



# BRIGANCE<sup>®</sup> Readiness Activities for Emerging K Children

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- Reading
- Mathematics
- Additional Support for Emerging K

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## BRIGANCE Readiness Activities

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Here's how to use the BRIGANCE Readiness Activities with the *i-Ready* Student Profile report.

If the <i>i-Ready</i> Student Profile report “Next Steps for Instruction” include...	Use these BRIGANCE Readiness Activities
<b>Phonological Awareness</b>	
Continue to practice rhyme recognition.	<ul style="list-style-type: none"> <li>• <a href="#">Phonological Awareness Skills</a></li> </ul>
Develop understanding of blending syllables.	<ul style="list-style-type: none"> <li>• <a href="#">Phonological Awareness Skills</a></li> </ul>
Build knowledge of segmenting syllables.	<ul style="list-style-type: none"> <li>• <a href="#">Phonological Awareness Skills</a></li> </ul>
Introduce blending onset and rime.	<ul style="list-style-type: none"> <li>• <a href="#">Phonological Awareness Skills</a></li> </ul>
Teach segmenting onset and rime.	<ul style="list-style-type: none"> <li>• <a href="#">Phonological Awareness Skills</a></li> </ul>
<b>Phonics</b>	
Extend letter recognition to lowercase letters.	<ul style="list-style-type: none"> <li>• <a href="#">Visual Discrimination</a></li> <li>• <a href="#">Reads Uppercase and Lowercase Letters</a></li> <li>• <a href="#">Prints Uppercase and Lowercase Letters in Sequence</a></li> </ul>
Teach that words are separated by spaces in print.	<ul style="list-style-type: none"> <li>• <a href="#">Print Awareness and Concepts</a></li> <li>• <a href="#">Prints Personal Data</a></li> </ul>
Teach how readers follow words in a book.	<ul style="list-style-type: none"> <li>• <a href="#">Response to and Experience with Books</a></li> <li>• <a href="#">Print Awareness and Concepts</a></li> </ul>
<b>High-Frequency Words</b>	
Introduce Level K high-frequency words.	<ul style="list-style-type: none"> <li>• <a href="#">Response to and Experience with Books</a></li> <li>• <a href="#">Visual Discrimination</a></li> <li>• <a href="#">Print Awareness and Concepts</a></li> <li>• <a href="#">Reads Uppercase and Lowercase Letters</a></li> </ul>
<b>Vocabulary</b>	
Focus on oral language development.	<ul style="list-style-type: none"> <li>• <a href="#">Body Parts</a></li> <li>• <a href="#">Colors</a></li> <li>• <a href="#">Response to and Experience with Books</a></li> </ul>
<b>Comprehension</b>	
Focus on language development.	<ul style="list-style-type: none"> <li>• <a href="#">Body Parts</a></li> <li>• <a href="#">Colors</a></li> <li>• <a href="#">Response to and Experience with Books</a></li> </ul>
Teach reading strategies.	<ul style="list-style-type: none"> <li>• <a href="#">Response to and Experience with Books</a></li> <li>• <a href="#">Print Awareness and Concepts</a></li> </ul>
Discuss read-aloud informational text.	<ul style="list-style-type: none"> <li>• <a href="#">Response to and Experience with Books</a></li> </ul>
Discuss read-aloud literary text.	<ul style="list-style-type: none"> <li>• <a href="#">Response to and Experience with Books</a></li> </ul>
Support listening comprehension.	<ul style="list-style-type: none"> <li>• <a href="#">Body Parts</a></li> <li>• <a href="#">Colors</a></li> <li>• <a href="#">Response to and Experience with Books</a></li> </ul>

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Here's how to use the **BRIGANCE Readiness Activities** with the *i-Ready* Student Profile report.

If the <i>i-Ready</i> Student Profile report "Next Steps for Instruction" include...	Use these <b>BRIGANCE Readiness Activities</b>
<b>Number and Operations</b>	
Recognize numerals to 10.	<ul style="list-style-type: none"> <li>• Reads Numerals</li> <li>• Numeral Comprehension</li> <li>• Numerals in Sequence</li> </ul>
Count up to 20 objects.	<ul style="list-style-type: none"> <li>• Counting</li> </ul>
Make a set of up to 10 objects.	<ul style="list-style-type: none"> <li>• Number Concepts</li> <li>• Counting</li> <li>• Numeral Comprehension</li> </ul>
Count forward by 1s from any number less than 100.	<ul style="list-style-type: none"> <li>• Counting</li> </ul>
Count backwards from 10 to 0.	<ul style="list-style-type: none"> <li>• Counting</li> </ul>
Compare two sets with up to 10 objects.	<ul style="list-style-type: none"> <li>• Numeral Comprehension</li> </ul>
Compare two written numerals from 1 to 10.	<ul style="list-style-type: none"> <li>• Numerals in Sequence</li> </ul>
Count back to subtract 1, 2, or 3 from numbers up to 10.	<ul style="list-style-type: none"> <li>• Counting</li> </ul>
<b>Algebra and Algebraic Thinking</b>	
Find combinations of 10 and identify missing addends.	<ul style="list-style-type: none"> <li>• Joins Sets</li> </ul>
Use number sentences to solve joining problems with number to 10.	<ul style="list-style-type: none"> <li>• Joins Sets</li> </ul>
Use number sentences to solve take away problems with numbers to 10.	<ul style="list-style-type: none"> <li>• Joins Sets</li> </ul>
Relate addition and subtraction to part-part-whole concepts.	<ul style="list-style-type: none"> <li>• Joins Sets</li> </ul>
<b>Measurement and Data</b>	
Compare the length of two objects (longer, taller, shorter, thicker).	<ul style="list-style-type: none"> <li>• Quantitative Concepts</li> </ul>
Identify measurable attributes of objects using informal language (how long, thick, short or tall they are, or how much they weigh or hold).	<ul style="list-style-type: none"> <li>• Quantitative Concepts</li> </ul>
Compare measures of familiar objects.	<ul style="list-style-type: none"> <li>• Quantitative Concepts</li> </ul>
Sort objects according to one or more attributes.	<ul style="list-style-type: none"> <li>• Quantitative Concepts</li> <li>• Shape Concepts</li> </ul>
<b>Geometry</b>	
Identify basic two-dimensional shapes (square, circle, rectangle, triangle).	<ul style="list-style-type: none"> <li>• Shape Concepts</li> </ul>
Identify spatial relationships (out, above, below) and follow directions to move objects into relative positions (over, under, top, bottom, behind, between).	<ul style="list-style-type: none"> <li>• Directional/Positional Concepts</li> </ul>
Describe parts of two-dimensional shapes using informal language such as the number of sides and corners.	<ul style="list-style-type: none"> <li>• Shape Concepts</li> </ul>
Identify basic three-dimensional shapes (cube, cone, cylinder, sphere).	<ul style="list-style-type: none"> <li>• Shape Concepts</li> </ul>

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# BRIGANCE Activity Finder:

## Additional Support for Emerging K

**Social and Emotional Development** Strong social and emotional skills are important to a child's development. Children who develop these skills can express their feelings, make decisions, solve social problems, and form meaningful relationships with others. These children also are better able to manage everyday stress and disappointment. The recommendations and activities in this section help to develop children's self-confidence, ability to work and play with others, curiosity and engagement, ability to follow simple rules and routines, and problem-solving skills.

- [General Social and Emotional Development](#)
- [Play Skills and Behaviors](#)
- [Initiative and Engagement Skills and Behaviors](#)
- [Self-Regulation Skills and Behaviors](#)

# Body Parts

## Objective

- To identify parts of the body.
- To use science concept vocabulary, related to parts of the body, to communicate information.
- To follow multi-step directions.

### RATIONALE

A child's body is his first point of reference. Learning to name body parts helps a child distinguish the different parts that make up his body. The ability to identify body parts helps the child have a greater awareness of his body in relation to space.

## Sequence

### SEQUENCE OF SKILLS

Although each child's developmental rate and pattern is unique, the following is a sequence of skills that children typically develop through the age of seven years. Use the skill sequence as a general guide when planning your instruction.

#### 1. Points to body parts

#### 2. Names body parts

eyes	fingers	fingernails
nose	teeth	heels
mouth	thumbs	ankles
hair	toes	jaw
feet	neck	shoulders
ears	stomach	elbows
tongue	chest	hips
head	back	wrists
legs	knees	waist
arms	chin	

### TEACHING SEQUENCE

#### Initially, Teach at the Receptive Level

Initially, teach a child body parts at the receptive level. When introducing body parts, teach the child to match his body parts with the corresponding body parts on your body. For example, touch your mouth, and have the child touch his mouth. After the child can consistently match body parts, teach him to point to the body parts you name.

#### Next, Teach at the Expressive Level

Once the child can consistently match and point to requested body parts, teach him to say the names of the body parts. For example, touch your elbow, and ask him to tell you the name of the body part that you are touching. Point to your knee, and ask the child to name the body part you are touching.

## SEQUENCE OF TEACHING ACTIVITIES

### 1. Identifies Own Body Parts

First, teach a child to identify his own body parts. For example, ask the child to touch his nose. You may also ask the child to face a mirror and touch the nose on his reflection.

### 2. Identifies Body Parts of a Doll

Next, teach a child to identify the body parts of a doll. For example, ask the child to touch a doll's leg.

### 3. Identifies Body Parts of a Person in a Picture

After a child can identify his own body parts as well as the body parts of a doll or of another person, teach the child to apply new learning to a picture of a person. For example, ask the child to touch the arm of a person in a picture.

## Recommendations for Effective Teaching

### BE SENSITIVE TO A CHILD'S PERSONAL SPACE

When teaching body parts, be especially sensitive to a child's sense of self and his personal space. For most activities, touch your own body part and have the child mirror your actions.

### REFER TO THE LIST OF BODY PARTS

When planning instruction, refer to the list of body parts on this page. They appear in the order in which children typically learn them. However, take advantage of any opportunity that arises to teach and develop an awareness of the body parts.

### TEACH A FEW BODY PARTS AT A TIME

Teaching too many concepts at one time may confuse some children. To prevent confusion, teach these children only a few body parts at a time.

### POINT TO YOUR OWN BODY PARTS AS YOU NAME THEM

A very small child may have become aware of his mouth when his mother said, "Open your mouth," as she pointed to her own mouth. That practice developed the child's comprehension of the word mouth. Therefore, when naming a body part, touch that part on your body, so the child knows to which part you are referring.

### OTHER NAMES FOR BODY PARTS

Parents or caregivers might use a different name or term to identify a body part. For example, "tummy" or "belly" may be the name a child's family uses to refer to the stomach. Make the child aware that the name you are using for the same body part is "stomach."

### CONNECTING NEW EXPERIENCES TO LEARNING BODY PARTS

A child frequently becomes more aware of a body part and learns its name when something different or interesting is associated with the body part. For example, a child may become more aware of his feet when he is wearing new shoes. Call the child's attention to the item and say the name of the body part.

### INCLUDE WITH OTHER ACTIVITIES

When engaged in other activities, refer to parts of the body as appropriate. For example:

- When reading a story to children, talk about the illustrations and relate them to parts of the body. For example, you might point out how the character has grown from baby to preschooler. Point to the height, the head, the hands, the arms, the legs and toes to show growth.
- After children have measured their height against a tape on the wall, talk about the parts of their body that have grown.
- When working on beginning sounds, ask, “Which body part begins with the sound /m/?”
- When children are in the Dramatic Play area, you might refer to parts of the body as children dress up. You might say, “Mario, please put that pirate cape over your shoulders.” Or “Those mittens are too small for your hands.”

### USE OPEN-ENDED STATEMENTS

To provide practice in using science concept vocabulary, have children complete open-ended statements. For example, say:

“We have fingers on our hands and toes on our \_\_\_\_.” (feet)

“Our arms bend at the elbows, and our legs bend at the \_\_\_\_.” (knees)

“We wear mittens on our hands and shoes on our \_\_\_\_.” (feet)

“We see with our eyes. We hear or listen with our \_\_\_\_.” (ears)

“On our hands we have fingers, and on our feet we have \_\_\_\_.” (toes)

### READ WITH YOUR CHILDREN

Read books with children that develop science concept vocabulary. Here are some engaging books that you might read to help children learn the names of parts of the body:

Aliki. *My Hands*.

Carle, Eric. *From Head to Toe*.

Seuss, Dr. *The Foot Book*.

# Factors That Impact Development

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Be alert to factors that might affect language development.

## ARTICULATION PROBLEMS

Some children have articulation problems and may substitute, distort, or omit sounds. A child may say “mouf” for mouth or “wlegs” for legs. A child who knows the names of body parts should be given credit for his knowledge even if he does not articulate the words clearly. Provide the child with an accurate speech model. Some articulation difficulties will improve with practice and time. If the problem is severe or if there is no improvement, refer the child to the speech-and-language specialist for an evaluation.

## HEARING OR VISUAL PROBLEMS

Observe children for indications of a hearing or visual problem.

- If a child appears to have a hearing impairment, be sure that he can see your face and your gestures. Explain things using short, clear sentences. Draw or use pictures and props to illustrate abstract concepts such as time and feelings.
- If a child appears to have a visual impairment, present information in different ways: make the experience more concrete, rely on the other senses, emphasize listening skills for following directions or listening for details in a story. Touch a child’s shoulder or arm if he is not attentive, so that he knows you are including him in the activity.

# Teaching Activities

## 1. Meet Your Nose, Meet Your Toes

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Decide which body parts you want to introduce to children. Then, do the following:

- Point to a body part, such as your nose and say “nose.”
- Ask children to point to their noses and say “nose.”
- Observe children who may not know the names of body parts and provide additional experiences.
- Continue the routine with each body part that you are introducing.

## 2. If You’re Happy and You Know It

**Materials:** None.

**Group Size:** Small group or class.

**Procedure:** Tell the children that you are going to teach them a song that has actions that go with the words. Then do the following:

- Sing a verse for a body part and demonstrate the action.
- Sing the verse a second time, and have children join in. For example, if you want to teach the word “ears,” the verse could be:  
*If you’re happy and you know it, touch your ears.*  
*If you’re happy and you know it, touch your ears.*  
*If you’re happy and you know it, and you really want to show it.*  
*If you’re happy and you know it, touch your ears.*
- Every time you sing a verse, change the body part and action. For example:  
*If you’re happy and you know it, blink your eyes . . .*  
*If you’re happy and you know it, bend you knees . . .*  
*If you’re happy and you know it, wiggle your fingers . . .*

**EXTENSION:** Invite volunteers to be the “leader” and call out a body part for a new verse. Have volunteers stand in front of the group as they lead the singing and demonstrate the new action.

## 3. Hokey Pokey

**Materials:** None.

**Group Size:** Small group or class.

**Procedure:** Have children stand far enough apart to allow for movement. Then do the following:

- Tell children that you are going to teach them a silly song called the “Hokey Pokey.” Explain that as you’re singing, you’re going to ask them to move a body part, such as their arms or legs.
- Sing a verse as you demonstrate an action. For example:  
*You put one arm in, you take one arm out,*  
*You put one arm in and you shake it all about.*  
*You do the Hokey Pokey and you turn yourself around,*  
*That’s what it’s all about!*
- Continue singing the song and have children move other body parts, such as the head, tummy, feet, legs, and so on.

**EXTENSION:** When children are comfortable, invite them to lead the class in singing a new verse and demonstrating the action.

#### 4. Head and Shoulders

**Materials:** None.

**Group Size:** Small group or class.

**Procedure:** Have children stand in a circle and do the following:

- Say the first line of the chant and demonstrate the action by tapping your head, shoulders, knees, and toes.
- Ask children to echo you and touch each body part named as you sing.

*Head and shoulders, knees and toes*

*Knees and toes*

*Head and shoulders, knees and toes, knees and toes,*

*Eyes and ears and mouth and nose,*

*Head and shoulders, knees and toes, knees and toes.*

**EXTENSION:** Change the body parts in the verse to those that you want children to learn, such as mouth, elbows, and ankles. When children are familiar with different body parts, invite them to be the leader and make up a new chant.

**EXTENSION:** Sing the song again but this time leave out the word *head* and only do the action. Sing the song again and drop another body part word. Do this until you are just performing the actions.

**EXTENSION:** You might want to do another chant that reinforces the names of parts of the body.

*Clap, clap, clap, clap your hands (clap)*

*Clap your hands together. (clap)*

*Clap, clap, clap, clap your hands (clap)*

*Clap your hands together. (clap)*

Other verses:

*Stamp, stamp, stamp your feet . . .*

*Shake, shake, shake your hips . . .*

*Bend, bend, bend your knees . . .*

#### 5. Is It a Body Part?

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Tell children that you are going to say some words. Explain that some of the words are names of body parts and some of them are not. If the word you say is the name of a body part, children should touch that part of their body.
- Have children listen closely as you say the following words: *blue, arm, truck, elbow, knee, flower, finger, toe, shirt, ring, nose, car, wrist, toy*, and so on.
- Pause briefly after each word to give children time to think and respond. Provide help as needed.

**EXTENSION:** For children who can identify many body parts, invite them to lead the class in the activity.

#### 6. How Does It Move?

**Materials:** None.

**Group Size:** Small group or class.

**Procedure:** Increase children's awareness of their bodies by discussing the uses of a body part and how it moves. Do the following:

- Have children stand in a circle.
- Ask them questions such as:
  - "What body parts help us walk? Show me!"
  - "What body parts can we bend? Show me!"
  - "What body parts can blink? Show me!"
  - "What body parts can wiggle? Show me!"
- When children are familiar with how each body part moves, do the following:
- Say a sentence and invite children to fill in an action word, then demonstrate the action. For example:
  - "These are my hands and they want to [clap]."
  - "These are my fingers and they want to [wiggle]."
  - "This is my head and it wants to [nod]."
  - "These are my elbows and they want to [bend]."

## 7. Keep the Ball in the Air

**Materials:** A soft foam ball for each child.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Demonstrate how you can keep a soft foam ball in the air by hitting it with different body parts, such as your hand, elbow, wrist, knee, or foot.
- Invite children to experiment hitting the ball with different body parts.
- Give them a direction to follow. For example: "Hit the ball with your knee." As you say the direction, demonstrate the action.
- Allow children to hit the ball with their knee several times.
- Give other directions and encourage children to practice the action.
- If a child's ball hits the floor, encourage him to pick up the ball and continue with the activity.

## 8. Simon Says

**Materials:** None.

**Group Size:** Small group or class.

**Procedure:** Arrange the children so that they are standing a safe distance from each other. Stand in front of the children, and then do the following:

- Tell children that you are Simon and you will give them various commands.
- Ask them not to move unless they hear the words, "Simon says."
- Demonstrate as you say, "Simon says, 'Raise your arm.'" Precede some commands with the words "Simon says." Give other commands without those words. For example:
  - "Simon says, 'Nod your head.'"
  - "Simon says, 'Wiggle your fingers.'"
  - "Bend your knees."
- If children move when you say a command without using the words "Simon says," ask them to sit down.

**EXTENSION:** To make the activity more challenging, include more than one body part in the command. For example:

- "Simon says, 'Put your hand on your head.'"
- "Simon says, 'Tap your knees with your hands.'"

## 9. Body Parts of a Doll

**Materials:** Male and female dolls that represent different ethnic backgrounds: one for each child and one for you.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Show children a doll and talk about the body parts that you plan to teach.
- Point to each of those parts on the doll and then have each child point to the corresponding body part on his own body.
- Give each child a doll, and keep one for yourself.
- Name a body part and point to it on your doll so that children can see which body part you are naming.
- Ask each child to point to the corresponding body part on her doll. For example, as you point to the arm, say, "This is my doll's arm. Point to your doll's arm."
- Continue this procedure, pointing to each of the doll's body parts as children imitate your actions.
- Point to a body part on your doll. Ask children to name the body part. For example, point to your doll's nose and ask, "What is this?"
- Continue this routine with each body part you want children to learn.





## 10. Parts Make Parts!

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Have children sit in a circle and do the following:

- Explain that some body parts are made up of smaller body parts. For example, tell children that the ears, eyes, nose, mouth, and hair are all parts of the head.
- Discuss other parts of the body and the smaller parts that make it up. For example, say: "Here is my hand. There are a lot of smaller body parts that make up my hand. What are they?"
- Prompt children to name as many parts of the hand as they can, such as fingers, thumb, knuckles, nails, and wrist.
- Have children identify other parts of the body and the smaller parts that compose it, such as a foot, arm, and leg.

## 11. That's a Big Me!

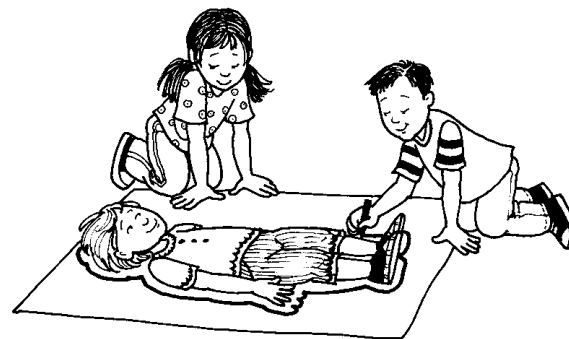
**Materials:**

- A roll of paper: newsprint, brown wrapping paper, butcher paper.
- Markers.
- Crayons.
- Scissors.
- Decorative supplies: yarn, buttons, pieces of felt, chenille stems, aluminum foil, colored construction paper.
- Glue sticks.
- Tape.
- Scissors

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- One at a time, have each child lie on her back on a large sheet of paper.
- Starting at the child's head, trace around her body with a marker.
- Name the different body parts as they are traced, noting right and left sides. Be sensitive to the child's personal space as you trace.
- Invite children to personalize their outlines with markers, crayons, and the decorating supplies. Encourage them to add facial features, hair, and clothing.
- Have children cut out their outlines. Offer help, if needed.
- Hang the outlines on the wall with the feet touching the floor.
- Ask each child to point to and name each body part on the outline. Then have her point to the same part on her body.



## 12. What Comes Next?

**Materials:**

- Sheets of drawing paper.
- Crayons, markers, or colored pencils.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Tell children that they are going to help you draw a person. Explain that their job is to tell you what to draw next.
- Say: "I want to draw a boy. Let's start at the top. What body part should I draw first?"
- Take turns asking the children what part you should draw next. Encourage them to name the body parts going from head to toes.
- As a child suggests a body part, have him point to that part on himself.
- If the children can't think of a part, have them look at each other to decide what parts are missing.
- When the drawing is completed, ask children how they want you to dress the boy. For example, you might say, "Should this boy wear shorts or long pants?"

**VARIATION:** Provide each child with paper and a marker and have them follow you along and draw the parts as they are named.

## 13. Finger Plays for Me, Myself, and I!

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Invite children to stand in a circle.
- Introduce the finger plays below that reinforce the names of body parts.
- Recite the rhyme. Say each line slowly and demonstrate an action.
- Repeat the rhyme and have children join in and do the motions.

***My Hands Upon My Head***

*My hands upon my head I place*

*On my shoulders, on my face,*

*On my knees and at my side,*

*Then behind me they will hide.*

*I will hold them up so high,*

*Till they almost reach the sky.*

*Now I clap them—one, two, three.*

*Then I fold them silently.*

***Here Are My Ears***

*Here are my ears. Here is my nose.*

*Here are my fingers. Here are my toes.*

*Here are my eyes. Both open wide.*

*Here is my mouth with white teeth inside.*

*Here is my tongue that helps me speak.*

*Here is my chin and here are my cheeks.*

*Here are my hands that help me to play.*

*Here are my feet for walking today!*

**EXTENSION:** Introduce other familiar finger plays about body parts, such as, "Open, Shut Them." Say each line of the finger play and demonstrate the actions. Invite children to join in and do the motions.

## 14. Tell Me a Story!

**Materials:** Books.

**Group Size:** Individual, small group, or class.

**Procedure:** Make reading aloud an important part of each school day. As you teach body parts, read aloud books to reinforce science vocabulary concepts. Here are some book suggestions:

Aliki. *My Hands*.

Carle, Eric. *From Head to Toe*.

Seuss, Dr. *The Foot Book*.

Do the following:

- Gather children around you in your reading area in the classroom.
- Preview the book. Underline the title with your finger as you read it. Share the names of the author and illustrator. Talk about the illustration on the cover.
- Read the book for enjoyment. Emphasize the rhyme, rhythm, and repetition of the language as you read.
- Then read it again. This time talk about the parts of the body in the illustrations. Ask children to tell you what they liked about the book.

## 15. My Hands

**Materials:**

- A cloth bag.
- Different colored and textured rocks.
- A feather, a small sponge, a ball, a piece of towel, a piece of chalk.
- Other items with different attributes.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Gather children around you and tell them that today they are going to use their hands to play a game.
- Demonstrate the activity by shutting your eyes, putting your hand into the bag, and picking up one of the objects.
- Say: "I'm putting my hand in the bag. Now I have an object in my hand. I wonder what it is. I'm going to describe it to you."
- For example, "It's round and smooth. I think it is (pause) a ball."

- Now take it out of the bag and hold it up for children to see. Pass the object around so children can feel its texture. Encourage them to describe it.
- Tell children that they will take turns shutting their eyes and putting their hand into the bag. Encourage them to pick up one object, describe it, then guess what it is.
- Continue the activity until everyone has had a chance to touch and guess the objects.

## 16. Riddle Time

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Share the following riddles with children. Encourage them to guess the body part by naming a rhyming word. If children need help the first time, you can point to the body part:

*I use it to smell.*

*It rhymes with "rose."*

*I have only one.*

*It's called a [nose].*

*I use it to eat.*

*It rhymes with "south."*

*I use it to smile.*

*It's called a [mouth].*

*I use them to see.*

*They rhyme with "ties."*

*They're blue, green, or brown.*

*And they're called [eyes].*

*I use them to hear.*

*They rhyme with "clears."*

*They're on my head.*

*And they're called [ears].*

*I use them to touch.*

*They rhyme with "bands."*

*I use them to clap.*

*And they're called [hands].*

## 17. Let's Have a Taste Test!

**Materials:**

- A variety of foods, such as bite-sized pieces of oranges, apples, pickles, lemons, carrots, pretzels, and so on.
- Paper plates.

**Group Size:** Individual, small group, or class.

**Health Tip:** Be sure you are aware of children's allergies before you do this activity.

**Procedure:** Do the following:

- Seat children at a table. Point to your mouth and ask children to help you name its parts. (lips, teeth, tongue, gums)
- Now have them shut their eyes and explain that they will play a game called "Let's Have a Taste Test!"
- Place two small bites of the same kind of food in front of them. Invite children to taste one of the pieces.
- As they are eating it, encourage them to use words to describe it, such as *sour*, *salty*, *sweet*, and so on.
- Have them guess the food, then open their eyes to see what they've eaten. Invite them to sample the second piece and enjoy!

**VARIATION:** Repeat the above activity with the same foods or other kinds of foods. This time, have children hold their noses when they taste the food. Prompt a discussion about how different food tastes when you can't smell it. Have children recall what it's like to eat food when they have a cold or stuffy nose.

## 18. Do You Hear What I Hear?

**Materials:** A CD/audio cassette and CD/cassette player.

**Group Size:** Individual, small group, or class.

**Preparation:** Make a CD/audio cassette of different sounds children are familiar with, such as people laughing, crumbling up a piece of paper, a dog barking, clapping hands, a car starting, shutting a window, people singing, turning on a water faucet, and so on. Or, get a sound effect CD/audio cassette from the library.

**Procedure:** Do the following:

- Point to your ears and tell children that they will play a game using their ears. Say, "You'll have to listen very carefully to figure out what you are hearing."
- Invite children to listen to a variety of familiar sounds.
- Have them take turns guessing the sound. "Prompt them to use language, such as "I know what that is. It's a \_\_\_\_ ." "I don't know. Play it again." "It's loud. It's a \_\_\_\_ ."
- If they can duplicate the sound themselves, invite them to do so.

**EXTENSION:** If children need to see a visual to help them guess the sound, display pictures and invite them to match a picture to a sound.

# Colors

## Objective

- To recognize and name colors.
- To use color names to communicate information and share experiences.

### RATIONALE

The ability to recognize and name colors helps a child become more aware of her environment. A child talks about the colors of fruits, vegetables, and flowers, the clothes she wears, and the colors she uses in her paintings. Children make discoveries about color when they use a variety of art materials and engage in creative activities, including painting, drawing, and sculpting. Color knowledge also can help a child navigate the environment more safely when color is used for warning signals, caution signs, or stop signs.

## Sequence

### SEQUENCE OF SKILLS

Although each child's developmental rate and pattern is unique, the following is a sequence of skills that children typically develop through the age of seven years. Use the skill sequence as a general guide when planning your instruction.

1. Matches colors
2. Points to colors
3. Names colors

red	brown
blue	black
green	pink
yellow	gray
orange	white
purple	

### TEACHING SEQUENCE

#### Initially, Teach at the Receptive Level

Initially, teach a child colors at the receptive level. The term receptive indicates that the child shows understanding. Introduce colors by teaching the child to match samples of the same color. When the child can consistently match samples of the same color, teach her to point to a color when it is requested and presented with other colors.

#### Next, Teach at the Expressive Level

The term expressive indicates that the child shows understanding of a concept by using words. Once the child can consistently match and point to requested colors, teach her to say the names of colors.

## Recommendations for Effective Teaching

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### CREATE AN ENVIRONMENT RICH IN COLOR

A rich use of color in the classroom helps a child learn colors (displays of children's artwork, displays of art and sculpture of various cultures, paints and materials in the art center, thematic projects). When children can name colors, print labels with names of colors and post them beside objects of that color in the classroom.

### INCLUDE WITH OTHER ACTIVITIES

When engaged in activities, encourage children to use names of colors in conversation. For example:

- When a child is sharing an experience, prompt the child to use descriptive words including color names. For example, "I like the puppet's red hair."
- At the easel, ask the child, "What color paints will you mix together?" After mixing, ask the child to tell you about the color she created. The child might say, "That's green. My dad's car is green."
- When working on beginning sounds, ask, "What color begins with the sound /r/?"

### EMPHASIZE COLOR WORDS IN CONVERSATION

- When reading a storybook to children, talk about the colors in the illustrations.
- When reading a color alphabet book, talk about the letter(s) that begins each color. For example, R is for red, red like an apple.
- When reading a book about animals, talk about the animal's colors. For example, "That's a zebra. It has black and white stripes."

### CHOOSE A COLOR

When using objects that are available in different colors (crayons, markers, blocks), let each child choose the color she prefers. For example, ask, "Do you want a red one or a blue one?" or "What color do you want?" If a child cannot tell you because she does not know the color name, allow her to select the color by pointing to it. Then name the color, and ask her to repeat it.

### COLOR NAMES FOR TRANSITIONS

Transition times offer opportunities to achieve instructional goals. Here are some ideas to direct children through transitions while reinforcing color names.

- Children who are wearing white shoes may leave for outdoor play.
- Children who used red paint at the easel, line up for lunch.
- Children who wore black pirate costumes for the parade, get your coats.

### MONITORING THE CHILD'S PROGRESS

After a child has been taught a color, find out if she knows the color name. Ask questions or give directions using color words. For example, say, "Pick up the white paper plates first," or ask, "Give me the blue pen, please."

### READ WITH YOUR CHILDREN

Read books with children that support their learning of color names. Here are some engaging books that you might read:

Cabrera, Jane. *Cat's Colors*.

Dodd, Emma. *Dog's Colorful Day*.

Hoban, Tana. *Is It Red? Is it Yellow? Is it Blue?*

Jackson, Ellen. *Brown Cow, Green Grass, Yellow Mellow Sun*.

Illus. by Victoria Raymond.

Jonas, Ann. *Color Dance*.

Martin, Bill, Jr. *Brown Bear, Brown Bear, What Do You See?*

Illus. by Eric Carle.

## Factors That Impact Development

Be alert to factors that might affect language development.

### ARTICULATION PROBLEMS

Some children have articulation problems and may substitute, distort, or omit sounds. A child may say "wed" for red or "ellow" for yellow. A child who knows the names of colors should be given credit for his knowledge even if he does not articulate the words clearly. Provide the child with an accurate speech model. Some articulation difficulties will improve with practice and time. If there is no improvement, refer the child to the speech-and-language specialist for an evaluation.

### COLOR BLINDNESS

A child may experience difficulty learning colors because of color blindness. If a child confuses blue and yellow or red and green when matching, refer the child to an optometrist or ophthalmologist for evaluation of possible color blindness.

# Teaching Activities

## 1. Color Day

### Materials:

- Drawing paper.
- Paintbrushes.

Materials in one specific color.

- Yarn, stickers.
- Construction paper.
- Paint (watercolors, finger paints, tempera paints).
- A marker or pen.
- A variety of items.

**Group Size:** Class.

**Preparation:** Introduce one color at a time on a special day called “Color Day.” Dedicate that day to a different color each week for 11 weeks. Extensive exposure to a single color will help children learn to identify the color and remember it.

- On the day before “Color Day,” show children a swatch of the color that they will learn. Give them a paper circle of that color to take home.
- In the Letter to Families, explain “Color Day” and request that families help their children pick out an article of clothing, a toy, or a snack of that color. For example, if the color is yellow, a child might wear a yellow T-shirt.
- For those children who forget or don’t have something in that color, make a star in that color that children can wear.

**Procedure:** Attempt to use the targeted color in everything the children do on that day. For example, on Yellow Day, do the following:

- Wear something yellow to school.
- Provide a yellow snack, such as bananas or lemonade.
- Plan a painting activity with yellow paint.
- Assemble a display of yellow things, such as daffodils, lemons, and a toy school bus. Invite children to name the things they see that are yellow.
- Tie a piece of yellow yarn around each child’s finger as a reminder.
- Put yellow stickers on each child’s drawings.

- Learn a poem about the color. For example:  
*Yellow is a color.*  
*Let’s name the things we see.*  
*The Sun and a banana.*  
*Are yellow. Do you agree?*

## 2. Color Match

**Materials:** Blocks (at least two of each color).

**Group Size:** Individual or small group.

**Procedure:** Use blocks to demonstrate to children how to match colors. At first, use only two matching blocks. Later, add other colors, one at a time. Do the following:

- Hold up one block for the children to see.
- Ask the children to find another block that is the same color.
- Match the two blocks as you talk about the objects’ colors with the children.

**VARIATION:** Cut flowers from colored construction paper, at least two flowers in each color. Have the children match flowers that are the same color.

## 3. The Color Shape Sort

**Materials:** Shapes cut from construction paper in the colors that you plan to teach.

- Construction paper.
- Scissors.

**Group Size:** Individual, small group, or class.

**Preparation:** Cut various shapes, such as stars, circles, squares, and hearts from colored construction paper.

**Procedure:** Do the following:

- Select shapes in two colors.
- Shuffle the colored shapes.
- Demonstrate the activity by naming the colors as you sort the shapes into color categories.
- Have children sort the shapes by color. As they work, encourage them to name the colors in each sort. Provide help, as needed.
- As children become proficient in matching two colors, introduce other colors, one at a time.



#### 4. Our Color Chart

**Materials:**

- Poster paper.
- Scissors.
- One glue stick for each child.
- Stapler.

**Group Size:** Individual, small group, or class.

**Preparation:** Do the following:

- For each color, create a color chart with columns like the one below.

Clothing	Food	Nature	Signs	Books

**Procedure:** Do the following:

- Have children sit at tables.
- Provide old magazines and catalogs.
- Invite children to cut out pictures of things that are in a specific color, such as a red sweater, an apple, a rose, a STOP sign, and a book (*Is it Red? Is it Yellow? Is it Blue?*).
- Have children glue their pictures in the correct category.
- Ask children to name the pictures in each category.

#### 5. Scrapbook of Colors

**Materials:**

- Sheets of white paper.
- Magazines and catalogs with colored pictures.
- Construction paper in the colors that you plan to teach or color swatches from a paint store.
- Scissors.
- One glue stick for each child.
- Stapler.

**Group Size:** Individual, small group, or class.

**Preparation:** Make a scrapbook for each child by stapling together sheets of white paper, allowing one page for each color that you plan to teach. Glue one color sample (color swatches or construction paper shapes) on each page.

**Procedure:** Distribute the scrapbooks, then do the following:

- Have each child work on only one color page at a time.
- Invite children to open their scrapbooks to the first color page.
- Tell children to find and cut out pictures from magazines and catalogs that match the color sample, then glue the pictures on the page.
- After children have completed their scrapbooks, invite them to talk about the color and pictures on each page.
- Help children write the color name and page number on each page of the color scrapbook.

**EXTENSION:** From time to time, have children add color pages to their scrapbook.

## 6. Color Chains

**Materials:**

- Strips (2" × 8") cut from construction paper in the colors that you plan to teach.
- A glue stick for each child.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Give each child ten strips of each color.
- Show children how to make one chain loop by gluing the two ends of one strip together.
- Thread a second strip through the first loop, and glue the ends of that strip together.
- After children understand the process, hold up a strip.
- Have each child choose the same color from her pile to match your strip.
- Have children glue the ends of the strip to make a loop.
- Continue this procedure with each of the colors.

**EXTENSION:** Do the following to develop children's ability to create simple patterns:

- Make a color chain with a specific pattern, such as red, blue, red, blue, red, blue, and so on.
- Show the color chain to children and point to and name each color. At the end of the chain, ask: "What color comes next?" Invite children to name the color.
- Have children make a pattern with their color chains. For example: yellow, blue, green, yellow, blue, green, and so on. Invite volunteers to talk about their color patterns.

## 7. Colors of the Rainbow

**Materials:**

- A picture of a rainbow.
- Sheets of white drawing paper.
- Sets of crayons or chalk in the appropriate colors.
- A can of hair spray if the children are using chalk.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Give each child a sheet of drawing paper and a set of crayons in rainbow colors.
- Display a picture of a rainbow. Slowly, name the colors in order, from the inside to the outside of the rainbow: purple, blue, green, yellow, orange, and red. Have children echo you.
- Place the crayons in the same color order.
- Hold up a purple crayon and then ask each child to find her purple crayon.
- Demonstrate how to use the crayon to make a semicircular stroke across the page to start forming a rainbow.
- Have children make a sweeping arc-shaped stroke.
- Continue this procedure with the other colors in rainbow order.
- Together name the colors in the rainbow.

**NOTE:** If children use chalk to draw their rainbow, use hair spray on the pictures to prevent the chalk from smudging.

**EXTENSION:** Draw a rainbow again, but this time ask children to say the name of each color.

## 8. Still-Life Paintings

### Materials:

- Paints in a variety of colors.
- Paintbrushes.
- White drawing paper.
- A variety of fruit, vegetables, and flowers.
- Art books from the library with still-life paintings.

**Group Size:** Individual, small group, or class.

**Procedure:** Gather children around you and do the following:

- Show children several still-life paintings in the art books. Explain that they are going to make their own still life paintings.
- Display fruits, vegetables, and flowers that are one solid color, such as, a bowl of red apples or a bouquet of yellow tulips. Later in the week, show other examples with more than one color, such as a bouquet of daisies or bananas with brown spots.
- Fill paint cups with a small amount of the color paint needed. Place it at the easel with white paper and paintbrushes.
- Have children put together their own display of fruits, vegetables, or flowers and then use the display as a model to create their own-still life paintings.
- Talk with children about their paintings. Use descriptive words including color names. For example, "I see that you are painting a bouquet of daisies. Will you add the yellow center? Will you leave it all white?"

## 9. Who Is Wearing Blue?

**Materials:** None.

**Group Size:** Small group or class.

**Procedure:** Do the following:

- Have children sit in a circle so that they can see each other's clothing.
- Ask questions about the color of the children's clothing. For example: "Who is wearing a red shirt and black shoes?" Or: "Who is wearing a blue dress with yellow flowers on it?"
- Encourage children to respond in a complete sentence, such as: "I'm wearing a red shirt and black shoes." Or: "I'm wearing a blue dress with yellow flowers on it."

**EXTENSION:** Ask questions that contain more-detailed descriptions of clothing. For example: "Who is wearing a white T-shirt that has a red pocket?" or "Who is wearing a brown striped shirt with solid green pants?" Encourage children to answer in complete sentences.

**VARIATION:** Direct children through transitions while reinforcing color names. For example:

- When children line up to go outside, say: "People wearing red and white stripes may line up!" Or: "If you're wearing light green, please line up!"
- To get children's attention after transition times, play a short game by giving commands, such as: "Everyone wearing red shoes, please sit down." "Everyone wearing green and yellow T-shirts, please fold your hands." "Everyone wearing purple sneakers, shut your eyes."

## 10. I Spy

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Tell children that you are going to give them a clue about an object in the classroom, and they will have to guess what it is. Explain that the clue will be the color of the object.
- For example, select a yellow toy school bus and say, "I spy, with my little eye, something that is yellow."
- If a child guesses an object that is yellow but not the yellow school bus, praise her for choosing something that is the correct color, and reinforce the color name. Then explain that you spied something else in the room that is yellow. Give another clue, such as: "I spy, with my little eye, something that is yellow that some children ride in to get to school."
- If a child guesses an object that is not the correct color, tell her the color name of the object she chose. For example, say, "That's a good guess, but that block is purple. We're looking for something that is yellow."
- A child who guesses correctly becomes the next leader and "spies" the next object.

## 11. Can You Guess What I'm Thinking?

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Tell children that they are going to play a game, "Can You Guess What I'm Thinking?"
- Think of an object and make up some clues. One clue should be about the object's color. For example: "I'm thinking of something that is usually red and grows on trees." "Can You Guess What I'm Thinking?"
- If children do not guess correctly, provide additional clues until they guess the object. For example: "It has seeds in it." Or: "Sometimes you drink the juice from it." "Can you Guess What I'm Thinking?" (apple)
- Give each child a turn to think of an object, then give clues while the class tries to guess the name of the object.

## 12. Change a Color!

**Materials:**

- A spoon.
- Food coloring: red, blue, and yellow.
- Six jars.
- Water.
- Red, blue, and yellow paints: watercolor or tempera paint.
- Paintbrushes.
- White drawing paper.
- A smock for each child.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Fill three jars half-full with water.
- Add red food coloring to the water in one jar.
- Add blue food coloring to the water in another jar.
- Add yellow food coloring to the water in the third jar.
- Place all six jars on a table in front of the children.

- Explain that you will make three new colors using red, blue, and yellow.
- Pour equal amounts of yellow and blue into an empty jar. Stir the liquid. Ask the children to tell you the name of the new color. Some children will be amazed to see green appear!
- Follow the same procedure to mix yellow and red to create orange, then mix blue and red to create purple. Encourage children to talk about how the colors changed when the paints were mixed together.
- Invite children to paint with the new colors. Encourage them to experiment by using paints to change colors on paper.

## 13. Shades of Color

**Materials:**

- Samples of basic colors.
- Samples of varying shades of the basic colors available at paint or fabric stores.

**Group Size:** Individual, small group, or class.

**Procedure:** Once children can recognize the basic colors, teach them the various shades of these colors. Do the following:

- Provide basic color samples as well as samples of the various shades of these colors. Have children match the shades to the basic colors.
- Display the basic colors of yellow, blue, red, and green and their shades such as pale yellow, light blue, bright red, and dark green.
- Use the terms *pale*, *light*, *bright*, and *dark* several times as you talk about the shades. Create opportunities for the children to use the words. Encourage them to speak in complete sentences.
- Look around the room for examples of shades of color. You might say, "Ana is wearing a light pink sweater today." "Jake is wearing pale yellow shorts." "The leaves on our begonia plant are dark green."

## 14. Story Time Colors

**Materials:** Books.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Gather children around you in the reading area.
- Read aloud books about colors. Here are some suggestions.
  - Cabrera, Jane. *Cat's Colors*.
  - Dodd, Emma. *Dog's Colorful Day*.
  - Hoban, Tana. *Is It Red? Is it Yellow? Is it Blue?*
  - Jackson, Ellen. *Brown Cow, Green Grass, Yellow Mellow Sun*.  
Illus. by Victoria Raymond.
  - Jonas, Ann. *Color Dance*.
  - Martin, Bill, Jr. *Brown Bear, Brown Bear, What Do You See?*  
Illus. by Eric Carle.
- Preview the book by reading the title and the author and illustrator's names aloud. Ask children to tell you what they think the book is about as you turn the pages.
- Read aloud the book for enjoyment. Read with expression to engage the children.
- Read the book again. Then talk with children about the illustrations using color names. For example, hold up the book *Dog's Colorful Day*. Say, "This is a messy dog. What happened to him? Let's look at the pictures and see how he became so messy." As children talk about the illustrations, you might want to read specific pages to deepen children's understanding of the story.

## 15. Poetry Corner

**Materials:**

- Chart paper.
- Markers.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Gather children around you.
- Write the following poem on chart paper and read it aloud. Read it again, but this time underline the words with your finger as you read the poem.
  - An apple is red.
  - A pepper is green.
  - Name the color of a  
*Tangerine!*
  - A banana is yellow.
  - The sky is blue.
  - Name the color of  
*Your own shoe!*
- Invite children to think of objects that are red, green, yellow, or blue and replace the underlined objects in the poem with your own objects. Then read the poem aloud.

# Response to and Experience with Books

## Objective

- To demonstrate an interest in books and enjoyment in literacy activities.
- To participate in book-related conversations, asking and answering questions about characters, story events, and ideas, concepts and facts (or asking and answering questions that demonstrate understanding).

### RATIONALE

Research studies conclude that five-year-olds who have been read to regularly throughout their early years are inquisitive and tend to do better in school. Children who have been read to have better language skills, are more motivated to learn to read, and have a better understanding of the reading process than those who have not been read to. Giving young children successful and enjoyable experiences with books will help create book knowledge, the desire to read, and will cultivate a lifelong love of reading.



## Sequence

### SEQUENCE OF SKILLS

Although each child's developmental rate and pattern is unique, the following is a sequence of skills that children typically develop through the age of seven years. Use the skill sequence as a general guide when planning your instruction.

- Turns several pages in a book at once.
- Points to pictures of animals or common objects.
- Looks at pictures selectively.
- Turns book right-side-up.
- Turns pages individually.
- Points to and names simple pictures.
- Shows an interest in books and reading.
- Describes actions depicted in pictures.
- Takes part in reading by "filling in" words and phrases.
- Gains information from books about real things.
- Tries to read books from memory.
- Follows along in a book being read.
- Recalls some main events when asked, "What happens in this story?"
- Retells story from a picture book with reasonable accuracy.
- Attempts to read by looking at pictures.
- Reads some words by sight.
- Tries to read words by using phonics, context clues, or picture clues.
- Reads simple stories aloud.
- Distinguishes between fantasy and reality.

# Recommendations for Developing Children’s Interest and Experience with Books

## SELECT QUALITY BOOKS

Libraries and school systems frequently publish a list of recommended books for children of different ages. There are also books by educators that provide parents and teachers with book recommendations. Professional organizations such as the International Reading Association provide annual lists of recommended books. Consult your local or school library. Here are some suggested resources:

- *The New Read-Aloud Handbook* by Jim Trelease.
- *The New York Times Parent’s Guide to the Best Books for Children* by Eden Ross Lipson.
- *Read to Me: Raising Kids Who Love to Read* by Bernice E. Cullinan.
- *Choosing Books for Children: A Commonsense Guide* by Betsy Hearne.
- The Children’s Choices List (appears every October in *The Reading Teacher*).
- The Notable Children’s Trade Books in the Field of Social Studies List (appears in the May/June issue of *Social Education*).
- The Outstanding Science Trade Books for Children List (appears in the November issue of *Children and Science*).

## CREATE A CLASSROOM LIBRARY

Introduce children to a wide variety of books including storybooks, wordless picture books, information books, predictable books, alphabet and counting books, poetry books, magazines, and easy-to-read books. Throughout the year, add the books children have authored to the library. Rotate the books in the class library so that new and engaging books are available.

- Create an environment that engages young readers. Set up an inviting place to read—a carpeted corner with comfortable chairs or big pillows. The library should be a place where children will want to come to read on their own or with a buddy. Display the books on an open-face rack so that children can see the covers of the books.
- Add to the class library cassette players, headphones, and CDs/tapes for listening to books. Show the children how to use the audio equipment and explain how the books and recordings are stored.

## INCLUDE INFORMATIONAL BOOKS IN YOUR LIBRARY

Select nonfiction books on a wide range of topics, such as storms, animals, people, oceans, dinosaurs, and machines. Informational books help build children’s vocabulary and develop new knowledge. Select books that engage children in topics that are of interest to them.

## PRACTICE BEFORE READING ALOUD TO CHILDREN

Before reading a storybook to children, practice reading it aloud using different voices for different characters and practice changing the inflection of your voice to accompany the events in the story. The words you are reading will tell you whether to use a soft or loud voice (“as she whispered to her sister” or “as the waves crashed against the shore”) or whether to use a low voice or a high one. You will want to read some passages slowly, others quickly. For some passages, you will want to pause for emphasis or excitement (“Once upon a time . . . in a land far, far away . . .” or “What . . . was in the box?”).



# Teaching Activities

## 1. Let's Get Ready to Read!

**Materials:** A favorite picture book

**Group Size:** Individual or small group.

**Procedure:** Before reading to children, introduce book handling skills to show them how books are read. Do the following:

- Gather children in a circle on the floor. Make sure that each child can see you and the book.
- Hold up a favorite book so that the front cover is facing them. Say: "This is the front cover of the book. It gives us important information. Point to the title and say: "The title of the book is (pause) . . ." See if children remember the title. If not, read the title.
- Continue holding up the front cover. Say: "The author of the books is . . ." "An author is the person who writes the story."
- Point to the illustrator's name. "The illustrator of the book is . . ." "An illustrator is the person who draws the pictures."
- Slowly open the book. Say: "We read a story by opening the book this way. Here is the first page." Continue turning the pages until you get to the end. "Here is the last page of the book. This is where the story ends." Close the book and show children the back cover and say, "This is the back cover of the book."
- Read the book aloud with expression. After reading, ask children to help you retell the story.

## 2. Repeat After Me!

**Materials:** A picture book with repetitive verse or phrase.

**Group Size:** Individual or small group.

**Scheduling:** The repetitive storybook will be read three times. Plan your storybook reading so that the first and second readings occur over one or two days. The third reading can happen a few days later.

**Procedure:** Have children sit comfortably in a circle on the floor around you. Then do the following:

### FIRST READING:

- Before reading, underline the title with your finger as you read it aloud. Draw children in by reading with expression.
- As you read, pause to explain the meanings of unfamiliar words. Use your voice or gestures, or point to an illustration to convey a word's meaning.
- Make comments as you read, briefly summarizing what's happening to help children follow story events.

### SECOND READING:

- Remind children that they have read this book before and point out one or two things that they might remember. Ask children to help you retell the story, ask questions, such as: "What happened here?" "What happened next?" "What did the character do first?" "What is he going to do now?" Encourage children to use these words when they discuss story events.
- Pay close attention to children's facial expressions, comments, and questions to see if they understand the story.

### THIRD READING:

- Now that children are more familiar with the book, read it again and invite them to chime-in by saying the repetitive verse or phrase. Pause before the refrain and encourage them to read it as you track the print.

### SUGGESTED BOOKS WITH REPETITIVE TEXT:

*The Gingerbread Man* by Jim Aylesworth

*I Went Walking* by Sue Williams

*Time for Bed* by Mem Fox

*Chicka Chicka Boom Boom* by Bill Martin Jr. and John Archambault

*The Little Red Hen* by Paul Galdone

*The Lady with the Alligator Purse* by Nadine Westcott

*Caps for Sale* by Esphyr Slobodkina

*More Spaghetti, I Say* by Rita Golden Gelman

*Alexander and the Terrible, Horrible, No Good, Very Bad Day*  
by Judith Viorst.



### 3. Tell Me a Story

**Materials:** A wordless picture book that has bold, colorful illustrations that depict the action of the story.

**Group Size:** Individual or small group.

**Scheduling:** The wordless storybook will be “read” three times. Plan your book reading so that the first and second readings happen on one day. The third reading should take place the following day.

**Procedure:** Gather children on the floor around you. Make sure that each child can see you and the book you are holding. Hold the book so that the illustrations face the children.

**FIRST READING:**

- Turn the pages of the book and ask children to look closely at the pages and tell what is different about this book from other books you’ve read aloud. Explain that this book has pictures, but it doesn’t have any printed words on the page!
- Explain that you are going to look at the pictures and make up a story as you go along. (You might want to give the people or the animals in the story names.) Then tell your story and point to the pictures so children can follow along.

**SECOND READING:**

- Show children the first page and describe what you see in the illustration. As you continue page by page, encourage them to share details that they see. Ask questions to direct children’s attention to the characters and action that takes place in the story.

**THIRD READING:**

- Tell children that it’s their turn to be storytellers. Have them tell the story as you turn the pages.

**EXTENSION:** Write down the story that children compose as they “read” their wordless storybook. Help children turn their story into a book and place the book in the classroom library.

**SUGGESTED WORDLESS PICTURE BOOKS:**

*Have You Seen My Duckling?* by Nancy Tafuri

*Harold and the Purple Crayon* by Crockett Johnson

*If You Give a Mouse a Cookie* by Laura Joffe Numeroff

*Jamaica’s Find* by Juanita Havill

*Skip to My Lou* by Nadine B. Westcott

*10 Minutes to Bedtime* by Peggy Rathmann

*Possum Magic* by Mem Fox.

## 4. Read and Retell

### Materials:

- A narrative picture book with colorful illustrations that depict the characters and objects in the story.
- Response Activity Materials:
  - Photocopies of the illustrated characters and objects in the book.
  - Felt.
  - Scissors.
  - Fabric glue or glue sticks.
  - A felt board.
  - A box to hold the felt-backed characters and objects.

**Group Size:** Individual, small group, or class.

**Scheduling:** The storybook will be read three times. Plan your storybook reading so that the first and second readings are done on one day or over two days. The Response to the Book can happen a day later.

**Preparation:** Photocopy illustrations that best depict each character and object that you want to display on the felt board. Cut out each character and object separately and glue them to pieces of felt. Trim the felt to the shape of the character or object. Set them aside in a box for the “Response to the Book” activity.

**Procedure:** Have children sit comfortably in a circle on the floor around you and do the following:

### FIRST READING:

- Introduce the title, author, and illustrator of the book. Run your finger under the title of the book as you read it.
- Provide a short introduction that states the main problem of the story.
- Read the book with expression. Offer short comments about a character’s thoughts, feelings, or motivations. Make a prediction of an upcoming event if appropriate.
- Introduce unfamiliar words and briefly pause to explain word meaning.
- After reading, have a brief discussion about the book. Help children think about what the character did, recall specific events, and use illustrations to support their thinking. Encourage children to use their new words in the discussion.

### SECOND READING:

- Read the book again. Direct children’s attention to the front and back covers of the book. Point to the pictures in the book and ask children questions, such as:
  - “What is happening here?”
  - “ What are they going to do now?”
  - “What happens next?”
- After reading, prompt a discussion. Talk about why the characters behaved as they did or how they felt. If appropriate, prompt children to connect their personal experiences to the story.

### RESPONSE TO THE BOOK:

- Take each felt-backed character out of the box and place it on the felt board. Encourage children to tell each character’s name. After you have introduced them, place them back in the box.
- Invite children to use the felt board and characters to dramatize and retell the story in their own words. Prompt children to use new words when they talk about characters and story events.

### SUGGESTED NARRATIVE PICTURE BOOKS:

*The Little Engine That Could* by Piper Watty

*The Very Hungry Caterpillar* by Eric Carle

*Goodnight Moon* by Margaret Wise Brown

*The Gingerbread Man* by Jim Aylesworth

*Goldilocks and the Three Bears* by James Marshall.

## 5. Read and Make a Collage

### Materials:

- A narrative picture book using collage as illustrations.
- Response activity materials:
  - Sheets of construction paper.
  - Sheets of colored tissue paper.
  - Wallpaper sample books.
  - Glue sticks.
  - Scissors.
  - Sheets of drawing paper: at least one for each child.

**Group Size:** Individual, small group, or class.

**Procedure:** Gather children on the floor around you. Make sure that each child can see you and the book. Hold the book so that the illustrations face the children and do the following:

### FIRST READING:

- Read the story once for enjoyment; introduce new vocabulary, inserting short definitions as you read. Provide brief comments to help children follow story events and notice characters' actions.
- After the initial reading, help children recall events by asking questions about the main characters' actions, such as: "What did the character do?" "What happened next?"

### SECOND READING:

- Reread the story. Ask a "why" question after reading to prompt children to make inferences about the story characters. For example, "Why did the character do this?"
- Help children connect their own experiences and feelings to the characters.
- Choose 3 or 4 words that are unfamiliar to children. Develop children's understanding of the new words. Explain word meanings in the context of the story. Provide situations and examples in which the words are used. Ask children to provide their own examples.

### RESPONSE TO THE BOOK:

- Turn back to either the book's cover or the first illustration and talk about how the illustrator created the picture. Ask, "What materials did the illustrator use? If possible, show some materials that artists might use to create a collage. Continue through the book, page by page, and encourage children to talk about each picture.
- Explain the collage process. Point out the layers of paper in some of the illustrations, mentioning that some overlapping pieces have straight edges as though they were cut with scissors. Point out that some pieces have rough edges as though they were torn.
- Demonstrate how to make a collage picture using paper materials. Ask children to create their own collage; they might want to illustrate one of the pages in the book.

### SUGGESTED NARRATIVE BOOKS:

*The Very Hungry Caterpillar* by Eric Carle

*The Tiny Seed* by Eric Carle

*A Snowy Day* by Ezra Jack Keats

*Whistle for Willie* by Ezra Jack Keats

*Frederick* by Leo Lionni

*Alexander and the Wind-Up Mouse* by Leo Lionni

*Lucy's Picture* by Nicola Moon and illustrated by Alex Ayliffe.

## 6. Read and Create a Watercolor Illustration

### Materials:

- A narrative picture book with watercolor illustrations.
- Response Activity Materials:
  - Sheets of drawing or painting paper: at least one for each child.
  - Watercolors.
  - Paintbrushes (varying sizes).
  - Small sponges.
  - Containers of water.
  - A smock for each child.

**Group Size:** Individual, small group, or class.

**Procedure:** Have children sit comfortably in a circle on the floor around you. Make sure that each child can see you and the book. Hold the book so that the illustrations face the children, then do the following:

- Read the story for enjoyment.
- Introduce unfamiliar words by pointing to an illustration and using your voice or gestures to convey a word's meaning. Or, provide a short explanation.
- Help children follow story events by summarizing the action in a brief comment. Observe children's understanding by paying attention to facial expressions and comments or questions.
- After reading, encourage a retelling by asking about the sequence of events. Say: "What happened first? What happened next? What happened last?" Then do a second reading to deepen children's understanding of the story.
- Use the new words in discussions of the story and at other times throughout the day.

### RESPONSE TO THE BOOK:

- Point out a picture from the book and talk about how the illustrator created the picture. Show some of the materials the illustrator uses.
- Continue through the book, page by page, and encourage the children to talk about each illustration and how it was created. For example, you might note that the illustrator used light, thin paint strokes, or wide, bold strokes. Point out which illustrations look as if they were painted with a sponge, rather than a brush.
- Encourage children to use new words when they talk about the illustrations.
- When you finish reviewing the book's artwork, have children create their own watercolor illustrations.

### SUGGESTED NARRATIVE BOOKS:

*"More, More, More," Said the Baby* by Vera Williams

*Swimmy* by Leo Lionni

*A Chair for My Mother* by Vera Williams

*Jamaica's Find* by Juanita Havill and illustrated by Anne Sibley O'Brien

*Old Black Fly* by Jim Aylesworth and illustrated by Stephen Gammell

*Wilfrid Gordon McDonald Partridge* by Mem Fox and illustrated by Julie Vivas.

## 7. Read and Make a Picture Book

### Materials:

- An informational picture book that is illustrated with photographs.
- Response Activity Materials:
  - Photographs: photos the children have brought from home, photos from classroom activities and field trips, or photos cut from old magazines.
  - Scissors.
  - Glue sticks.
  - Sheets of drawing paper (at least one for each child).

**Group Size:** Individual, small group, or class.

**Preparation:** A few days before you plan to do this activity, send a note home with the children requesting that family photos be sent to school. Explain that the photos will be used for an art activity so they will not return home in their original form.

**Procedure:** Have the children sit comfortably in a circle on the floor around you. Make sure that each child can see you and the book. Hold the book so that the photographs face children. Then do the following:

- Read the title and ask children what they think the book is about. Have them share what they know about the topic. Ask about other books they read on the same topic.
- Introduce important words from the book that they will need to know to talk about the topic. Discuss their meaning and provide examples.
- Read the book or split the book into two or three parts and read each part on a different day. Use new words as you talk about content.
- Talk about the photos and read the captions. Explain that captions give more information about a topic.
- Point out other text features specific to the book, such as the Table of Contents, bold-faced words, or diagrams. Talk about the information that they provide.

### RESPONSE TO THE BOOK:

- Turn back to the first photo in the book, either on the book's cover, or on one of the beginning pages, and talk about how the photographer used a camera to create pictures for the book. Ask, "Have you ever used a camera (real or pretend)?" "What pictures did you take?"
- Tell children that they will each make a picture story with the photos that they brought from home. Ask, "What will your story be about? Which photos do you want to use?"
- Work with small groups of children to plan their picture stories. Help them plan how many pages will be in their book and what each page will tell about. Then have them look at their photos and choose the best one for the page. When the picture books are completed, have children read them to the group. Some children might want to add their books to the class library.

### SUGGESTED INFORMATIONAL BOOKS:

*My Big Book of Everything* by Roger Priddy

*Exactly the Opposite* by Tana Hoban

*Is It Rough? Is It Smooth? Is It Shiny?* by Tana Hoban

*The Moon Was the Best* by Charlotte Zolotow and illustrated by Tana Hoban

*Everybody Works* by Shelley Rotner

*I Spy Funny Teeth: Riddles*

by Jean Marzollo and photographed by Walter Wick

## 8. Share a Fun Informational Book

### Materials:

- An informational picture book about a specific concept.
- Objects or pictures of objects that appear in the book.

**Group Size:** Individual, small group, or class.

### Preparation:

 Do the following:

- Choose an informational book about a specific concept or topic that children are learning. Select 5 to 8 vocabulary words from the book that are key to learning about the topic.
- Gather objects or pictures of objects that appear in the book. For example, if the children are learning about butterflies, you might choose a book about the life cycle of a butterfly, a book about different kinds of butterflies, or a book that tells where to find butterflies. You might want to bring in a butterfly cocoon, a butterfly collection, a butterfly net, or flowers that butterflies are attracted to. Put them on display in the room.

**Procedure:** Gather children on the floor around you. Make sure that children can see the book. Do the following:

- Tell children that the book you are going to read tells about real things. The book gives information about a topic. Talk about each object on display.
- Read the title. Discuss the photo on the cover and what the book might be about. Have children share what they know about the topic and what they would like to learn.
- Read one part of the book. Point out some of the text features, such as a chart or caption and talk about the information it provides.
- As you read, pause briefly to provide short explanations of a word's meaning. Point to an illustration to help clarify the meaning.
- Encourage children to ask questions about the topic and comment on the photos and illustrations as you read. Prompt children to use new words in the discussion.
- If children are interested, bring in other books on the same topic and read them with children.

### RESPONSE TO THE BOOK:

- Place informational books in the reading area so children can select one during choice time. Organize the informational books by topic.
- Small groups of children might read books on a topic and then work together to create a poster about information they learned.

### SUGGESTED AUTHORS OF INFORMATIONAL PICTURE BOOKS:

Aliki; Jim Arnosky; Joanne Cole; Donald Crews; Tomie dePaola; Gail Gibbons; Tana Hoban; Stephen Krensky; Seymour Simon.

## 9. We're a Part of the Story!

### Materials:

- A predictable book or narrative picture book.
- Response Activity Materials:
  - Photocopies of the illustrated characters and objects in the story.
  - Scissors.
  - Craft or Popsicle® sticks.
  - Glue or glue sticks.
  - A box to hold the stick puppets.

**Group Size:** Individual, small group, or class.

### Preparation:

- Photocopy illustrations of characters and objects that you want to use to make into stick puppets.
- Cut out each character and object and glue each one to a craft stick.
- Glue the character or object high enough on the stick so that there is enough stick left for a child to hold.

**Procedure:** Have the children sit comfortably in a circle on the floor around you. Make sure that each child can see you and the book.

Then do the following:

- Read the title, author, and illustrator. Talk about the cover illustration. Ask, “What do you think the book is about?”
- Take a picture walk, and encourage children to discuss what they think the story is about. Ask them to predict what will happen.
- Read the book. Stop briefly to explain a new word or offer comments about a character or event.
- After reading ask a “why” question to prompt children to make inferences about the story characters. For example, “Why did the character do this?”
- Give each child a stick puppet that represents a character or object in the story. Reread the book. Ask the children to listen carefully as you read. Have them raise their stick puppets when their character or object is mentioned in the story.

### RESPONSE TO THE BOOK:

- Have children use the stick puppets to dramatize the story and retell it in their own words. Encourage them to use the new words in their retellings.
- Invite children to create original stories with the stick puppets.

### SUGGESTED BOOKS:

*Goodnight Moon* by Margaret Wise Brown

*Time for Bed* by Mem Fox

*Where the Wild Things Are* by Maurice Sendak

*Winnie the Pooh* by A.A. Milne

*The House at Pooh Corner* by A.A. Milne

*No Roses for Harry* by Gene Zion.

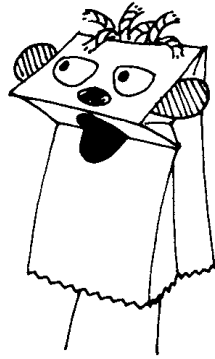
## 10. Every Puppet Tells a Story

### Materials:

- A narrative picture book with several characters.
- Response Activity Materials:

To make puppets:

- Socks.
- Small paper bags.
- Buttons.
- Scraps of felt and fabric.
- Yarn.
- Glue or glue sticks.
- Scissors.
- Markers.
- Crayons.



To make a puppet stage:

- A large appliance box with the upper front panel cut out.
- A towel draped over the back of a chair.
- A blanket or sheet hung over a card table.
- A curtain on a spring rod suspended in a doorway.

**Group Size:** Small group or class.

**Procedure:** Gather children on the floor around you.

- Read the title of the book. Provide a short introduction that states the main problem of the story.
- You might look at a few pictures in the book and think aloud to demonstrate how to make predictions about the story. For example: "Look at this picture. This story must be about . . ." "I wonder if the characters are going to . . ."
- Read the story aloud with expression. At several points in the story, pause to comment on characters' actions and feelings. Offer a short definition or explanation of an unfamiliar word, or point to an illustration to help clarify word meaning as you read the word.
- After reading ask "why" questions to encourage children to make inferences about and explain story events. Model how to answer a "why" question. Help children think about what the character did, recall specific events, and use illustrations to support their thinking.

### RESPONSE TO THE BOOK:

- Have children make puppets to represent the characters in the story. The puppets can be stuffed socks with button eyes and fabric features, or they can be lunch-bag puppets with glued-on or drawn-on features.
- Ask children to use their puppets to dramatize the story and retell it in their own words using new vocabulary.
- Work with a small group of children to create a sequel to the story and use their puppets to tell the story.

### SUGGESTED BOOKS:

*Panda Bear, Panda Bear, What Do You See?* by Bill Martin Jr.

*The Little Red Hen* by Paul Galdone

*Alice's Adventure in Wonderland* by Lewis Carroll.



## 11. A Field Trip to the Library

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:**

- Arrange for a trip to the public library. Speak with the children’s librarian to set up a date.
- Tell the librarian what topics or themes the children are working on and ask if a special story time can be arranged.
- Allow time for children to sign up for their own library cards.
- Before you go, talk to children about library rules. Most public libraries have a children’s room and some conversation is okay, but remind the children to use their “inside voices” and best manners so that they don’t disturb others.
- Discuss the library’s policy for checking out books. Demonstrate how this process works.
- Review how to care for and handle books.
- When you are at the library, show children where they can find books and other things, such as music CDs, magazines, and books on tape and CD.
- Ask the librarian to tell children about special events, such as story times, puppet shows, summer reading programs, so they can come back with family members and caregivers throughout the year.

**SUGGESTED BOOKS:**

*Check It Out! The Book About Libraries* by Gail Gibbons

*Stella Louella’s Runaway Book* by Lisa Campbell Ernst

*Beverly Billingsly Borrows a Book* by Alexander Stadler.

# Prehandwriting

## Objective

- To write to express thoughts and ideas, using letter-like forms and/or conventional print.
- To write own name, using good approximations of letters.
- To write for many purposes (signs, labels, stories, messages, and so on).

### RATIONALE

Being able to write helps children develop a sense of self. At an early age, preschoolers begin asking family members and caregivers to write signs and letters for them as a way to communicate their ideas. As they begin to “pretend write,” children use different kinds of scribbling that resembles pictures and letters. They move from drawing pictures to creating symbols to communicate and convey messages. Over time, children start to string letters together, then group letters with spaces in-between. As their early writing skills progress, children begin to more closely approximate conventional writing.

## Sequence

### SEQUENCE OF PREREQUISITE SKILLS

The following prerequisite skills are included as a general guide for planning instruction.

- Draws pictures to convey a message or tell a story.
- Prints mock letters (conventional symbols such as stars and hearts, or letters with extra lines).
- Writes letter strings from left to right (no correlation with sounds or words; no separation between letters or groups of letters).
- Writes groups of letters with spaces in-between, resembling words.
- Labels pictures with a letter; the letter is the picture’s beginning sound.
- Writes own name as well as labels for pictures.
- Employs transitional or invented spelling by writing the first letter of a word to stand for the word.
- Writes phrases and then goes on to write whole sentences.

# Teaching Activities

## 1. Let's Pretend

**Materials:**

- Clipboards and blank forms.
- Writing tools, such as markers and crayons.
- Toy telephone (old landlines and cell phones).
- Comfortable chairs, table with magazines and books.
- Doctor's uniforms.

**Group Size:** Individual or small group.

**Procedure:** Children like to engage in “pretend writing” and imitate adults by writing a letter or a note for the teacher or making a shopping list. Do the following to give children early writing experiences that demonstrate the different purposes for writing:

- Set up a doctor's office in the Dramatic Play area. Observe children as they engage in play. Join in the play and engage in various kinds of writing that often occur in a doctor's office. For example, take the role of patient and sign in when you come in for your appointment or take a clipboard and fill out the form with your personal information.
- Focus on using writing for different purposes. For example, pretend that you are the doctor and you are writing a prescription for a patient or using a clipboard with paper to write down what the patient says when you ask, “How are you feeling?”

**VARIATION:** Set up other pretend situations that provide opportunities for children to write for different purposes. Have children play house or turn an area into a restaurant, a hardware store, or a market.

## 2. Pictures About Families

**Materials:**

- Paper.
- Markers, crayons, or pencils.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Read a storybook about a family, such as *Whistle for Willie* by Ezra Jack Keats or *A Baby Sister for Frances* by Russell Hoban. Talk about the people that make up a family—mother, father, aunt, grandma, brother, sister, and so on.
- Invite children to draw families. It could be a picture of their family or an imaginary family. Ask questions that prompt children to add details to their pictures, such as glasses on their father or long curly hair on their sister.
- Ask them to name the people in their picture and write their names. Offer to write names if children are not comfortable writing on their own.

### 3. Set Up a Writing Center

**Materials:**

- White paper, construction paper, sticky notes, index cards, and other kinds of paper.
- Folders.
- Blank books.
- Writing tools, such as markers, crayons, or pencils.
- Scissors.
- Glue.
- Masking tape.
- Classroom mailbox.
- Bookcase or shelves.
- Table and chairs.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Set up a writing center so that children can experiment with a variety of writing tools and materials.
- Create a sign for the Writing Center and place it at eye level so children can read it.
- Create other signs for children to read in the Writing Center. For example, make labels for storage bins where the paper, crayons, scissors, and glue are kept.
- Allow children to draw freely on blank paper or in blank books. Ask children about their drawings to encourage them to talk about their experiences or tell their stories. Prompt children with questions to get them to provide more details.
- Ask children if they would like you to write labels for their drawings or take dictation for stories that they want to tell. Call attention to your writing, asking them to notice that you write down each word they say.

### 4. My Journal

**Materials:**

- Blank books (made of stapled sheets of paper).
- Writing tools, such as markers, crayons, or pencils.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Provide each child with a blank book to use as a personal journal. Ask them to write their name on the front cover.
- Encourage children to write in their journals every day or a few times a week. Let them know that they can write anything they want in their journals.
- Talk with children about some of the writing they can do in their journals. Model journal writing for children.
- Children can use their journal to:
  - Write letters or practice writing their name.
  - Write and draw pictures about stories they read.
  - Write their own stories and then illustrate them.
  - Record observations of a walk around the neighborhood, a science project, or information learned.
  - Write about a personal experience.
- Use children's journal entries to observe their development throughout the year.

## 5. Our Plant Book

**Materials:**

- Flower seeds.
- Pots for plants.
- Camera.
- Construction paper.
- Markers.

**Group Size:** Individual or small group.

**Procedure:** Children write to record observations. Do the following:

- Set up a Science Center. Stock the center with a variety of materials for children's exploration and a lot of writing tools and paper for children to record their observations. Have one area for growing things.
- Work with children to plant flower seeds in containers. Label each container with the name of the flower.
- Place the containers in the sunlight and have children take turns watering the seeds each day. Write a watering schedule with children. Ask them, "Who wants to water on Monday? Tuesday? and so on. Have children write their name next to the watering day they chose.
- Every few days, have children look closely at the plant and talk about its growth. Ask children to draw a picture of the plant and write about its growth. If children are reluctant to write, offer to write captions for their drawings.
- Have children share their drawings and "read" what they wrote to others in the group.
- Once several flowers have bloomed, make a book showing the stages of the plant's growth. Ask children to help you give the book a title and write it on the cover. Place the book in the classroom library.

## 6. Story Word Cards

**Materials:**

- A favorite storybook.
- 2 or 3 sets of word cards (choose 6 words from a familiar storybook).
- Write one word on each card and include a simple picture of the word as a clue to its meaning.
- Large sheets of drawing paper.
- Markers and pencils.

**Group Size:** Individual or small group.

**Procedure:** Children write to respond to a book. Do the following:

- Reread a favorite storybook and then ask a question to prompt discussion. It might be a question on how the character in the story feels about something or what the character thinks or what the character does. You might relate events in children's lives to events in the stories. Discussions based on these kinds of questions deepen children's understanding of a character's thoughts and feelings and of their own experiences.
- Ask children to draw a picture and write a caption about the book. Children probably will be inspired by the discussion they just had about story characters and events. Remind them to use the word cards to help them with their writing.
- Observe children as they work. Comment about their writing or drawings. For example, "Can you tell me about what you're writing?" Help children with letter formation if asked.

## 7. A Watch Me Grow Book

### Materials:

- An informational book.
- Writing paper.
- Writing tools, such as markers, crayons, or pencils.
- Camera.

**Group Size:** Individual or small group.

**Procedure:** Teacher models the conventions of writing. Do the following:

- Choose an informational book that fits in with your current theme. For example, if your theme is Life Cycles, you might want to read *Watch Me Grow Puppy*, a Dorling Kindersley book by Lisa Maglof.
- Introduce the book to children. Read the title and look through the pages of the book. Point out the photos and the captions that tell about the life cycle of dog, from a tiny puppy to a big dog. (I'm three days old! I'm three months old! I'm one year old!)
- Observe and discuss human growth. Ask children to bring in baby pictures and compare what they look like now to the pictures.
- Have each child make a "Watch Me Grow" book. Give each child a blank book made of stapled sheets of paper. On each page glue a photo of the child and ask the child to write a caption. Use the book as a model for children's writing.
- Offer to help children write their captions. If children prefer they can dictate their captions to you. Write exactly what the child says using standard spelling. Make sure the child can see you write. Model the conventions you are using, such as writing from left to right, leaving a space between words and adding punctuation at the end. Read the dictation back to the child when finished, tracking the print as you read it. Have the child read the dictation to themselves or another child.
- Place the completed books in the Book Area for others to read.

# Visual Discrimination

## Objective

To discriminate visually which one of four printed symbols is different.

Forms  
Uppercase Letters  
Lowercase Letters  
Words

### RATIONALE

Visual discrimination is the ability to recognize similarities and differences between forms and symbols in the environment. Visual discrimination of forms, letters, and words is prerequisite to reading. A child's success in math, science, and other subjects will depend upon his print awareness; the ability to recognize the visual characteristics that make one object, letter, or word the same as or different from another.

## Sequence

### TEACHING SEQUENCE

#### Use Concrete Objects First

As you begin to work on visual discrimination, use concrete materials, such as blocks. A child at the readiness level attaches meaning to concrete objects more easily than he does to printed symbols. Give the child opportunities to discriminate familiar objects that are in his environment. Let the child handle, as well as look at, the objects that he is to discriminate. Use the children themselves for purposes of comparing.

#### Use Printed Symbols Later

When the child seems confident of his ability to discriminate concrete objects, progress to symbols printed on the chalkboard and then to symbols printed on paper.

### SEQUENCE OF TEACHING PAGES

The tasks in this section lead the child to make successively more precise distinctions between objects or symbols. The following is a suggested sequence to use when planning activities.

#### 1. Forms

Begin with discrimination activities that involve familiar forms. Such forms as animals and toys are familiar and usually have pleasant associations for the child. The degree of difficulty should increase steadily. The child will discriminate items that are

- very different.
- somewhat different.
- the same but different in size.
- the same but face in different directions.

#### 2. Letters

The next set of tasks involves discrimination of uppercase and then lowercase letters. The child will discriminate letters that are

- very different (e, z).
- somewhat different (T, F).

#### 3. Words

Visual discrimination of two-letter and three-letter words is the last set of tasks. The child will discriminate

- two-letter and three-letter words that are very different.
- two-letter and three-letter words with different initial letters.
- three-letter words with different medial letters.
- three-letter words with different final letters.

# Recommendations for Effective Teaching

## TEACH VOCABULARY

Build a vocabulary of visual terms. Vocabulary should include

- colors (red, blue, dark green, pink).
- shapes (circle, square, triangle, rectangle).
- sizes (small, large, big, little, tall, short).
- qualities and relationships (round, happy, over, inside).
- directions (around, through, away from, toward).

## ADJUST THE LEVEL OF DIFFICULTY TO SUIT INDIVIDUAL NEEDS

The level of difficulty should be varied according to the child's needs. Adjust the degree of difference between objects to be discriminated. For example, if a child has difficulty discriminating between two similar objects (a rectangular block and a square block), have the child work with objects that are very dissimilar (a ball and a crayon).

## USE ONLY A FEW OBJECTS INITIALLY

When introducing a teaching activity, use only two or three objects. Once a child is successful with three objects, increase the number of objects to four. Add more objects, one at a time, as the child's skill level increases.

## USE A VARIETY OF MATERIALS AND COLORS

Make visual discrimination fun for children by using colorful and interesting objects. Use articles found during nature walks or items brought in by the children for sharing. Model racing cars and small animal figures should spark interest.

## GIVE ASSOCIATIONS FOR LETTERS

To help a child discriminate letters, give each letter a "personality" so that the child will more readily separate it from other letters. For example, describe the letter 'v' as a flower vase, or the letter 'b' as a stick with a ball.

## PRESENT WORDS AS PATTERNS

Present each word as a configuration of letters, not as a unit of meaning. However, you may read the word for the child.

## INCLUDE WITH OTHER ACTIVITIES

Incorporate tasks involving visual discrimination with other activities. For example:

- When you are reading picture books to the children, discuss visual differences and similarities between people, animals, and things.
- When you are exploring nature, prompt children to observe similarities and differences. For example, point to two trees and talk about their different trunks and the shapes of their leaves.

## READ WITH YOUR CHILDREN

Here are some books that children and adults will enjoy reading and talking about together.

### Informational Books

Emberly, Ed. *The Wing on a Flea*.

Marzollo, Jean. *I Spy Little Letters*. Illus. by Walter Wick.

Steiner, Joan. *Look-Alikes: The More You Look, the More You See!*

Photographed by Thomas Lindley.



# Factors That Impact Development

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Be alert to factors that might affect development.

## VISION PROBLEMS

Some vision problems that may cause difficulty in visual discrimination include astigmatism (blurring effects), poor visual acuity (inability to focus on an object or a printed symbol and perceive a single, clear image), farsightedness, and nearsightedness.

## LIMITED SPATIAL AWARENESS

Some children lack spatial awareness and, therefore, do not fully comprehend directional/positional concepts. Those children tend to have difficulty with tasks that involve visual discrimination.

## UNFAMILIAR TERMINOLOGY

The child must understand the terms alike, different, and same to follow the directions in this section. If the child does not understand these terms, be sure to teach them using familiar objects.

## INSUFFICIENT ATTENTION

Most visual discrimination tasks require the child to pay close attention. Children who lack the necessary concentration may have difficulty with tasks involving visual discrimination.

# Teaching Activities

## 1. Does It Match?

**Materials:**

- A sheet of heavy white cardboard.
- Markers.
- An assortment of objects of different shapes: a rubber band, a washer, a tongue depressor, a key, a jar lid.
- A box or other container.

**Group Size:** Individual.

**Preparation:** Trace around the objects, one by one, on the piece of cardboard. Put the objects in the box.

**Procedure:** Do the following:

- Explain to the child that he is to take an object from the box and match it to its outline on the cardboard.
- Demonstrate by matching one object to its outline.
- Give the child the box of objects, and let him match each object to its outline.
- If the child has difficulty matching the rubber band (which changes shape) to the outline, provide help.

**EXTENSION:** Trace additional shapes on the piece of cardboard and place these objects in the box. Children can play this matching activity again with new materials during choice time.

## 2. Mix and Look

**Materials:** Three identical objects and one very different object: three yellow crayons and one stapler (first set of objects); three wooden rulers and one block (second set of objects).

**Group Size:** Individual or small group.

**Procedure:** Arrange the first set of objects in a row on a table in random order. Then do the following:

- Let children study and touch the objects.
- Demonstrate for children. Explain that you are going to find the object that is different from the rest.
- Tap each object in turn until you come to the one that is different and say, "This one is not the same as the others. It is different."

- Mix up the objects and then let the child find the object that is different. Discuss ways in which it differs from the rest. If necessary, point to the objects and say: "Three are yellow crayons, one is a stapler."
- Make new rows, using new objects. Let each child take a turn finding the different object.

## 3. Shoe Mix-Up

**Materials:** Two similar pairs of children's shoes.

**Group Size:** Small group.

**Procedure:** Have children sit in a circle, then do the following:

- Ask two children who have similar shoes to take off their shoes.
- Have children shut their eyes, then put two matching shoes and one that is different in a row.
- Ask a child to point to the one that is different. Encourage the child to explain what makes that shoe different from the others.
- Try this with mittens, boots, and other articles of clothing.

## 4. If It's Different and You Know It

**Materials:**

- Several sets of objects. Each set should contain three identical objects and one very different object. For example: 8 blue crayons and 1 green crayon; 4 pairs of scissors and 1 ruler.

**Group Size:** Individual, small group, or class.

**Procedure:** Place one set of objects on a table in mixed up order. Then do the following:

- Explain to children that you are going to play a clapping game. Tell them that when you point to an object that is different from the others in the row, the children must clap once.
- Arrange the first set of objects on a table.
- Slowly, point to and touch each object as you move across the row. Give children time to respond.
- Let each child take a turn arranging and pointing to other sets of objects on the table.

## 5. Size It Up!

**Materials:** A collection of objects that are identical but are of three different sizes (beads, toy cars, leaves, plastic dishes).

**Group Size:** Individual.

**Procedure:** Place the set of objects on a table in front of the child, such as beads. Then do the following:

- Demonstrate the activity by matching a large bead to another large bead.
- Hand the child a bead of another size and ask him to find its match. Give help when needed.
- If the child experiences difficulty, let him handle not only the bead to be matched but all of the beads on the table.
- Continue the activity until all of the beads on the table have been matched according to the three sizes.

## 6. Meet Your Match

**Materials:** Two identical sets of picture cards.

**Group Size:** Class (an even number of children).

**Procedure:** Do the following:

- Give one card to each child. Explain to children that each card has a match.
- Tell children that each of them is to find the child who is holding a match for his picture card.
- Have each child hold up his card so that others can see it.
- Allow sufficient time for each child to find his match. Have each matched pair of children stand together and hold up their cards.
- When all the cards are matched, collect them, shuffle, and play the game again.

**VARIATION:** Play this game using uppercase letters, lowercase letters, or both.

## 7. Go Fish

**Materials:** One pack of “Go Fish” cards or four identical sets of picture cards.

**Group Size:** Small group.

**Procedure:** Do the following:

- Tell children that the object of the game is to get pairs of matching cards. Hold up two matching cards to show children.
- Give four cards to each child and put the rest of the pack in the center of the table.
- Have players take turns asking other players for particular cards. For example, “Do you have a red car?” If a player who is asked has the card, she gives it to the child who asked for it.
- If she does not have the card, she says, “Go fish,” and the child who asked picks a card from the pack.
- Have children set their pairs, as they get them, face up on the table.
- At the end of the game, ask children to count their pairs.

## 8. Wilma the Wallaby

**Materials:**

- Large sheets of cardboard.
- A stapler or glue.
- Markers.
- A box of shape cards (circles, squares, triangles, and rectangles).

**Group Size:** Individual.

**Procedure:** Make a large cardboard wallaby with four pockets. Mark each pocket with a different shape. Set Wilma the Wallaby on the ledge of an easel, or mount it on a bulletin board. Then do the following:

- Show the child the box of shape cards, and talk about the names of the four shapes.
- Point to the four pockets on Wilma, and explain that you want the child to put each shape from the box in the appropriate pocket.
- Take a few shape cards from the box, and show the child what to do. Then, give the child the box of shape cards and let her begin.

## 9. Forms—Very Different in Concept

**Materials:**

- 3 pieces of white chalk.
- 1 chalkboard eraser.
- Page 46.
- Pieces of blank paper.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Place the three pieces of chalk and the eraser on a table in front of the child.
- Ask the child to indicate which of the four items is different.
- Allow the child to pick up the items. If the child has difficulty telling which item is different, explain how the chalk differs from the eraser.

**PRACTICE:** Use the reproducible on page 46 for additional practice.

Ask the child to indicate which of the four pictures in each row is different from the other three.

## 10. Forms—Somewhat Different in Concept

**Materials:**

- 3 paintbrushes.
- 1 marker.
- Page 47.
- Pieces of blank paper.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Place the three paintbrushes and the marker on a table in front of the child.
- Ask the child to indicate which of the four items is different.
- Allow the child to pick up the items. If the child has difficulty telling which item is different, explain how the paintbrushes differ from the marker.

**PRACTICE:** Use the reproducible on page 47 for additional practice.

Ask the child to indicate which of the four pictures in each row is different from the other three.

## 11. Forms—Different in Size

**Materials:**

- 3 large sheets of construction paper.
- 1 small sheet of construction paper.
- Page 48.
- Pieces of blank paper.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Place the three large sheets of paper and the small sheet of paper on a table in front of the child.
- Ask the child to indicate which of the four items is different.
- Allow the child to pick up the items. If the child has difficulty telling which item is different, explain how the sheets differ from each other.

**PRACTICE:** Use the reproducible on page 48 for additional practice.

Ask the child to indicate which of the four pictures in each row is different from the other three.

## 12. Forms—Different in Direction

**Materials:**

- 4 identical mugs with handles.
- Page 49.
- Pieces of blank paper.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Place the four mugs on a table in front of the child. Position the mugs so that three of the mug handles face in one direction, while the fourth mug handle faces the opposite direction.
- Ask the child to indicate which of the four items is different.
- If the child has difficulty telling which item is different, explain how the mugs differ in direction.

**PRACTICE:** Use the reproducible on page 49 for additional practice.

Ask the child to indicate which of the four pictures in each row is different from the other three.

### 13. Uppercase Letters—Very Different

**Materials:**

- Magnetic letters, letter cards, or stencils.
- Page 50.
- Pieces of blank paper.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Arrange a row of four letters on a table. Three letters should be the same and one letter should be very different. For example: C, C, N, C.
- Ask the child to indicate which of the four letters is different.
- Allow the child to pick up the letters. If the child has difficulty telling which letter is different, let him trace the shape of each letter with his finger, and explain how the letters differ.

**PRACTICE:** Use the reproducible on page 50 for additional practice. Ask the child to indicate which of the four letters in each row is different from the other three.

### 14. Uppercase Letters—Somewhat Different

**Materials:**

- Magnetic letters, letter cards, or stencils.
- Page 51.
- Pieces of blank paper.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Arrange a row of four letters on a table. Three letters should be the same and one letter should be somewhat different. For example: M, N, M, M.
- Ask the child to indicate which of the four letters is different.
- Allow the child to pick up the letters. If the child has difficulty telling which letter is different, let him trace the shape of each letter with his finger, and explain how the letters differ.

**PRACTICE:** Use the reproducible on page 51 for additional practice. Ask the child to indicate which of the four letters in each row is different from the other three.

### 15. Lowercase Letters—Very Different

**Materials:**

- Magnetic letters, letter cards, or stencils.
- Page 52.
- Pieces of blank paper.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Arrange a row of four letters on a table. (Three letters should be the same and one letter should be very different. For example: t, o, t, t.)
- Ask the child to indicate which of the four letters is different.
- Allow the child to pick up the letters. If the child has difficulty telling which letter is different, let him trace the shape of each letter with his finger, and explain how the letters differ.

**PRACTICE:** Use the reproducible on page 52 for additional practice. Ask the child to indicate which of the four letters in each row is different from the other three.

### 16. Lowercase Letters—Somewhat Different

**Materials:**

- Magnetic letters, letter cards, or stencils.
- Page 53.
- Pieces of blank paper.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Arrange a row of four letters on a table. Three letters should be the same and one letter should be somewhat different. For example: d, d, b, d.
- Ask the child to indicate which of the four letters is different.
- Allow the child to pick up the letters. If the child has difficulty telling which letter is different, let him trace the shape of each letter with his finger, and explain how the letters differ.

**PRACTICE:** Use the reproducible on page 53 for additional practice. Ask the child to indicate which of the four letters in each row is different from the other three.

## 17. Words—Very Different

**Materials:**

- Word cards: it, go, go, go.
- Page 54.
- Pieces of blank paper.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Place the four word cards on a table.
- Encourage the child to talk about the words.
- Ask the child to indicate which of the four words is different. If the child has difficulty telling which word is different, let him trace with his finger each letter in the words, and explain to him how the words differ.

**PRACTICE:** Use the reproducible on page 54 for additional practice. Ask the child to indicate which of the four words in each row is different from the other three.

## 18. Words—Different Initial Letters

**Materials:**

- Word cards (hat, hat, hat, bat).
- Page 55.
- Pieces of blank paper.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Place the four word cards on a table.
- Encourage the child to talk about the words.
- Ask the child to indicate which of the four words is different. If the child has difficulty telling which word is different, let him trace with his finger each letter in the words, and explain to him how the words differ.

**PRACTICE:** Use the reproducible on page 55 for additional practice. Ask the child to indicate which of the four words in each row is different from the other three.

## 19. Words—Different Medial Letters

**Materials:**

- Word cards (pet, pat, pet, pet).
- Page 56.
- Pieces of blank paper.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Place the four word cards on a table.
- Encourage the child to talk about the words.
- Ask the child to indicate which of the four words is different. If the child has difficulty telling which word is different, let him trace with his finger each letter in the words, and explain to him how the words differ.

**PRACTICE:** Use the reproducible on page 56 for additional practice. Ask the child to indicate which of the four words in each row is different from the other three.

## 20. Words—Different Final Letters

**Materials:**











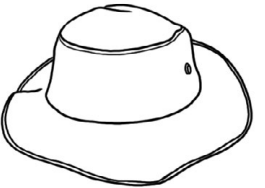





- Word cards (sit, sit, sit, sip).
- Page 57.
- Pieces of blank paper.

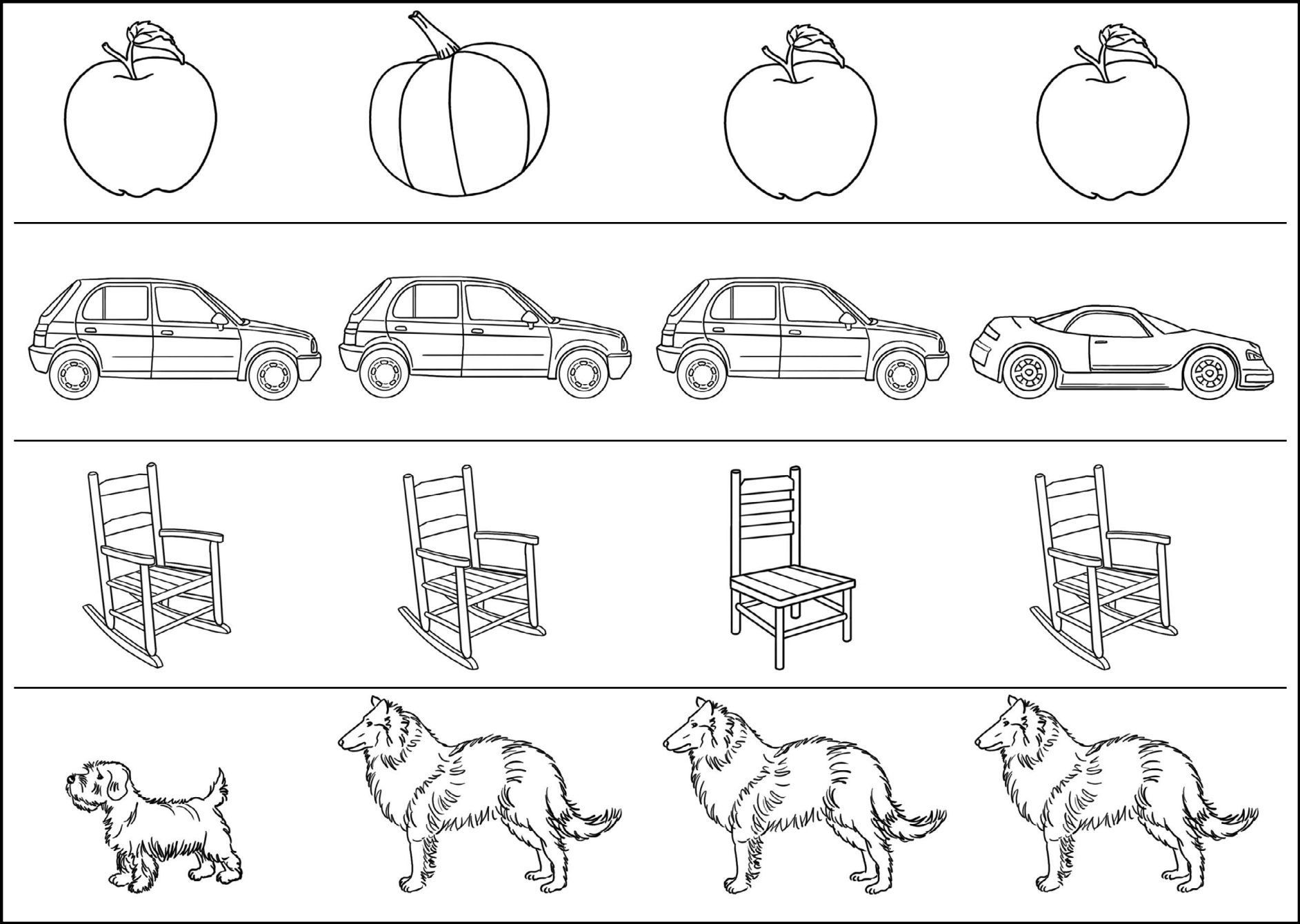
**Group Size:** Individual or small group.

**Procedure:** Do the following:

















- Place the four word cards on a table.
- Encourage the child to talk about the words.
- Ask the child to indicate which of the four words is different. If the child has difficulty telling which word is different, let him trace with his finger each letter in the words, and explain to him how the words differ.

















**PRACTICE:** Use the reproducible on page 57 for additional practice. Ask the child to indicate which of the four words in each row is different from the other three.





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C

Y

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**tin**

**tin**

**tin**

**tip**

**cob**

**cot**

**cob**

**cob**

**man**

**map**

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**rug**

**run**

**rug**

# Print Awareness and Concepts

## Objective

- To demonstrate an awareness of concepts of print and different functions of print.
- To recognize the association between spoken and written words by following print as it is read aloud.

### RATIONALE

Research indicates that children who have begun to handle books and engage in pre-reading behaviors at an early age are better prepared when they begin school. Children learn that print has functions as a first step in learning to read and write. The first words they read are those that are most important to them—their name, familiar labels, and signs. Children then learn about the conventions of print, or the appropriate reading behaviors that involve reading from left to right, top to bottom, and knowing that there are spaces between words.

## Sequence

Although each child's developmental rate and pattern is unique, the following is a sequence of skills that children typically develop through the age of seven years. Use the skill sequences as a general guide when planning your instruction.

- Shows increasing awareness of print in classroom.
- Shows an interest in different functions and forms of print, including signs, letters, newspapers, lists, messages, menus, and books.
- Holds book right side up.
- Points to the title of a book.
- Turns the pages of a book one at a time.
- Turns pages of a book from front to back in a single direction.
- Begins to track print from top to bottom, left to right.
- Shows progress in recognizing the association between spoken and written words by following print as it is read aloud.
- Shows an awareness that letters form words and words are separated by spaces.

# Teaching Activities

## 1. What Does This Say?

**Materials:** Different kinds of print: books, posters, catalogs, recipes, school menu, newspapers, magazines, grocery lists, maps, message pad with a note, price tags, center signs, labels on cubbies, and other reading materials.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Display a variety of literacy materials in the classroom and provide a lot of opportunities to make use of them. Include materials that reflect the cultural backgrounds of your children.
- Take a walk with the children around the room and stop and talk about the many examples of print. Identify labels and signs and read them to the children. Help children become aware that print carries a message.
- Stop and take a look at the print on your bulletin board. For example, you might have a neighborhood map posted. Find your school and then read the street name aloud. Read the school lunch menu for the day. Ask children what they will eat. Point to the words and read them aloud.
- Refer to labels and signs spontaneously throughout the day as you engage in activities. For example, "I'm writing Juan on your picture so everyone knows that you did this." "Your name is on the turns list. You can go into the Block Area now."
- Continue your walk around the room identifying print materials. Encourage children to ask about each piece of print. For example, "What does this say?" "Please read this sign." The goal is to develop an understanding of the different functions of print.

## 2. Let's Read Together!

**Materials:** A favorite book.

**Group Size:** Individual.

**Procedure:** Do the following:

- Have the child select a favorite book to read. Model reading behaviors, such as reading from top to bottom and left to right.
- Tell the child that you will read the book to him, but he can turn the pages.
- Give the book to the child and show him how to hold it right side up. Ask him to show you the front cover and the back cover. Then ask him to point to the words in the title as you read it aloud.
- As you read, track the print from top to bottom, left to right. When you come to the end of the page, ask the child to turn the page.
- When you reach the last page of the story, have the child say "the end."

**EXTENSION:** Invite children to pretend read to a friend, doll, or stuffed animal. Observe whether children are using appropriate reading behaviors.

## 3. Write It Down, Then Read It!

**Materials:** Writing materials in the Dramatic Play area.

**Group Size:** Individual.

**Procedure:** Do the following:

- Observe children in the Dramatic Play area or another center. Participate in children's play to help them:
  - extend a story they are writing.
  - create a sign or a menu for the bake shop.
  - write a note to the baby's mother or engage in some other kinds of writing.
- Model appropriate writing behaviors as they dictate their ideas to you. Start at the top left of the page, moving from left to right, leaving a space between words, a return sweep, and punctuation mark.
- Read aloud what you wrote. Track the print from top to bottom, left to right as you read. Give the writing to the children to incorporate into their play. Observe children's reading behaviors as they "pretend read."

# Reads Uppercase and Lowercase Letters

## Objective

To read uppercase and lowercase letters.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

a b c d e f g h i j k l m n o p q r s t u v w x y z

### RATIONALE

Knowledge of the alphabet is an essential component of learning to read and write. Key findings of The National Early Literacy Panel Report identify alphabet knowledge—knowledge of the names of printed letters and sounds associated with printed letters—as a key predictor to later literacy achievement.

## Sequence

### SEQUENCE OF PREREQUISITE SKILLS

The following prerequisite skills are included as a general guide for planning your instruction. Before a child is expected to read letters, she should be able to:

- visually discriminate forms and letters. (See Visual Discrimination.)
- recite the alphabet.

### TEACHING SEQUENCE

#### Initially, Teach at the Receptive Level

Initially, teach a child to read letters at the receptive level. For example, have the child match identical letters. When the child can consistently match identical letters, have her point to a letter when you say the letter name.

#### Next, Teach at the Expressive Level

Once the child can consistently match and identify letters, teach her to name the letters. For example, show the child the letter d, and have her say its name.

# Recommendations for Effective Teaching

## TEACH UPPERCASE LETTERS FIRST

It is best to teach uppercase letters first. They are easier to distinguish from each other. Begin with letters in the children's names. Then do other letters, a few at a time. Once the children can identify uppercase letters, introduce lowercase letters. Begin with letters in the children's names then do the others.

## CALL ATTENTION TO SIMILARITIES AND DIFFERENCES IN LETTERS

Similar letters may be difficult to distinguish. Help the child distinguish a letter by giving her special tips for that letter. For example, if the child confuses b with d, show the child a card with the word "bed." Draw a bed over the letters. Write b at the head of the bed; write d at the foot of the bed. Say, "This word is bed. It begins with b and ends with d." This gives a strong visual memory for the child each time she writes the letter.

b d

## TEACH CHILDREN TO READ ALTERNATE FORMS

The letters a and g can be written in two different ways. To avoid confusion, show children the a and g in a book and the a and g on the alphabet chart in the classroom.

a a g g

## DISPLAY AN ALPHABET BORDER AND PROVIDE DESK TAPES

As an aid to teaching letter names, display an alphabet border and refer to it often. Pair each letter with a picture of an object that begins with that letter. An alphabet can be taped to each child's desk to provide a model for writing.

## PROVIDE CHILDREN WITH NAME CARDS

Prepare a name card for each child and use it to label a child's cubby. You can use name cards in a variety of ways to get children to recognize and read letters: in the Writing Center where children use them as a model when they write; on "turns lists" so children know which centers they go to on a particular day; on a job chart so children know their assignment for the week.

## ATTACH MEANING TO LETTERS

Letters have little or no meaning for some children. Children who have had very limited experience with letters in their environment do not attach meaning to them. Rather than presenting letters as symbols, associate letters with sounds and concrete objects as much as possible (e.g., associate the letter B with a Bee; P with the vegetable Peas; S with See; J with the bird Jay, and so on; use environmental print/logos to convey that letters/words have meaning).

## INCLUDE WITH OTHER ALPHABET ACTIVITIES

Encourage children to read letters while engaged in a variety of alphabet activities. For example,

- children name the letters when doing an alphabet puzzle.
- during transitions you hold up a letter card, and say, for example, "If your name begins with this letter, read the letter and then line up for lunch."
- During circle time you hold up a name card and ask the child whose name it is to read the first letter or all the letters in her name.
- children write their own names and read the letters as they write using name cards as models.

## READ WITH YOUR CHILDREN

Here are some books that children and adults will enjoy reading and talking about together.

### Alphabet Books

Beylon, Cathy and Fremont, Victoria.

*A Is for Astronaut.*

Carter, David. *Alpha Bugs.*

Girnis, Margaret. *ABC for You and ME.*

Hoban, Tana. *26 Letters and 99 Cents.*

## Factors That Impact Development

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Be alert to factors that might affect development.

### CHILD HAS VISION PROBLEMS

Some vision problems that may cause difficulty in reading letters include astigmatism (blurring effects), poor visual acuity (inability to focus on an object or a printed symbol and perceive a single, clear image), farsightedness, and nearsightedness. If you suspect a vision problem, refer the child to a medical professional.

### CHILD HAS ARTICULATION PROBLEMS

Some children have articulation problems and may substitute, omit, or distort sounds. Articulating a letter name is a different skill from that of reading a letter. Therefore, a child may be able to read a letter but may simply pronounce some letter names incorrectly. Provide the child with an accurate speech model. Have the child practice any letter name that the child finds difficult to articulate. Some articulation difficulties will improve with time and practice. Others may need the help of a medical professional.

# Teaching Activities

## 1. Magnetic Match

### Materials:

- Two sets of uppercase or lowercase magnetic letters.
- A magnetic board.

**Group Size:** Individual or small group.

**Procedure:** Line up four or five letters vertically on the left-hand side of the magnetic board. On the right-hand side of the board, randomly place the same four or five letters. Then do the following:

- Point to one of the letters in the left-hand column, and say the name of the letter.
- Ask a child to find the same letter on the other side of the board. For example, point to a B and say, "This is a B." Follow this procedure for all the letters that you wish to teach.

**EXTENSION:** If children are ready, have them match lowercase letters to their uppercase counterparts. For example, point to an uppercase B and say, "This is an uppercase B. Can you find a lowercase b on the board?" To reinforce letter shapes, encourage children to handle the letters.

## 2. Hungry Mice

### Materials:

- Twenty-six tag board wedges of cheese.
- Twenty-six tag board mice.
- A marker.

**Group Size:** Individual or small group.

**Preparation:** Make a set of lowercase letter cards by printing a different lowercase letter on each wedge of cheese. Make a set of uppercase letter cards by printing a different uppercase letter on each mouse.

**Procedure:** Place both sets of letter cards in front of the child. Have her match each mouse with its corresponding wedge of cheese.

## 3. Match and Snap

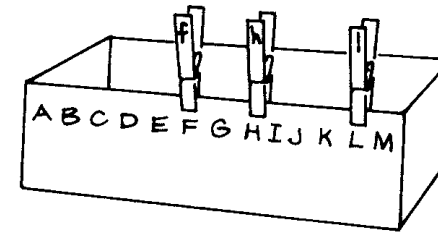
### Materials:

- A shoebox.
- Twenty-six wooden clothespins.
- A marker.

**Group Size:** Individual.

**Preparation:** Do the following:

- Print the uppercase alphabet along the top of an open box. The alphabet should be printed about an inch below the rim. You may split the alphabet so that half the letters are on one side of the box and the other half are on the other side.
- Using a marker, print the uppercase letter on the clothespins.



**Procedure:** Do the following:

- Show the child how to attach the clothespins to the edge of the box. Position three clothespins on the box above the letter that makes a match.
- Invite the child to match the remaining clothespins to their corresponding letters.

### EXTENSIONS:

- Repeat this activity with lowercase letters.
- Once the child can match uppercase or lowercase letters, adapt the materials so that the activity will require the child to match uppercase letters to lowercase letters. For example, print the lowercase alphabet on the box, and print uppercase letters on the clothespins.



#### 4. Can You Find a Match?

**Materials:** Two identical sets of lowercase or uppercase letter cards.

**Group Size:** Small group.

**Procedure:** Do the following:

- Shuffle the two packs of cards, and place them face down on a table in front of the children.
- Have one child take a turn selecting any two cards, one from each deck. As the child selects two cards, she holds up the cards so that the other children can see them and then read the letter names.
- If she selects two identical cards, she keeps the pair of matching cards and takes a second turn to pick another two cards. If she selects two cards that do not match, she returns them to their original position, face down on the table.
- The next child takes a turn and repeats the routine.
- When all the cards have been matched, have the children count their pairs to see who has the most.

**EXTENSION:** Have children match lowercase letter cards to uppercase letter cards.

#### 5. Letter Walk

**Materials:**

- Footprints cut from brown paper or wrapping paper.
- A marker.
- Tape.

**Group Size:** Individual or small group.

**Preparation:** On each of the footprints, print a different uppercase or lowercase letter. Arrange the footprints in a walking pattern on the floor, and tape them in place.

**Procedure:** Do the following:

- Tell children that they are going to walk and read letters at the same time.
- Demonstrate the letter walk. Look at the first footprint. Read the letter aloud and then step on the footprint.
- One by one, invite children to walk on and read all the footprints.

#### 6. Grab Bag

**Materials:**

- Letter cards for each of the uppercase or lowercase letters.
- A paper bag.

**Group Size:** Small group.

**Procedure:** Do the following:

- Place uppercase and lowercase letter cards into a paper bag.
- Have a child reach into the bag without looking, pull out a letter card, and name the letter. One at a time, give the other children a turn.
- When all the letter cards have been identified, have the children place all the cards on a table and match the uppercase letters with the lowercase letters.

#### 7. Alphabet Hopscotch

**Materials:**

- Sheet of wrapping paper or bulletin board paper (6' long).
- A marker.

**Group Size:** Individual or small group.

**Preparation:** With the marker, draw a hopscotch diagram on the sheet of paper. In each section of the diagram, print a different letter of the alphabet. The letters may or may not be in alphabetical order.

**Procedure:** Demonstrate for the children by hopping onto one letter and saying its name. Give children a turn. Have them say the letter's name as they hop on the letter.

**VARIATION:** Play this game in the schoolyard. Use washable sidewalk chalk to draw a hopscotch and write the letters in the boxes.

## 8. Musical Letters

**Materials:**

- Letter cards, one for each child.
- A tape/CD player.
- A tape or CD.

**Group Size:** Small group or class.

**Procedure:** Do the following:

- Have children sit in a circle on the floor.
- Give each child a letter card.
- Tell children that when you start the music, they should start passing the letter cards around the circle.
- Tell them to keep passing the cards until you stop the music. When it stops, go around the circle and ask children to name the letter on the card they are holding.
- Continue the activity until each child has had a chance to read several letters.

## 9. Go Fish

**Materials:** Four identical sets of letter cards (playing-card size).

**Group Size:** Small group.

**Procedure:** Do the following:

- Pass out five cards to each child, and put the rest of the pack in the center of the table. Explain to the children that the goal is to get a set of four letter cards that are the same.
- Have players take turns asking other players for particular cards by saying the names of letters (e.g., “Do you have any Ps?”).
- If a player has the card, she gives it to the player who asked for it. If she does not have the card, she says, “Go fish,” and the child who asked picks a card from the pack.
- Once a player has four of the same card, she places the set of four face up on the table.
- At the end of the game, have players count how many sets of four they have.

## 10. Letter Riddles

**Materials:** A set of uppercase letter cards for each child.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Give each child a set of letter cards. (Use letter cards A–M the first time you play Letter Riddles. Use letter cards N–Z the second time you play.) Have each child randomly place the letter cards face up on her desk.
- Tell children that you will give them a letter clue. Their job is to find the letter, and then say its name. For example, “I am thinking of a letter that is the first letter in David’s name. What letter is it?” Ask each child to hold up the correct letter card and read the letter name.

**EXTENSION:** Play the riddle game again, but this time use lowercase letters.

# Prints Uppercase and Lowercase Letters in Sequence

## Objective

To print uppercase and lowercase letters in sequence from memory.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

a b c d e f g h i j k l m n o p q r s t u v w x y z

a b c d e f g h i j k l m n o p q r s t u v w x y z

## RATIONALE

Children need to be able to write letters to perform many tasks in school. To become proficient, a child must develop the skill of printing letters to the automatic level—printing each letter without stopping to recall how the letter is formed. The child will be able to print letters at the automatic level only after frequent practice and review of letter formation.

## Sequence

### SEQUENCE OF PREREQUISITE SKILLS

The following prerequisite skills are included as a general guide for planning your instruction. Before a child is expected to print letters in sequence from memory, he should:

- develop fine-motor and visual-motor skills.
- visually discriminate forms and letters. (See Visual Discrimination.)
- read uppercase and lowercase letters. (See Reads Uppercase and Lowercase Letters.)

### SEQUENCE OF TEACHING ACTIVITIES

#### 1. Begin with Tracing Activities

To help a child learn to form letters correctly, allow the child to trace letters. Be sure that the letters have directional arrows to help the child learn the direction of each letter stroke.

#### 2. Provide Copying Activities

Once the child has experience with tracing letters, have him copy letters. Provide the child with good models and continue to stress the proper direction and form of each letter.

#### 3. Provide Printing Activities

When the child can copy letters, have him print the letters in sequence. Models for printing should still be available, but the child should use a model only if he cannot recall the form of a particular letter.

# Recommendations for Effective Teaching

## TEACH UPPERCASE LETTERS FIRST

It is best to teach uppercase letters first. They are easier to distinguish from each other. Once children can write uppercase letters, introduce lowercase letters.

## TEACH A FEW LETTERS AT A TIME

Begin with letters in children's names and other letters children want to know how to print when they write. Then introduce other letters, a few at a time. Once the children can print uppercase letters, introduce lowercase letters. Begin with letters in the children's names, then do the others.

## USE LANGUAGE EXPERIENCE CHARTS

Use large lined charts to record children's experiences and stories. As you write their words, call attention to how the letters are formed. For example, "This is a T. I write a vertical line, a line that goes down, then I add one line that goes across at the top, like this."

## DETERMINE WHICH HAND IS DOMINANT

Some children at the readiness level switch the pencil from one hand to the other as they write. A child who continues to change hands might have difficulty remembering the directional patterns involved in printing. As soon as possible, determine which is the child's dominant hand.

- One way to determine which hand is dominant is to have the child print letters with one hand then print the same letters with the other hand.
- Evaluate the samples to determine which hand is dominant.
- Encourage the child to use the dominant hand when he writes. If the child forgets which hand to use, help him remember by placing a reminder, such as a sticker, on the wrist of his dominant hand.

## PROGRESS FROM LARGE TO SMALL

Give the child an opportunity to trace and copy letters by using the large-muscle movements of the arm before using the small-muscle movements of the hand and fingers.

- Trace and copy letters on the chalkboard.
- Trace and copy letters in sand.
- Trace and copy letters using finger paint.

Gradually reduce the size of the letters before having the child use lined paper.

## TEACH THE TERMS DOWN, UP, LEFT, AND RIGHT

Be sure that the child understands the terms *down*, *up*, *left*, and *right*. Use those terms when giving directions for printing letters. If the child is not familiar with those terms, guide the child's hand and say the words as you make the movements. This will help develop the child's awareness of the terms as well his printing skills.

## PROVIDE APPROPRIATE-SIZE FURNITURE

Provide an appropriate-size desk or table and chair for each child. When the child sits at his desk, he should be able to place his feet flat on the floor, and the desktop should be below his chest level.

## CHECK PENCIL POINTS

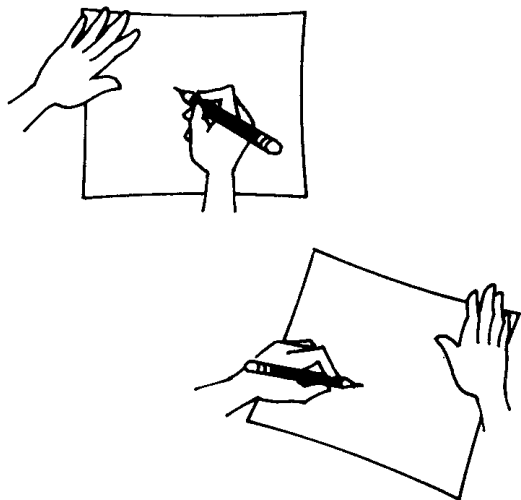
It is important that a beginning writer use a pencil with a point that is not too sharp. If the point is too sharp, the pencil will be difficult to use and will make holes in the paper.

## DEMONSTRATE CORRECT PENCIL GRASP

Optimally, the child's fine-motor coordination of his writing hand will develop enough to allow him to grasp the pencil with his thumb and index finger. The child's index finger should not extend beyond the painted portion of the pencil.

### DEMONSTRATE HOW TO POSITION PAPER CORRECTLY

The paper should be aligned as shown below, depending on which hand the child uses for printing.



Show the child how to hold the top edge of the paper to keep the paper in place. Remind him not to use his writing hand to hold the paper. If the child has difficulty maintaining this position, secure the paper in the correct position with tape.

### PROVIDE EXTENSIVE PRACTICE

Printing requires a child to execute small and precise movements. The child must think about how to perform the necessary movements to print a letter. With a lot of practice children can reach a level of automaticity, when a child can print a letter without deliberately thinking about how to form it. Practice should be teacher-directed with a lot of teacher modeling on letter formation. Give praise for any and all improvement that results from practice. Provide handwriting models for use in centers around the classroom.

### READ WITH YOUR CHILDREN

Here are some books that children and adults will enjoy reading and talking about together.

#### Alphabet Books

Feelings, Muriel. *Jambo Means Hello: Swahili Alphabet Book*.

Illus. by Tom Feelings.

Geisert, Arthur. *Pigs From A to Z*.

Girnis, Margaret. *ABC for You and ME*.

# Factors That Impact Development

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Be alert to factors that might affect development.

## VISION PROBLEMS

Some vision problems that may cause difficulty in reading letters include astigmatism (blurring effects), poor visual acuity (inability to focus on an object or a printed symbol and perceive a single, clear image), farsightedness, and nearsightedness. If you suspect that a child has a vision problem, refer him to the appropriate medical professional.

## LACK OF READINESS FOR THE SKILL

If a child appears to lack readiness, it is probably best to delay the teaching of printing. Engage children in activities that use manipulatives to strengthen the muscles in their hands and increase dexterity, such as cutting, pasting, working with clay, coloring, and drawing.

## WEAK FINE-MOTOR COORDINATION

A child might have difficulty printing letters if his fine-motor coordination is weak. Look for the following indicators:

- The small muscles of the child's fingers and thumb are rigid.
- The child has difficulty controlling the movement of the small muscles of the fingers and thumb.
- The child has difficulty touching each fingertip with the thumb of the same hand.
- The child grasps a pencil with more than two fingers.
- The child clutches a pencil in the palm of the hand.
- The child holds a pencil more than or less than one inch above the point.

## POOR EYE-HAND COORDINATION

Printing activities require a child to use visual information to control hand movement. Some children have poor eye-hand coordination. They may have difficulty changing the direction of movement when printing letters.

## LETTERS REVERSED

Reversal problems often disappear as a child matures. It is common for young children to reverse letters when first learning to form them.

# Teaching Activities

## 1. Dough Letters

### Materials:

- A lump of play dough for each child.
- Models of letters targeted for instruction.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Give children a lump of play dough, and have them roll it into “snakes.”
- Demonstrate how to form the snakes into the shapes of letters.
- Invite children to practice forming the snakes into the shapes of letters. Provide your models for the children to use as they work.
- Talk about and name the letters as they are formed. For example, you might say, “Yes, that’s a B, the first letter in Ben’s name.” Or, “Yes, that’s a B; it has the sound /b/. That’s the first sound in Ben’s name.”

## 2. Sandy Letters

### Materials:

- Fifty-two tagboard squares: 5" × 5".
- Glue.
- Sand or salt.

**Group Size:** Individual.

**Preparation:** Do the following:

- Make one set of lowercase letters and one set of uppercase letters.
- Use glue to print a letter on each tag board square.
- Pour some sand over the glue and shake off any excess.
- Allow the glue to dry.

**Procedure:** Give the child a set of letters. Have the child trace the letters with his finger. Talk about how to form each letter as the child traces, using terms *up*, *down*, *right*, and *left*.

**EXTENSION:** You might have children choose the letters in their name and place them in the correct order. Ask children to trace the sandy letters in their name.

## 3. Print in Sand

### Materials:

- A shallow box (the top of a shoebox, a candy box) for each child.
- Sand.
- Models of the letters to be printed.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Fill each box ¼" to ½" deep with sand.
- Give children a box or box top and a model of the letter that they are to print.
- Ask children to print the letter in sand.
- Once children have shown you their letter, have them erase the letter by gently shaking the box.
- Have children practice printing letters in the sand using the models that you have provided.

## 4. Letters Out of Sequence

**Materials:** A set of alphabet cards, uppercase or lowercase.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Place a sequence of alphabet cards in the chalkboard tray. Place one or two letters out of order. For example, place the letter cards in the following order: E, G, H, I, and F.
- Ask children to look carefully at the letters and decide if they are in the correct order. If not, ask them to rearrange the letters in proper sequence.
- Give each child a turn to sequence a group of 5 letters correctly. If a child has difficulty, ask him to look at the alphabet tape on his desk or the bulletin board.

**VARIATION:** This activity may also be done with magnetic letters on a magnetic board, or with alphabet blocks on the floor.

**EXTENSION:** If children are ready, increase the number of letters you display for children to sequence, or place more than two letters out of order.

## 5. Alphabet Cards

**Materials:** A set of alphabet cards, uppercase or lowercase for each child.

**Group Size:** Individual, small group, or class.

**Procedure:** Give children their own set of cards. Ask them to arrange the cards in the correct order in the chalk tray, or on a table. After they have sequenced the letters, have children point to each letter and say its name.

**EXTENSION:** Once children have arranged the cards in sequence, encourage them to use the letter cards to write their first and last names.

## 6. Which Letter Are You?

**Materials:**

- Twenty-six sheets of colored construction paper.
- A marker.

**Group Size:** Class.

**Procedure:** Do the following:

- Print one alphabet letter on each sheet of construction paper. You may wish to print the uppercase letter on one side and the lowercase letter on the reverse side. If possible, laminate the cards for durability.
- Provide each child with one of the letter cards.
- Have children hold up their cards and ask them to go to the front of the room and work together to arrange themselves in alphabetical sequence. If possible, take a photo of the children—in alphabetical sequence—and use it to make an alphabet poster.

## 7. Missing Letters

**Materials:**

- A chalkboard.
- Chalk.
- A chalkboard eraser.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Write the alphabet on the chalkboard.
- Leave out a few letters but substitute a blank line in place of each missing letter.
- Tell children that some of the letters are missing. Have a child come to the chalkboard and complete the sequence by printing each missing letter and saying its name.
- Provide help if children have difficulty printing. Model writing the letters as you say the stroke description. For example, If a child wants to print E, a missing letter, say as you write, “Pull down straight. Slide right. Slide right. Slide right.”
- Give each child a turn. If a child has difficulty, he can turn to the group for help and say, “What letter is missing?”
- After all children have had a turn, recite the alphabet as a group.

**VARIATION:** Give each child a worksheet of the alphabet with some letters missing. Have children print the missing letters on the blank lines.

## 8. Finger Paint Letters

**Materials:**

- Finger paints.
- Sheets of glossy finger-paint paper for each child.
- A smock for each child.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Print the alphabet in uppercase letters on the chalkboard for the children to see.
- Give each child a smock and encourage children to help each other button or tie their smocks.
- Provide each child with finger paints and finger-paint paper.
- Have children copy the alphabet in sequence on their paper.
- Once the children can complete this without difficulty, ask them to try to print the letters without looking at the letters on the board.

**VARIATION:** You might have children do this activity with lowercase letters when they are ready.



## 9. Let's Print Uppercase Letters in Sequence A–Z

**NOTE:** Two handwriting styles are provided for both uppercase and lowercase letters: Zaner-Bloser and D'Nealian. Choose the style that you'd like your children to use.

**Materials:**

- D'Nealian, page 73; Zaner-Bloser, page 74  
Make one copy for you and one for each child.
- A pencil for each child and one for you.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Give each child a copy of page 73 or page 74 and a pencil.
- Direct children's attention to the letters on the page. Explain that the small numerals and directional arrows show the sequence of pencil strokes to follow.
- Remind children that they will start at the top and trace in the direction of the arrow.
- Turn your page to face the children and demonstrate by tracing the A. Begin at the top and trace in the direction of the first arrow.
- Have children trace the A several times on their copy. Make sure that each child is tracing in the correct direction. Verbalize the direction as the children trace.
- After children can trace a letter correctly and without difficulty, have them copy the letter in the space provided on the blank lines.
- Have children continue tracing and then copying the letters.
- After children have practiced copying the letters, encourage them to practice printing the letters in sequence from memory on primary lined paper.

## 10. Let's Print Lowercase Letters in Sequence a–z

**NOTE:** Two handwriting styles are provided for both uppercase and lowercase letters: Zaner-Bloser and D'Nealian. Choose the style that you'd like your children to use.

**Materials:**

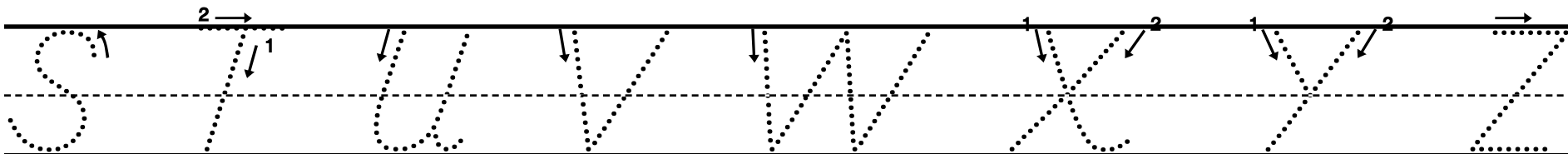
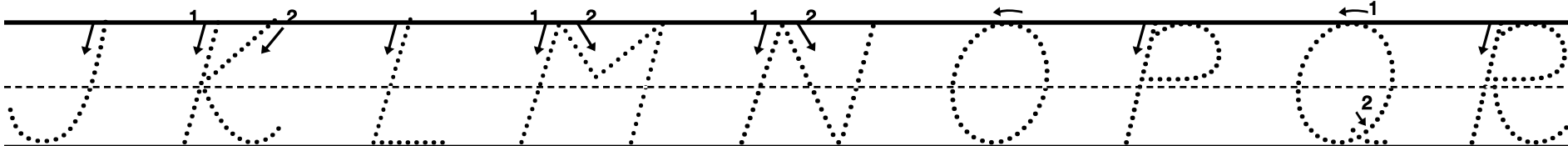
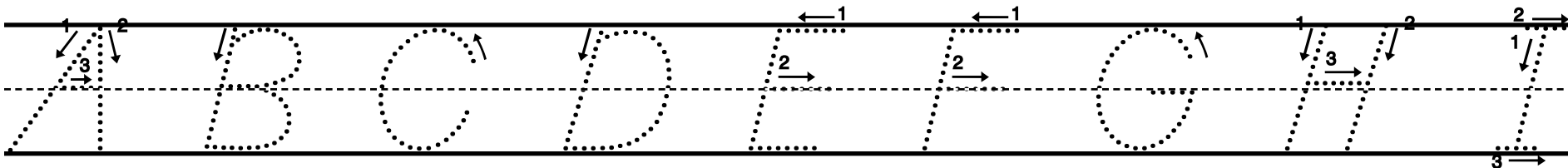
- D'Nealian, page 75; Zaner-Bloser, page 76  
Make one copy for you and one for each child.
- A pencil for each child and one for you.

**Group Size:** Individual or small group.

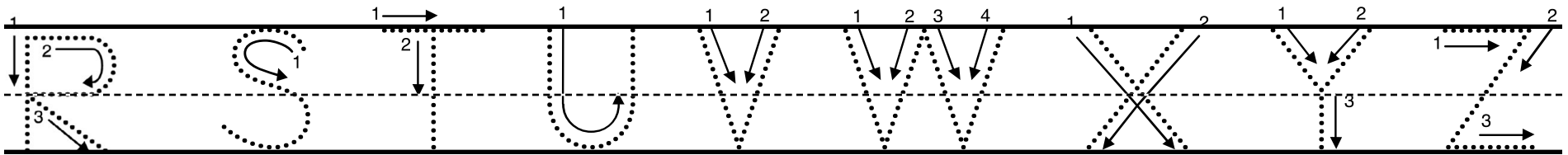
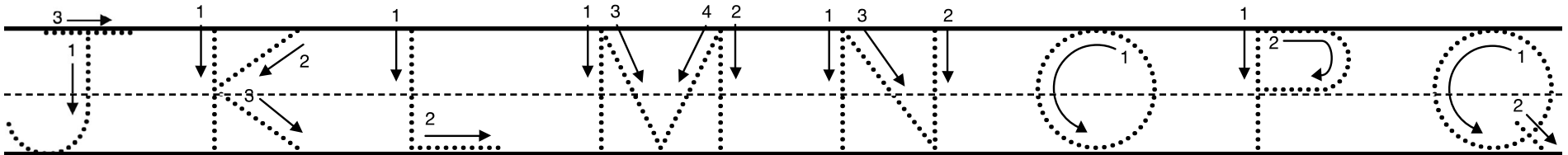
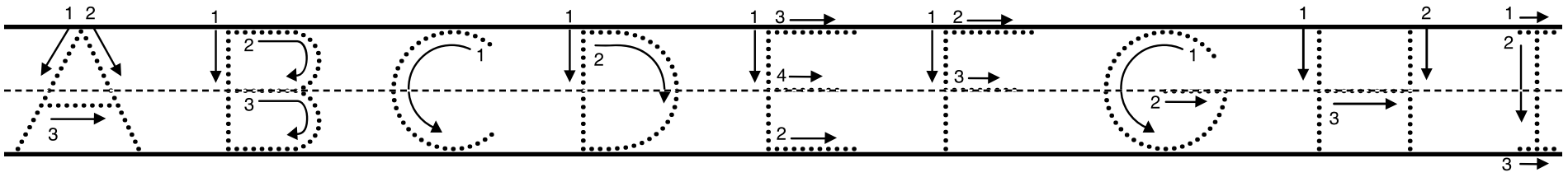
**Procedure:** Do the following:

- Give each child a copy of page 75 or page 76 and a pencil.
- Direct children's attention to the letters on the page. Explain that the small numerals and directional arrows show the sequence of pencil strokes to follow.
- Remind children that they will start at the top and trace in the direction of the arrow.
- Turn your page to face the children and demonstrate by tracing the a. Begin at the top and trace in the direction of the arrow.
- Have children trace the a several times on their copy. Make sure that each child is tracing in the correct direction. Verbalize the direction as the children trace.
- After children can trace a letter correctly and without difficulty, have them copy the letter in the space provided on the blank lines.
- Have children continue tracing and then copying the letters.
- After children have practiced copying the letters, encourage them to practice printing the letters in sequence from memory on primary lined paper.

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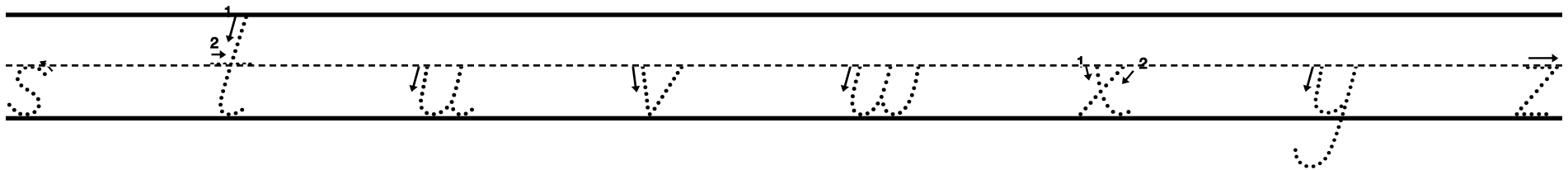
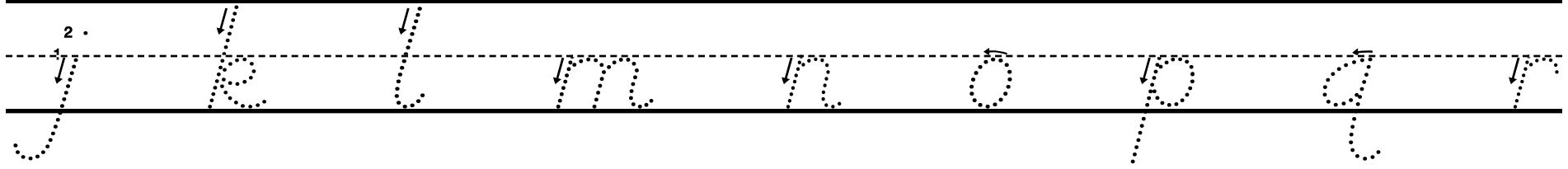
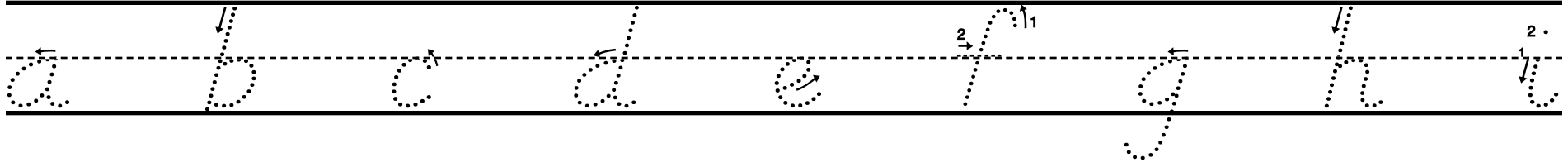


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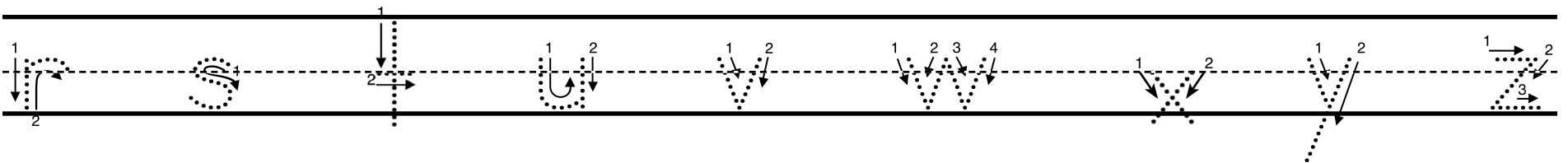
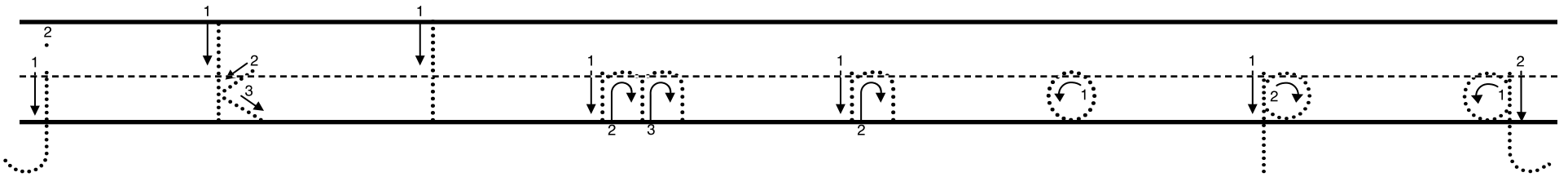
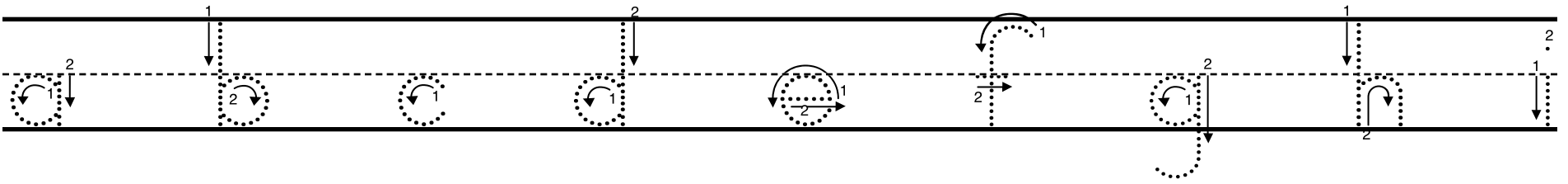
Zaner-Bloser™ style. Zaner-Bloser is a trademark of Zaner-Bloser, Inc.

NAME: \_\_\_\_\_



D'Nealian® style. D'Nealian® is a registered trademark of Scott, Foresman and Co.

NAME: \_\_\_\_\_



Zaner-Bloser™ style. Zaner-Bloser is a trademark of Zaner-Bloser, Inc.

# Prints Personal Data

## Objective

To print personal data on request.

first letter of first name	age
nickname	telephone number
real name	middle name
last name	address

### RATIONALE

Printing personal data is the most basic early writing task required of a person in our society. Children provide their personal information often—when they write their name and address on a mailing envelope; when they sign their name to get a library card; when they sign up for a center; when they write their name on a drawing. Learning to write personal information helps children develop a sense of identity.

## Sequence

### SEQUENCE OF PREREQUISITE SKILLS

Although each child's developmental rate and pattern is unique, the following is a sequence of skills that children typically develop through the age of seven years. Use the skill sequence as a general guide when planning your instruction. Before a child is expected to print his personal data, he should be able to:

- give his personal data verbally.
- use writing tools.
- visually discriminate forms and letters. (See Visual Discrimination: Print Awareness.)
- read uppercase and lowercase letters. (See Reads Uppercase and Lowercase Letters.)

### TEACHING SEQUENCE

#### 1. Teach the Child to Communicate Data Orally

Once a child can give his personal information orally teach him to write the information.

#### 2. Plan a Teaching Strategy for Writing

When teaching a child to print his personal information, refer to the data listed at the beginning of this section. Some children will be able to write some of the information already. For that reason, attempt to teach each child what he needs to learn rather than to follow a particular sequence.

# Recommendations for Effective Teaching

## PROVIDE ACTIVITIES TO DEVELOP FINE-MOTOR SKILLS

Writing requires that a child have sufficient fine-motor strength and coordination. Activities that involve manipulating small objects (e.g., picking up coins; threading beads onto a string or shoelace) or using muscles in the hands (e.g., molding play dough or clay; finger painting) help to increase muscle strength and dexterity.

## ADAPT TEACHING STRATEGIES TO MEET CHILDREN'S NEEDS

Teach children new skills based on what they already know. For example, if a child already prints his name in uppercase letters, teach him lowercase letters. When he learns to write lowercase letters, teach him to use uppercase letters to begin his name, street name, and other proper nouns.

## PRACTICE WRITING LETTERS

Use the reproducible pages for writing letters on pages 73–76 to give children practice.

## PROVIDE MODELS FOR EACH CHILD

Place name cards on each child's desk, chair, and cubby. The printing on the name cards should be clear and large enough so that children can trace the letters with their fingers. Encourage children to use the name cards as a model for writing.

Your printing is the most important model for children. Encourage the children to watch you form letters as you write.

## READ WITH YOUR CHILDREN

Here are some books that children and adults will enjoy reading and talking about together.

dePaola, Tomie. *Andy That's My Name*.

Grode, Phyllis. *Sophie's Name*. Illus. by Shelly O. Haas.

Henkes, Kevin. *Chrysanthemum*.

Mosel, Arlene. *Tikki Tikki Tembo*. Illus. by Blair Lent.

# Teaching Activities

## 1. Sandy Cards

### Materials:

- 3 pieces of poster board (3" × 8") for each child.
- White school glue or glue sticks.
- Sand.

**Group Size:** Individual, small group, or class.

**Preparation:** Do the following:

- Using glue or a glue stick, print each child's name on poster board. If you are printing a child's full name, use a longer piece of poster board.
- Sprinkle sand over the cards, completely covering the glue letters.
- Let the glue dry.
- Shake off any excess sand.

**Procedure:** Do the following:

- Give children their "sandy cards". Tell them to hold their cards so that the letters are right-side up.
- Have each child trace the shape of each letter in his name.

**EXTENSION:** When children have learned their names, make "sandy cards" for addresses and telephone numbers. Have children trace the shapes of the letters and numbers.

## 2. Arrange the Letters

### Materials:

- Many small pieces of poster board (1½" × 1½").
- 3 pieces of poster board (3" × 9") for each child.
- A marker.
- An envelope for each child.

**Group Size:** Individual, small group, or class.

**Preparation:** Do the following:

- Using a marker, print each letter of a child's name, address, and telephone number on small pieces of poster board.
- Print the child's full name on one of the large pieces of poster board.
- Print each child's address and his telephone number on other large pieces.

**Procedure:** Do the following:

- Give the child his name card, his letter cards, and an envelope.
- Have the child use the individual letter cards to form his name. Tell him to use his name card as a model.
- Have the child store his name card and letter cards in his envelope.
- Have each child follow the same procedure for his address and phone number.





### 3. Type Personal Data

**Materials:**

- A computer.
- A printer if available.
- Poster board to make a sign.
- Pieces of poster board (3" × 9") to make a name card, telephone-number card, and address card for each child.
- A marker.

**Group Size:** Individual.

**Procedure:** Do the following:

- In the computer area of your classroom hang up a sign that reads, "Can You Type Your Name?" Select a type style or font that approximates the style of letters that your children are learning. (Remember that there are two forms for a and g, the book form and the letter form on your alphabet chart.)
- Be sure that children know how to turn on the computer and access the program you are using. You might prefer to have the computers turned on and the program on screen so children can get right into the activity.
- Give the child his name card. Let him type his name, using his name card as a model.
- Once he learns to type his name, give him his address and telephone number cards and have him type those as well.
- Print out his personal data so he can match it to his cards.



### 4. Twisted Letters and Numbers

**Materials:**

- Chenille stems.
- Pieces of poster board (3" × 9") to make a name card, an address card, and a telephone-number card for each child.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Give children their name card and enough chenille stems to form the letters in their name.
- Show children how to twist the chenille stems to make different shapes and letters. Demonstrate how you can twist two or more stems together to form some letters and numbers.
- Have children form the letters of their name.
- Invite children to use chenille stems to make the letters and numerals in their address and telephone number.

### 5. Dough Data

**Materials:**

- Play dough for each child.
- Pieces of poster board (3" × 9") to make a name card, an address card, and a telephone-number card for each child.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Show children how to roll the play dough to make long, thin "snakes."
- Demonstrate how to shape the snakes into letters and numerals.
- Give children some play dough. Have them shape the dough to form the letters of their names.
- Have children use play dough to form each letter and numeral in their addresses and telephone numbers. Then have them match their play dough words and numbers to their name, address, and telephone number cards.

## 6. Sandbox Writing

### Materials:

- A shallow box or shoebox lid for each child.
- Sand.
- Finger paint.
- Sheets of finger-paint paper.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Pour sand into each shallow box. The sand should be between  $\frac{1}{4}$ " and  $\frac{1}{2}$ " deep.
- Demonstrate how to write letters and numerals in sand. Have the child watch as you slowly write his name, address, or phone number in the sand.
- Gently shake the box to erase the data.
- Write each letter or numeral, and have the child copy it in the sand. After, have the child gently shake the box to erase the data.

**VARIATION:** Do the following:

- Give children some finger paint and a sheet of finger paint paper. Using their hands, have them spread the paint on the paper.
- Have children use their index finger to write their name.
- After, have children spread the paint with their hands to "erase" their name and write it again.
- Repeat the routine and have children write their address and telephone number.

## 7. Write It on the Dotted Line

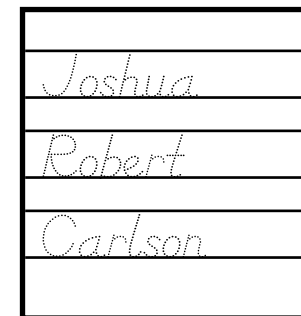
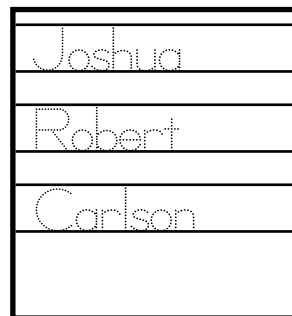
### Materials:

- A piece of primary writing paper for each child with their name written on it.
- A pencil for each child.

**Group Size:** Individual, small group, or class.

**Preparation:** Write a child's name on primary writing paper. Use dots instead of solid lines to write the data.

**Procedure:** Give each child his writing paper and a pencil. Have him trace each letter with his pencil. Later, have him copy his name on the bottom of the paper.



## 8. Ring the Bell!

### Materials:

- Sheets of construction paper.
- Marker.
- String or ribbon spirals to attach receivers to telephone base.
- Bulletin board.
- Pushpins.
- Each child's telephone-number card.
- A bell.

**Group Size:** Small group or class.

**Preparation:** Do the following:

- From construction paper, make a large, colorful telephone base and one telephone receiver for each child.
- Pin the telephone base in the center of a bulletin board.

**Procedure:** Do the following:

- Give children a card with their telephone number printed on it and a construction-paper telephone receiver.
- Ask children to write their telephone number on the receiver. When a child can write his complete telephone number on the receiver, congratulate him and let him ring the bell.
- Pin each child's receiver to the bulletin board, connecting it to the telephone base with a string or ribbon spiral.

## 9. Print Your Home Address

### Materials:

- Sheets of construction paper.
- A marker.
- Scissors.
- A primary pencil for each child.
- Each child's address card.

**Group Size:** Individual, small group, or class.

**Preparation:** Use a marker to draw a construction-paper house for each child. Cut out each house.

**Procedure:** Have children print their address on the house. They can use their address card as a model for writing. Display the houses with their addresses on a bulletin board in the classroom.

# Phonological Awareness Skills

## Objective

- To demonstrate an ability to identify and make oral rhymes.
- To demonstrate an ability to manipulate the sounds of spoken language: blend phonemes to say words, segment words into syllables or phonemes, add, delete, and substitute sounds from words to make new words.

### RATIONALE

Initial development of phonological awareness occurs between 48 and 60 months of age. During preschool, children begin to acquire a sensitivity to the sounds of spoken language. Key findings of The National Early Literacy Panel Report identify phonological awareness—the ability to detect, manipulate, or analyze spoken language independent of meaning—as a consistent and strong predictor to later literacy achievement.

## Sequence

### SEQUENCE OF SKILLS

The following is a sequence of skills and behaviors that children typically develop through the age of seven years. Use the following sequence as a general guide when planning your instruction.

- Fills-in with a second word in a rhyming word pair when reciting a familiar poem or rhyme.
- Detects rhyme with picture support.
- Makes oral rhymes.
- Can clap words in a sentence.
- Can clap parts, or syllables, in a name.
- Can identify how many syllables in familiar words.
- Orally puts together two familiar words to make a compound word.
- Orally puts together the two syllables of familiar two-syllable words.
- Orally takes apart compound words into their component words.
- Identifies the initial sounds common in a few words.
- Identifies the final sounds common in a few words.
- Orally blends the onset and rimes of words.
- Can delete the onset from a spoken word.
- Can add the onset to a spoken word.
- Can change the onset of a word to make a new word.
- Can segment the sounds in words.

# Teaching Activities

## 1. It's Rhyme Time!

**Materials:** Favorite nursery rhymes.

**Group Size:** Individual or small group.

**Procedure:** Choose one of the children's favorite nursery rhymes, such as Eentsy, Weentsy Spider or I'm a Little Teapot. Then do the following:

- Recite the rhyme "I'm a Little Teapot" and have children listen to the sounds of the language. Recite the rhyme again and invite children to join in.
- Repeat the rhyme, but this time say it slowly. Tell the children that some of the words in "I'm a Little Teapot" rhyme. Recite the first two lines and comment that *stout* and *spout* rhyme. Ask children if they can think of other words that rhyme with stout and spout. (*shout, pout, about, out*)
- Read the next two lines and say *shout* and *out* rhyme.  
*I'm a little teapot, short and **stout**.*  
*Here is my handle; here is my **spout**.*  
*When I get all steamed up, hear me **shout**,*  
*"Tip me over, and pour me **out!**"*
- Recite this Teddy Bear rhyme. When you come to the second word of a pair of rhyming words, pause and encourage children to chime-in and say the rhyming word. For example:  
*Teddy bear, Teddy bear,*  
*Turn **around**.*  
*Teddy bear, Teddy bear,*  
*Touch the [pause] **ground**.*  
*Teddy bear, Teddy bear,*  
*Touch your **shoe**.*  
*Teddy bear, Teddy bear,*  
*That will [pause] **do**.*

**EXTENSION:** Have children identify two rhyming words in each line of the finger play. For example, say:

- "What word sounds like *shoe*: *one* or *two*?"  
*One, **two**, buckle my [pause] **shoe**.*
- "What word sounds like *sticks*: *six* or *five*?"  
*Three, **four**, knock at the [pause] **door**.*  
*Five, **six**, pick up [pause] **sticks**.*  
*Seven, **eight**, lay them [pause] **straight**.*  
*Nine, **ten**, a good fat [pause] **hen!***

## 2. Which One Rhymes?

**Materials:** Make six sets of simple picture cards on squares of oak tag and laminate them. Choose three words for each set. Use words such as: *cat, hat, boy; shop, hop, sad; duck, truck, mop; pig, wig, shoe*. Two of the words in each set should rhyme.

**Group Size:** Individual or small group.

**Procedure:** Gather children around you on the floor. Then do the following:

- Display one set of picture cards, such as the cat, boy, and hat.
- Point to each picture and say its name.
- Say: "Does *cat* sound like *hat* or *boy*?" As you say each word slowly, point to the corresponding picture card.
- If children need additional support in identifying rhyming words, hold up the picture cards for *cat* and *hat*. Ask children to listen carefully to the sounds at the end of these words. Then hold up the card for *boy* and say the word. Ask, "Does *boy* have the same ending sounds as *cat* and *hat*?"
- Continue this routine with other sets of picture cards.

### 3. It's Time to Clap Your Name!

**Materials:**

- Children's name cards.

**Group Size:** Small group or class.

**Procedure:** Have children sit comfortably in a circle on the floor and do the following:

- Tell children to listen carefully as you say their names. Ask them to listen for the parts or syllables in their name.
- Say, "I've been thinking about your names. Some names like Lee have only one part or syllable. When I think of *Lee*, I think of clapping one time." Say *Lee* and clap one time.
- Say the name of other children. "Julie has two parts. So when I think of *Ju-lie*, I clap two times." Hold up Julie's name card and read it together.
- Say the name Stuart. "Clap each part *Stu art*. When I think of Stuart I clap two times." Repeat. Hold up Stuart's name card and read it together.
- Invite children to clap some names with you. Begin with one and two syllable names. Then advance to names with more than two syllables. For each name, say it, clap it, and read it.

**VARIATION:** Clap other words. Have children suggest words or characters' names from a favorite book. Have children clap the syllables.

### 4. How Many Parts?

**Materials:**

- Draw pictures of animals on squares of oak tag and laminate.  
Or, display picture cards of animals and insects.

**Group Size:** Individual, small group, or class.

**Procedure:** Gather children on the floor around you and do the following:

- Display several animal pictures on the chalkboard ledge or put them on a bulletin board.
- Point to each picture and have children name the animal.
- Point to the first one again. Tell children that you are going to say the animal name and clap each part or syllable.
- Say *bird* and clap when you say it. Explain that *bird* has one part, or syllable. Invite children to say the word *bird* and clap when they say it.

- Repeat this routine with other animal names, such as *cat*, *dol-phin*, *buff-a-lo*, *din-o-saur*, *cam-el*, *horse*, *dog*, *grass-hop-per*, *kan-ga-roo*, *hip-po-pot-a-mus*, *gi-raffe*, and so on.

**VARIATION:** Invite children to look around the room to find an object of interest. Encourage them to take turns naming the objects and clapping the syllables. For example: *stap-ler*, *pa-per*, *blocks*, *ea-sel*, *sink*, *ta-ble*, *chair*, *com-pu-ter*.

### 5. Put Them Together and What Do You Get?

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Gather children on the floor around you.
- Say: "I am thinking of two words. They are *foot* and *ball*. (Emphasize each word as you say it.) What word do you get when you say *foot* and *ball* together?" (*football*)
- Continue this routine with other compound words, such as *rainbow*, *baseball*, *fireworks*, *flashlight*, *mailbox*, and *backpack*.
- Display pictures of compound words on a bulletin board, such as *sailboat*, *raincoat*, *snowman*, *hairbrush*, *fireplace*, *paintbrush* and *seagull*.
- Follow the routine described above. After children put the words together to form a compound word, have them find the picture of the word on the bulletin board, say the word, and clap its parts.

**EXTENSION:**

- Identify the component parts of a compound word. "I'm thinking of the word *baseball*. I want you to tell me the words you hear in *baseball*." (*base ball*)
- Then ask, "What word would you get if you say *baseball* without the word *base*?" (*ball*)
- If children are ready for this task, have them follow this routine for other compound words such as *backyard*, *seashell*, *snowstorm*, and *raindrop*.

## 6. Name That Snack!

### Materials:

- Make picture cards of foods (each food word should contain two syllables): taco, pizza, carrots, apples, raisins, crackers, and yogurt.

**Group Size:** Individual, small group, or class.

**Procedure:** Have children sit in front of a display of picture cards containing different kinds of food. Then do the following:

- Point to the picture of the taco. Say: "What word do you get when you say *ta* and *co* together?" What word do you get when you say *rai* and *sins* together? Have children say the blended words.
- Continue this routine until children have blended each two-syllable word.

**EXTENSION:** Display pictures of foods with three syllables: spaghetti (spa ghe tti), hamburger (ham burg er), burrito (burr i to). Ask what word do you get when you say spa ghe tti together? Have children say the blended word.

## 7. What Sound Is the Same?

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Gather children around you and do the following:

- Tell children that they will listen to several words that begin with the same sound.
- Say, "Listen to these words: *ball*, *button*, and *bacon*."
- Repeat the words, emphasizing the beginning sound. Say, "All the words begin with the same sound, /b/." Repeat the words again.
- "Now I'm going to say another word. Tell me if it begins like *ball*, *button*, and *bacon*. I'm thinking of the word *bell*. Does it start like *ball*, *button*, and *bacon*? Yes, it does. It starts with /b/."
- Continue the routine with other words that begin with /b/ such as *bat*, *ball*, *butter*, and *biscuit*. After modeling several times, have children participate and tell if the words start with the same sound.
- Repeat the routine with other groups of words that begin with /m/: *mop*, *muffin* and *moon*; /t/: *toes*, *tent*, *tub*; /s/: *sand*, *soap*, *sun*.

**VARIATION:** Repeat the routine, but have one word begin with a different sound. For example, *ring*, *rock*, and *nest*.

## 8. Thumbs Up, Thumbs Down

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Gather children around you and do the following:

- Tell children that they will listen to two words. Ask them to put their thumbs up if both words start with the same sound. If the words do not start with the same sound, ask them to put their thumbs down.
- Say: "Do *sun* and *sock* start with the same sound?" Repeat the words, emphasizing the beginning sound. "Yes, *sun* and *sock* start with the same sound, /s/."
- Repeat the routine with other word pairs. Look to see if children have their thumbs up. Some children may need more time and practice to understand what you mean by "the sound at the beginning of the word."
- Change the routine so that children listen to two words that have different beginning sounds. Say: "Do *moose* and *button* start with the same sound?" Repeat the words, emphasizing the beginning sound in each word. "No, *moose* and *button* do not start with the same sound. *Moose* starts with /m/. *Button* starts with /b/." Ask children for other words that begin with /m/ and /b/."
- Repeat the routine with word pairs that have the same beginning sounds and different beginning sounds.

**VARIATION:** Vary the task by working with groups of three words. For example: *ring/rake/row*; *roof/sun/sand*; *seal/six/sad*; *sun/tan/tie*; *mop/mouse/man*; *vase/mat/van*; and so on.

**EXTENSION:** Playing a "thumbs up/thumbs down" game is a visual way of assessing children's understanding of initial sounds. As you play the game, make note of children who are not identifying initial sounds correctly. Provide additional practice. Play the picture matching game. Point to a picture and say, "This is a *cat*. *Cat* begins with /k/. This is a picture of a *kite*. *Kite* begins with /k/. Listen to the words as I say them again: *cat*, *kite*. Both words start with /k/. Provide many opportunities to teach this concept.



## 9. Sing a Song of B's

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Gather children around you and do the following:

- Introduce a song with words that start with the same sound. For example, sing the following words to the tune of "Twinkle, Twinkle, Little Star."

*What sound starts these words you know:*

Bagel, ballgame, bounce, and bow

Beach and baby, big, and bell?

*What sound starts each, can you tell?*

*They all start with /b/, you see.*

*Name a word that starts with **b!***

- First sing the song all the way through, then say, "Many of the words in the song start with the same sound. I'm going to sing it again, and this time I want you to listen for words that start with the same sound."
- Ask children if they can tell you any words that start with the same sound. If they have difficulty, say a few words: *bagel, bounce, bow*. Say, "What sound do you hear at the beginning of each word? /b/ Are the beginning sounds the same? Repeat the words and have children listen for /b/ at the beginning."
- Sing the song again, emphasizing the words in lines 2 and 3. Ask children to identify words that start with the same sound. (Line 2: bagel, ballgame, bounce, bow start with /b/; Line 3: beach, baby, big, bell start with /b/)
- Sing the song again and ask children to chime in with rhyming words (know, bow; bell, tell; see, b).
- Make up new lyrics for the song, and repeat the routine. Here's an example that uses words that begin with /m/.

*What sound starts these words you know:*

Mother, man, map, and mow

Moss, mushroom, milk, and May?

*What sound starts each, can you say?*

*They all start with /m/, you see.*

*Name a word that starts with **/m/ me!***

## 10. Name That Word!

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Gather children around you and do the following:

- Tell children that you are going to say a word broken into parts and that you need them to put the word back together. (The parts of these words are called onset and rime. Onset is anything before the vowel; rime is the vowel and anything after it in the syllable.)
- "I am going to say words. Listen as I blend the two parts together, c . . . at, cat."
- Repeat the routine with m . . . ouse, mouse.
- "Now it's your turn to blend parts to make words." Say the word parts, then have the children say the word.
  - b . . . and
  - f . . . ish
  - h . . . at
  - k . . . ite
  - b . . . arn
  - n . . . est
  - p . . . est

**EXTENSION:** Play "I Spy" with children. Display picture cards. Say: "I spy a m-op." Invite a volunteer to point to a picture card with a mop on it and say the word.



## 11. Put Sounds Together

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Gather children around you and do the following:

- Play a clue game, “I am thinking of . . . .” In this clue game, children blend individual sounds together and say words.
- Introduce the clue game. Say: “I am thinking of something I can wear on my head, and it has the sounds: /h/ /a/ /t/. What is it?” Have children say the sounds with you. Then ask them to say the sounds quickly to say the word, /h/ /a/ /t/, hat. The word is *hat*.
- Have children continue to practice with more words with sounds they are learning and sounds they learned previously.

**EXTENSION:** Continue this activity with either picture clues or objects found in the classroom. For example:

- “I am thinking of something that is bright and is found in the sky. It sounds like /s/-/u/-/n/. What is it?” Have children say the sounds with you. Then ask them to say the sounds quickly to say the word, /s/ /u/ /n/, sun. The word is *sun*.
- I am thinking of something you can use for cooking soup. It sounds like /p/-/o/-/t/. What is it?” (pot)
- “I am thinking of something that goes “cluck, cluck, cluck.” It sounds like /h/-/e/-/n/. What is it?” (hen)

## 12. Break It Down!

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:**

- In this activity, children segment a spoken word into its individual sounds, or phonemes.
- Introduce the activity. Say: “I am going to say a word. I want you to tell me all of the sounds you hear in the word. Listen carefully: /k/ /a/ /t/, cat. What sounds do you hear in *cat*.” Say each sound as children tap out each sound.
- How many sounds do you hear in *cat*? Children should say /k/ /a/ /t/. Three sounds. Let’s say the sounds together: /k/ /a/ /t/, *cat*.
- Continue to practice with words using other short vowel, one-syllable words, such as: *map*, *ten*, *sip*, *hot*, *rug*.

## 13. Sound Addition

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:**

- In this activity, children make a new word by adding a sound or phoneme to an existing word.
- Introduce the activity. Say: “Listen to the sounds in *at*, /a/ /t/. Say the sounds with me. What word do you have if you add /m/ to the beginning of *at*? (*mat*). Say the sounds in *mat* with me: /m/ /a/ /t/.
- Continue practice by adding consonant sounds to these words: *at*, *an*, *in*, *it*, and *on*.

## 14. Delete a Sound

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:**

- In this activity, children recognize the word that remains when a sound is removed from another word.
- Introduce the activity. Say: “Listen to the sounds in *pin*: /p/ /i/ /n/. Say the sounds with me. What is *pin* without the /p/? *Pin* without the /p/ is *in*.
- Continue practice by removing beginning consonant sounds from words to make new words. (*bat* without *b*, *at*; *part* without *p*, *art*; *mall* without *m*, *all*.)

## 15. Substitute a Letter to Change a Word

**Materials:** Picture cards.

**Group Size:** Individual, small group, or class.

**Procedure:**

- In this activity, children substitute one sound for another to make a new word.
- Introduce the activity. Show children a picture of a mop. Say: “This is a mop. Say the sounds with me: /m/ /o/ /p/.”
- “What word do we have if we change /m/ to /h/? Say the sounds with me /h/ /o/ /p/. Let’s say the sounds quickly to say the word: /h/ /o/ /p/, *hop*.”
- Continue practice using short vowel phonograms, such as: *map/tap*; *pet/set*; *bia/wia*; *hop/top*; *buu/ruu*.

# Number Concepts

## Objective

To demonstrate number concepts to ten.

### RATIONALE

Young children have an informal understanding of quantity. They know if someone gets more crackers than they do. Teachers build on this early interest to develop a sense of numbers and operations as well as mathematical competencies. Counting is a fundamental skill on which children build higher-level math skills. Rational counting is the ability to name “how many” by associating a number name with a quantity of objects. The skill of counting objects in two sets and determining the total quantity comes before the basic computation skills of addition and subtraction.

## Sequence

### TEACHING SEQUENCE

#### Teach the Child One-to-One Correspondence

The basis for counting to determine “how many” is one-to-one correspondence. One-to-one correspondence is the assigning of one and only one number to each object in a set. Requiring a child to create one-to-one matching between objects helps her understand that each object in a set is represented by one and only one number.

#### Teach the Child to Count Aloud as He Touches Each Object

Touching an object while saying the number name aloud helps reinforce the one-to-one correspondence involved in counting. If the child touches objects as she counts aloud, you will know if she is skipping numbers or giving two number names to a single object.

#### Teach the Child to Tell the Total Quantity

Once the child can successfully touch each object while counting aloud, have her repeat the last number stated to tell the total quantity.

#### Teach the Child to Tell Only the Quantity

Once the child can successfully count aloud and tell the total quantity, have her count the objects silently and state only the total quantity aloud.

#### When Joining Sets, Teach the Child to Count Consecutively

Teach the child to count consecutively when counting objects in two separate sets. Many children have difficulty counting when the sequence is interrupted. Demonstrate counting consecutively by assigning aloud the next number in sequence to the first object of the second set.

#### Begin by Joining a Set of Only One to Another Set of Objects

When a child is first joining sets, have her join a set of only one object to another set of objects. For example, if you are teaching the child to join sets to make a total of six, have her join a set of one to a set of five.

### SEQUENCE OF TEACHING ACTIVITIES

#### Initially, Use Concrete Objects

When you begin teaching rational counting, use concrete objects. A child at the readiness level attaches meaning more easily to concrete objects than to printed material. Give the child opportunities to work with familiar objects. It’s fun to use the children themselves to demonstrate the counting of objects.

#### Next, Use Pictures of Objects

After the child exhibits competence in counting concrete objects, use pictures of objects on the chalkboard and on paper.

# Recommendations for Effective Teaching

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## INTRODUCE COUNTING

While children are engaged in activities throughout the day, count objects. Count aloud slowly for the child. Then, have the child count with you. Start by counting two or three objects. After the child can count three objects without help, continue with four objects. Continue to increase the number of objects as each quantity is learned. Have the child count a variety of different objects (blocks, children, cars in the parking lot, raisins in a bowl).

## GIVE CLUES TO THE CHILD

If a child is counting and unsure of the next number, give the child a clue by providing the beginning sound of the number. For example, say, /s/ for *seven*, /f/ for *five*, and /n/ for *nine*.

## USE INTERESTING OBJECTS

A child may be more attentive and engaged in learning number concepts if you provide objects that she finds interesting. For example, if you know that a child collects shells, occasionally use shells for a counting activity.

## ENCOURAGE THE CHILD TO COUNT ON HER FINGERS

A child's fingers are very convenient counters. Show the child how to count on her fingers. By using her fingers for math activities, a child can develop fine-motor skills and perceptual skills. Children discontinue counting on their fingers once they have mastered counting and developed effective computational skills.

## SHOW QUANTITIES IN DIFFERENT ARRANGEMENTS

To give a child experience in conserving number, display identical quantities to be counted in different arrangements. For example, arrange one set of four objects with large spaces between the objects, and arrange another set of four objects close together. Have the child count the number of objects in each set.

## PROVIDE OPPORTUNITIES FOR PRACTICE AND REVIEW

After children have learned to count a specific quantity of objects, most children will need frequent review and practice until counting is mastered. An effective instructional program will include various activities for practice and review.

## READ WITH YOUR CHILDREN

Here are some books about counting that children will enjoy reading.

Berenstain, Stanley and Janice Berenstain. *Inside, Outside, Upside Down*.  
Rosen, Michael. *We're Going on a Bear Hunt*. Illus. by Helen Oxenbury.  
Vail, Rachel. *Over the Moon*. Illus. by Scott Nash.

# Factors That Impact Development

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Be alert to factors that might affect development.

## LIMITED UNDERSTANDING OF BASIC COUNTING PRINCIPLES

Many children learn rote counting easily but have difficulty with rational counting because they may not understand some basic counting principles. For example, a child may not understand:

- each object is counted once and only once.
- when counting a set of objects, each object has a number associated with it.
- the last number stated when counting tells how many are in the set.
- when counting objects in two sets to determine a total quantity, a child begins counting the objects in the second set with the next number in sequence.
- the order in which objects are counted does not change the quantity of the objects. (For example, an object that was first counted as number three can be number five when it is counted a second time.)

## LIMITED CONCRETE EXPERIENCES

Children may learn the sequence of number names (counting) easily through chants, songs, and games. However, the ability to count meaningfully is more complicated. A child needs to have many concrete experiences to develop an understanding of one-to-one matching. Developing the ability to apply a number concept to a collection of objects requires different types of concrete experiences over time. It's important not to rush this developmental process.

# Teaching Activities

## 1. A Dozen Eggs

### Materials:

- An egg carton.
- Twelve plastic eggs.

**Group Size:** Individual or small group.

**Procedure:** Teach children one-to-one correspondence. It is the basis for learning how to count. Do the following:

- Place the egg carton and the twelve eggs on a table in front of the child.
- Point out the twelve empty compartments of the egg carton. Tell the child to place one egg in each compartment. When the child is finished, talk to her about what she did. For example, say:

“How many eggs did you place in each compartment?”

“Did you have any eggs left over?”

“Did you have the same number of eggs as compartments?”

“Did you have one egg for each compartment?”

- Say: “Just as you put one egg in each compartment, we say one number for each object when we are counting.”

## 2. Going on a Picnic

### Materials:

- A blanket: optional.
- Sets of picnic items: a set of paper plates, a set of paper cups, a set of paper napkins, a set of plastic spoons.

**NOTE:** The quantity of each set of items should correspond to the number of children in the group.

**Group Size:** Small group. Initially, begin with three or four children.



**Procedure:** Teach children one-to-one correspondence. Seat the children at a table or have them sit cross-legged on a blanket. Tell them that you are going to have a pretend picnic. Then do the following:

- Take turns passing out the picnic items. Explain that each child will get one.
- Place a paper plate in front of each child and ask: “Do you have one plate?” When the children confirm that they each have a plate, say: “We have the right number of plates. Each child has one plate.”
- Invite one of the children to pass out the cups. Then talk about what the child has done. Ask:
  - “Do we have enough cups?”
  - “Do we have any extra cups—more cups than we need?”
  - “Do we have the same number of cups as we have children?”
 It might be helpful for some children to count the cups and then count the children. Say, “Is the number the same?”
- Have the children continue passing out the picnic items. Make sure that each child gets one of each item.

### 3. Let's Count!

**Materials:** A set of objects, such as books, shells, blocks, jars, cups. The number of objects in the set should represent the number you wish the children to count.

**Group Size:** Individual or small group.

**Procedure:** Teach children to count aloud as they touch each object. Display a set of objects on a table, then do the following:

- Have a child count the objects.
- Rearrange the objects several times, asking the child to count them again to reinforce that no matter how different the arrangement, the quantity always remains the same.
- To reinforce one-to-one matching, have the child touch an object and say its number name aloud as she counts it.

**NOTE:** Some children find it helpful to push an object away from the group once it has been counted.

- Give each child an opportunity to count the objects. Have them start with a different object each time to show that a number is only temporarily assigned to an object.
- If a child says two number names while touching one object or touches two objects while saying only one number, have her begin again. Together, count slowly as you both touch the items.

### 4. Beans in a Cup

**Materials:**

- A set of objects, such as beans, seeds, buttons, pegs, or chips for each child.
- A container for each child: a plastic cup or jar.

**Group Size:** Individual, small group, or class.

**Procedure:** Display identical quantities to be counted in different arrangements. Do the following:

- Demonstrate counting using a set of objects. Drop each object into the container as you say the number.
- After counting, pour the objects out of the container onto the table. Count the objects again. This time, as you count each object, make a new pile to show that the number stays the same whether the objects are in a container or in a pile.
- Give each child a set of objects and a container. Have children place their objects and container on a table. Have them drop their objects, one at a time, into their containers and count each number aloud.
- When the children have finished, have them pour the objects onto the table. Let each child take a turn counting the objects in her pile.

### 5. Stepping Stones

**Materials:** Construction paper cut-outs in the shape of stepping stones. Make as many stepping stones as you want the children to count.

**Group Size:** Small group or class.

**Procedure:** Teach children to count aloud as they touch each object. Arrange the construction paper stepping stones in a pattern for the children to follow. Then do the following:

- Have children line up at the end of the path and take turns walking from stone to stone.
- Have each child count aloud as she steps onto each stone.
- Add or remove stones from the path after each child has a turn so that the total number of stepping stones is different for each child.

## 6. How Many Do You See?

**Materials:** Existing objects and furniture in the classroom.

**Group Size:** Individual, small group, or class.

**Procedure:** Teach children to tell the total quantity. Do the following:

- Have children take turns counting things in the classroom.
- Ask a child to walk around the room, touching the objects as she counts. Then ask “How many?” Have the child state how many in all. For example, ask:  
“How many round tables do we have?”  
“How many chairs are in the reading circle?”  
“How many paint jars are at the easel?”
- To introduce the concept of zero, ask questions, such as:  
“How many two-headed elephants are in our classroom?”  
“How many pine trees are growing in our classroom?”  
“How many dinosaurs are sitting on Andy’s desk?”
- Continue asking questions until each child has had a chance to count and tell the total quantity.

## 7. Counting Taps

**Materials:** A drum.

**Group Size:** Small group or class.

**Procedure:** Do the following:

- Tell children that you are going to tap a drum a number of times and you want them to count the number of taps. Have them close their eyes and count out loud as you tap the drum.
- Invite children to take turns tapping the drum while the class counts the taps.
- Next, have a child go out of the room and close the door. Ask the child to knock on the door while the group listens and count the number of knocks.
- Let children take turns knocking. Encourage them to vary the quantity of knocks as well as the rhythm.

## 8. May I Have Some?

**Materials:** A set of objects, such as buttons, blocks, seeds, pegs for each child. The number of objects in the set should reflect the highest number that you would like the child to count.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Give each child a set of objects. Then ask her to give you a specific number of objects. For example, say: “May I have nine buttons?”
- Encourage the child to count silently. Then, have the child give you the quantity you requested. Count to see whether the number of objects is correct.
- If the child has not given you the correct number of objects, have her count the objects again by touching each object and saying the number aloud.
- Continue asking children for a specific number of objects until each child has had a chance to count.

## 9. Pass the Basket

**Materials:**

- A basket.
- A set of small objects, such as shells, toy cars, teddy bear counters.

**Group Size:** Small group or class.

**Procedure:** Tell children that they are going to play a counting game. Have them sit in a circle, then do the following:

- Show children a basket filled with small objects. Tell them that they will pass the basket around the circle.
- Explain that you will ask each child a question, and that person will remove a specific number of objects from the basket. For example, say: “Lee, count seven objects and give them to the person sitting next to you.”
- Have the child who receives the objects count them again to make sure there are seven.
- Continue this routine until each child has had a turn to count.



## 10. Count, Match, and Drop

**Materials:**

- Ten boxes with lids.
- Fifty picture cards: Five sets of ten, each set representing the quantities zero to nine.

**Group Size:** Individual.

**Preparation:** Do the following:

- Gather or make 50 picture cards. Leave five blank to represent the quantity zero. Have the remaining forty-five cards show objects in varying arrangements to represent the quantities one through nine.
- Attach to the lid of each box one picture card that represents a quantity zero through nine. On the lid, cut a slit wide enough to slide a picture card through.

**Procedure:** Do the following:

- Place the ten boxes and the sets of picture cards on a table.
- Have the child pick up one of the picture cards, count the number of objects on the picture card, and drop the card into the appropriate box.
- Have the child continue this routine until she has dropped all the picture cards into the boxes.
- Remove the lids from the boxes, and help the child check to see if she dropped each card into the correct box.

## 11. Beanbag Sets

**Materials:**

- Ten beanbags.
- Two hula hoops.

**Group Size:** Individual or small group.

**Procedure:** Teach children to count consecutively when counting objects in two separate sets. Do the following:

- Place the hula hoops on the floor in front of the children.
- In one of the hoops, place two beanbags. Place one beanbag in the other hoop.
- Say: "Here are two sets of beanbags. Let's count all the beanbags and see how many there are in all." Point to each beanbag as the children count.

- Continue this routine for different quantities to ten.
- Remind children not to use the number one when they to begin to count the second set.

**NOTE:** As children become proficient at joining a set of one with another set, increase the quantity to two in the first set. For example, place two beanbags in the first hoop and two in the other.

## 12. Beads on a String

**Materials:** Two strings of beads for each child. Each string should be knotted at the ends and should hold a quantity of beads that you would like the children to count.

**Group Size:** Individual, small group, or class.

**Procedure:** Teach children to count consecutively when counting objects in two separate sets of objects. Do the following:

- Place one string of beads on a table and count the beads. Push all the beads to one end of the string. As you count each bead, move it to the other end of the string. When you have finished counting, tell children how many beads there are in all.
- Repeat the routine and have children count with you.
- Give children a string of beads and let them practice counting. Have them tell how many beads they have on the string. Once they have counted the beads on their string, give them a second string of beads. Have her count the beads on both strings consecutively to give the total quantity of both sets.
- Next, assign partners and let each child count for her partner. You may wish to pair a child who has strong counting skills with a child who has less experience counting.



### 13. Roll the Number Cubes

**Materials:** A pair of number cubes.

**Group Size:** Individual or small group.

**Procedure:** Teach children to count consecutively when joining sets. Do the following:

- Have children sit in a circle on the floor.
- Hold up a pair of number cubes and say: "These are dice. You use these to play many board games. I'm going to teach you how to roll them." Explain that after they roll the number cubes, they should count the number of dots on the top of the number cubes.
- Demonstrate how to roll number cubes by cupping them in your palm. Gently shake the number cubes back and forth in your hand and then roll them onto a flat surface.
- Explain that although every side on a number cube has dots, you count only those dots on top of each cube.
- Demonstrate counting the dots on top of the two number cubes consecutively. For example, say: "This number cube has 2 dots and this number cube has 4 dots. I am going to count aloud to see how many there are all together." Point to the dots on the first number cube and say: "One, two." Then move your finger to the other number cube, point and say: "three, four, five, six. There are six dots all together."
- Pass the two number cubes to a child and have him roll, count aloud the dots, and state the total quantity of dots for both cubes. Give each child several turns.
- Encourage all of the children to count together as the roller points and counts.

**NOTE:** Once the children are comfortable using the number cubes, introduce some simple board games so that children can practice their new skill. Board games also provide practice in many skills, such as counting, joining sets, matching like quantities, and taking turns.

### 14. Fish in Fish Bowls

**Materials:**

- Colored chalk.
- A chalkboard.

**Group Size:** Individual, small group, or class.

**Procedure:** Teach children to count consecutively when joining sets. Do the following:

- On the chalkboard, draw two fish bowls.
- Using colored chalk, draw several fish in each bowl.
- Ask a child to count the fish in both bowls. Remind the child to count consecutively: count the fish in the first bowl, then move to the other bowl and continue counting. Have the child state how many fish all together.
- Give each child a turn, but add or subtract some fish to change the total number of fish in the bowls.

## 15. Dominoes

**Materials:** A set of double-six dominoes.

**Group Size:** Individual or small group.

**Procedure:** Teach children to count consecutively when joining sets. Do the following:

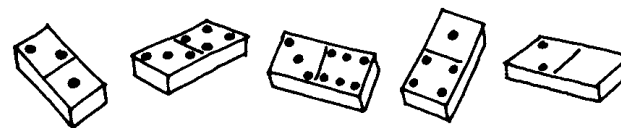
- Spread the dominoes on the floor in front of the child.
- Let the child handle the dominoes as you talk about them. Explain that each domino has a name that tells the number of dots on the domino; for example, two-three or double-three. Demonstrate how to name several dominoes. Then, give the child an opportunity to practice telling the names of the dominoes.
- After the child understands that each domino is identified by the quantity of dots on each end, ask the child to find the domino that you name. For example, say: "Show me a one-three."
- Show the child a domino and ask: "How many dots are on this domino? Together with the child count aloud the dots on both ends and tell how many dots there are in all. Remind the child to count consecutively moving from one end of the domino to the other.
- Provide many opportunities for children to count the dots on the dominoes.

**NOTE:** Initially to join sets, have the child use only dominoes with quantities to six. As the child's counting skills progress, use dominoes with quantities through twelve.

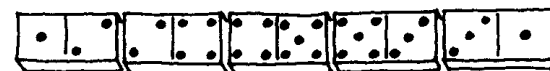


### VARIATIONS:

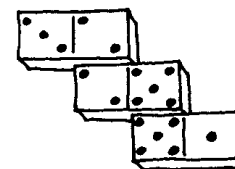
- Ask the child to tell you which end of the domino has more dots, which has fewer, which has none.



- Have the child join domino ends that have the same quantity of dots.



- Have the child identify all dominoes that have the same quantity on one end by placing those ends side-to-side.



## 16. Counting at Play

**Materials:** none.

**Group Size:** Individual or small group.

**Procedure:** Observe children engaged in various counting activities during center time, in the Block Area, the Dramatic Play Area, Book Area, Manipulatives, and other centers. You might observe:

- one child saying to another, "I have more trucks than you."
- "I have five fingers, see: 1, 2, 3, 4, 5."
- "1, 2, 3, 4 . . ." (Counting footsteps on the way to lunch)
- "I have my two friends here." (Child telling how many friends in the Block Area)
- Join children in their activities when appropriate to develop their counting skills.

# Counting

## Objective

To count

### RATIONALE

Counting is a basic math skill that prepares a child for the mastery of higher math skills. Counting leads to the association of the spoken word (number) with the printed symbol (numeral).

## Sequence

### TEACHING SEQUENCE

#### 1. Add a Number at a Time

Have the child repeat after you, saying, “1 . . . 2 . . . 3 . . .” Add numbers, one at a time, as the child learns to count. Once the child knows how to count a few numbers, let her recite them independently without having to repeat after you.

#### 2. Teach Rote Counting and Then Rational Counting

Counting includes two different operations or skill levels: rote counting and rational counting. Rote counting involves reciting numbers in order from memory without assigning those numbers to objects in a set.

Rational counting involves associating numbers in order to a series of objects in a set. Since rote counting is a simpler skill, teach the child to count by rote before teaching her to count objects.

# Recommendations for Effective Teaching

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## PROVIDE A GREAT DEAL OF PRACTICE

When children learn to count, first they repeat what has been heard and then after considerable practice repeat the numbers in sequence independently from memory.

## TEACH FREQUENTLY IN SHORT, INFORMAL PERIODS

When opportunities arise, teach counting informally in frequent but short periods.

## INCLUDE RHYMES, SONGS, AND FINGER PLAYS

Many children enjoy rhymes, songs, and finger plays. Use them to reinforce counting. For example, teach the children “One, Two, Buckle My Shoe” and “This Old Man.”

## COUNT TO A RHYTHM

Once a child can count from memory, provide the child with the experience of counting to a rhythm. For example, have the child count while you bounce a ball or while she claps her hands.

## HELP THE CHILD ASSOCIATE NUMBER WITH QUANTITY

After the child can count from memory, help her begin to associate number with quantity. Point to objects when the child counts.

## HELP THE CHILD ASSOCIATE NUMBER WITH NUMERAL

After the child can count from memory and associate number with quantity, point to the corresponding numerals when the child counts.

## READ WITH YOUR CHILDREN

Here are some books on counting that children will enjoy reading.

Anno, Mitsumasa. *Anno’s Counting Book*.

Evans, Lezlie. *Can You Count Ten Toes?:*

*Count to 10 in 10 Different Languages*.

Hoban, Tana. *Let’s Count*.

Wright, Blanche Fisher. *My Very First Mother Goose*.

# Factors That Impact Development

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Be alert to factors that might affect development.

## ARTICULATION PROBLEMS

Some children have articulation problems and may substitute, omit, or distort sounds. A child may say “seven” for seven, “ive” for five, or “twee” for three. Articulating the names of the numbers is a different skill from that of knowing number names in the correct sequence. Provide the child with an accurate speech model. Particular emphasis should be placed on the part of the number name that the child finds difficult to articulate. Some articulation difficulties will improve with practice and time. If there is no improvement, refer the child to a medical professional for an evaluation.

## OMISSION OF NUMBERS

If the sequence of several numbers is not mastered before more numbers are introduced, a child may tend to omit the numbers she has not mastered. If the child is omitting one or more numbers, provide practice for those numbers.

## HEARING PROBLEM

Observe for indications of a possible hearing problem, especially if the child is experiencing difficulty in mastering other skills requiring auditory input, such as reciting the letters of the alphabet. If a child appears to have a hearing impairment, refer her to a medical professional for an evaluation. When working with this child, be sure she can see your face and your gestures.

## DIFFICULTY WITH AUDITORY MEMORY

Rote counting is the ability to recite numbers in order from memory. Children learn to count from listening to an adult model, say, “1 . . . , 2 . . . , 3 . . .” and so on.” Children may indicate a weakness in auditory memory when they have difficulty in learning this skill. Children with this difficulty may also not be able to follow multi-step oral directions.

# Teaching Activities

## 1. Ten Little Elephants

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- To reinforce counting to ten, teach children the following verse. Sing the verse to the tune of “Ten Little Indians.”

*One little, two little,  
three little elephants,  
Four little, five little,  
six little elephants,  
Seven little, eight little,  
nine little elephants,  
Ten little elephant babies.*

- As children sing, have them march around the room pretending to be elephants. Show them how an elephant lumbers, slowly and heavily. Also, show the children how to make a trunk by bending over and clasping their hands together. Have them swing their trunk from side to side, raising it each time they sing the word elephant.

**VARIATION:** Substitute other animal names in the song, such as tigers, gorillas, donkeys, frogs, and so on. Help children imitate the movements of each animal.

## 2. Listen and Count

**Materials:**

- A tape player.
- A blank tape.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Record children as they count to a specified number.
- Play the tape so children can hear themselves counting.
- Play the tape again and have children count along with the recording.
- Invite children to play the counting tape during choice time so they can practice counting.

## 3. Clap Your Hands

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Stand in front of children. Clap as you count. For example, clap once and say: “One.” Clap again and say: “Two.” Continue this routine until a specific number has been reached.
- Repeat the activity, having the children clap and count with you.
- Invite children to take turns leading the clapping and counting.

## 4. Bouncing Ball

**Materials:** A playground ball.

**Group Size:** Individual, small group, or class.

**Procedure:** Show the children how to bounce a ball and then catch it with both hands. Then do the following:

- Stand in front of children, and bounce the ball to provide a rhythm for counting. Count as you bounce. For example, bounce the ball once and say: “One.” Bounce the ball again and say: “Two.” Continue this routine until a specific number has been reached.
- Repeat the activity, having children count with you as you bounce the ball.
- Invite children to take turns bouncing the ball and counting.

**VARIATION:** Use a drum instead of a ball. Have the children count to the rhythm of the steady drum beat.

## 5. Counting Parade

**Materials:** None.

**Group Size:** Small group or class.

**Procedure:** Do the following:

- Have children line up behind you. March around the room, counting consecutively as you step. Have the children count with you.
- Tell children to march to specific numbers. For example, say: "Let's march to fifteen." March and count to fifteen.
- Have children take turns choosing a number to march to and then leading the class around the room, counting aloud each step.

## 6. Number Tag

**Materials:** None.

**Location:** A safe playing area with two "safety zones" 20' to 40' apart.

**Group Size:** Small group or class.

**Procedure:** Do the following:

- Have children stand in a circle between the two safety zones.
- Choose one child to be the tagger and to sit in the middle of the circle. Whisper a number to the tagger.
- Have the other children walk around the circle, counting consecutively as they step.
- When the children in the circle reach the number that you whispered to the tagger, she jumps up and tries to tag a classmate as the children run for the safety zones.
- The first child tagged becomes the next tagger.

**VARIATION:** Instead of walking, have children play the game again by hopping, skipping, or marching.

## 7. Circle Game

**Materials:** None.

**Group Size:** Small group or class.

**Procedure:** Have children sit in a circle on the floor, then do the following:

- Tell children they are going to practice counting. Have a child begin counting by saying, "One." Then, have the child who is sitting next to the first child say, "Two." The child sitting next to the second child says, "Three."
- Continue having children count around the circle until a specific number has been reached.
- If a child is unable to recall the next number, tell her the number. Have her repeat the number. Then, continue the game.

**VARIATION:** Have each child recite the number sequence of the preceding child and add one number. For example, the first child says, "One." The next child says, "One, two." The third child says, "One, two, three."

## 8. Catch and Count

**Materials:** A playground ball.

**Location:** Level, smooth-surfaced, open area.

**Group Size:** Small group or class.

**Procedure:** Do the following:

- Have children stand in a circle. Have them toss the ball around the circle, counting as the ball is passed.
- Each time a child catches the ball she says the next number. Continue this routine until a specific number has been reached.
- If a child is unable to recall the next number, tell her the number. Have her repeat the number. Then, continue the game.

## 9. Continue Counting

**Materials:** None.

**Group Size:** Small group or class.

**Procedure:** Do the following:

- Tell children that they must listen closely as you count.
- Walk around the room as you count.
- Periodically, stop counting and tap a child. Encourage the tapped child to say the next number.
- Continue this routine until every child has been tapped and has had a chance to say the next number.

## 10. Counting Relay

**Materials:** None.

**Group Size:** Small group or class.

**Procedure:** Do the following:

- Tell children that they are going to take turns counting to one hundred. Choose a child to start counting.
- After the child has recited a few numbers, ask her to stop counting. Have another child continue, beginning where the first child stopped. Then ask another child to continue counting.
- Continue this routine until children count to one hundred.

## 11. Numbers That Come Before and After

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** After the children have mastered counting to a specified number, do the following:

- Ask questions about the number sequence. For example, if children can count to ten, ask: "I'm thinking of a number that comes before eight. What is the number?" Or: "I'm thinking of a number that comes after five. What is the number?"

## 12. Counting by Twos, Fives, and Tens

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** After the children can count to one hundred, do the following:

- Teach children to count by twos to one hundred.
- Count aloud to one hundred, but whisper the odd numbers and say the even numbers loudly. Have the children echo you.
- Count aloud again omitting the odd numbers. Have the children repeat after you.
- When children can count by twos, then teach them to count by fives, then tens.



# Reads Numerals

## Objective

To read numerals

### RATIONALE

Numerals are printed symbols that relate to quantity. Reading numerals is a fundamental math skill. It is a building block on which all later computational skills are based.

## Sequence

### TEACHING SEQUENCE

#### Initially, Teach at the Receptive Level

Initially, teach the reading of numerals at the receptive level. For example, have the child match like numerals. When the child can consistently match like numerals, have him point to a numeral when you say the number name.

#### Next, Teach at the Expressive Level

Once the child can consistently match and identify numerals, teach him to state the number for that numeral. For example, show the child the numeral 4 and have him say, "Four."

# Recommendations for Effective Teaching

## INTEGRATE READING NUMERALS WITH OTHER MATH TASKS

To ensure that each child learns to read numerals, integrate the task with other math tasks. This practice will help the child attach meaning to numerals. Children are more likely to learn and remember numerals if the symbols are meaningful rather than isolated. Help children make associations by:

- matching a numeral to its corresponding quantity (perhaps on a bulletin board display).
- pointing to or showing the appropriate numerals as the children count.
- saying the number names of numerals when a child needs to discriminate two or more numerals.

## PLAY GAMES THAT REQUIRE CONCRETE OR PRINTED NUMERALS

Many children learn the names of numerals by playing card games, memory games, or board games that require numeral cubes or a spinner. Children will need a lot of practice learning to read numerals and playing games makes the learning process much more fun.

## TEACH NUMERALS IN PROPER SEQUENCE

Teach the numerals in sequence, introducing one or two numerals at a time. This is particularly important when teaching the numerals 0 through 20. However, if a child has a definite need to learn a particular numeral, such as his street address or age, teach the numeral, regardless of sequence.

## TEACH THE CHILD TO READ ALTERNATE FORMS

Some numerals can be written in more than one way. To avoid confusion, make the child aware of the alternate forms and teach him to read them. When introducing a numeral, however, use the form that has been adopted by your school.

## INTRODUCE ONE NUMERAL AT A TIME

A child may become confused if too many numerals are introduced at one time. Allow the child time to learn a few numerals before additional numerals are introduced.

## USE A NUMERAL CHART

As an aid for teaching the child to read numerals to 100, display a numeral chart in the classroom. Number the chart from 0–99 or from 1–100. Refer to the chart often. Combine counting with the teaching of reading numerals so that the child will use it as a memory aid in numeral identification.

0	1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99

## TEACH THE CHILD TO COUNT BY TENS TO 100

Learning to count by tens to 100 will help the child learn the prefixes for all two-digit numerals to 100. For example, once the child learns that 30 is thirty, he will more readily grasp that 36 is thirty-six.

Count by tens using the numeral chart so that the child can begin to see a relationship between the numerals in each group of ten. For example, point out that 30 and the rest of the numbers in the row all begin with 3 and run from 0–9.

## DISPLAY NUMBER LINES

Display an easy-to-read number line in the classroom and individual number line tapes on desks or tables. Number lines provide visual reinforcement to numerals in sequence.

### READ WITH YOUR CHILDREN

Here are some books on numerals that children will enjoy reading.

Burningham, John. *The Shopping Basket*.

Charles, Faustin. *A Caribbean Counting Book*. Illus. by Roberto Arenson.

Cousins, Lucy. *Count with Maisy*.

# Teaching Activities

## 1. Give a Dog a Bone

**Materials:**

- Ten cards numbered 0–9 in the shape of bones.
- Ten cards numbered 0–9 in the shape of dogs.
- A marker.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Spread the dogs and bones out on the floor and tell children that the dogs are hungry but can't find their bones. Invite children to help the dogs by matching each dog to its corresponding bone.
- Before beginning the activity, demonstrate how to make a match. For example, pick up the dog card with the number 7 on it and match it to the bone card also with the number 7.
- Ask children to take turns matching each dog to its corresponding bone.

**VARIATION:** The game may also be played with different pairs, such as worms and apples or mice and cheese.

## 2. Numeral Laundry

**Materials:**

- String.
- 20 clothespins.
- Numeral cards 1–20 in the shapes of various articles of clothing.

**Group Size:** Individual.

**Preparation:** Do the following:

- Make a set of numeral cards in the shapes of various articles of clothing, such as pants, T-shirt, or socks.
- Write a numeral on each clothespin. The numerals on the clothespins should correspond to the numerals on the cards.
- Attach a string across the width of a bulletin board to resemble a clothesline.

**Procedure:** Do the following:

- Tell the child that he will hang the clothes on the clothesline by matching the numerals.
- Demonstrate how to make a match. For example, use the clothespin with the numeral 17 to hang up the T-shirt with the numeral 17.
- Ask the child to match the remaining clothes and clothespins.

**VARIATION:** Repeat the activity with other numerals depending on children's needs and interest.

## 3. Magnetic Numeral Match

**Materials:**

- Two sets of magnetic numerals 0–9.
- A magnetic board.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Place one set of numerals on the left side of the board and the other set on the right side.
- Point to a numeral, say its name, and ask the child to find the same numeral on the other side of the board.
- Once he has found the matching numeral, he may place the pair together in the middle of the board and work to match the rest of the numerals.

## 4. Numeral Fun

**Materials:** Two sets of numeral cards. Each set should have the same number of cards as there are children in the group.

**Group Size:** Small group or class.

**Procedure:** Do the following:

- Pass out a numeral card to each child. Keep the other set of cards for yourself.
- Tell children that they are going to play a game with numerals. Explain that when you hold up a particular numeral card, the child who has the matching card should hold it up.
- Be sure each child has a chance to match his numeral card with one of yours.
- Collect the cards, shuffle them, and play the game again.

## 5. Numeral Match

**Materials:** A set of ten numeral cards for each child and a set for you.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Give each child a set of numeral cards.
- Explain to children that they are going to play a game with numerals. Tell them that when you hold up a particular numeral, you want them quickly to show the same numeral from their own set of cards.
- Show children a numeral card. When they have matched it with one of theirs, name the numeral and have children echo you.
- Once children are successful at matching the numerals, increase the difficulty of the activity. For example, say the name of a numeral, but do not show the numeral card. Have each child hold up the appropriate numeral.

## 6. Are They the Same?

**Materials:** Two identical sets of ten numeral cards.

**Group Size:** Small group.

**Procedure:** Do the following:

- Shuffle the cards and place them face down on a table in front of the children.
- Have one child take a turn selecting two cards, one from each set. As the child selects two cards, he says the name of each numeral, then holds up the cards so that the other children can see them.
- If the cards match, the child may keep the pair of matching cards and take a second turn to draw two cards.
- If the cards selected by the child do not match, the child places them in their original position, face down on the table.
- The next child takes a turn. Play continues until all the cards have been matched.
- Have the children count how many matched pairs they made.
- As the skill level increases, use pairs of cards that represent numbers greater than nine.

## 7. Animals for Sale

**Materials:**

- Stuffed animals.
- Safety pins, one for each stuffed animal.
- Construction paper squares, one for each stuffed animal.
- A marker.

**Group Size:** Individual or small group.

**Preparation:** Do the following:

- Write a numeral that the children have been learning on each square of construction paper.
- Using a safety pin, attach a construction-paper numeral to the front of each stuffed animal.
- Place the animals on a table so that each numeral is visible to the children.

**Procedure:** Do the following:

- Tell children that they will get a chance to “buy” an animal. Explain that they don’t need money to buy an animal, but they must be able to say the name of the numeral that is on the animal.
- Demonstrate by pointing to an animal and saying the name of the numeral. For example, point to the animal that has 79 on it and say, “Seventy-nine.”
- Have children take turns “buying” an animal. After, tell children that they can keep the animals with them until the end of the day.



## 8. Musical Numerals

**Materials:**

- Numeral cards, one for each child.
- A tape or CD.
- A tape/CD player.

**Group Size:** Small group.

**Procedure:** Have children sit in a circle on the floor. Then do the following:

- Give each child a numeral card.
- Tell children that when you start the music, they should start passing the numeral cards around the circle.
- Tell them to keep passing the cards until you stop the music. Explain that when the music stops, each child will have a chance to name the numeral on the card he is holding.
- Continue the activity until each child has had a chance to read several numerals.

## 9. Numeral Grab Bag

**Materials:**

- Numeral cards.
- A paper bag.

**Group Size:** Small group.

**Procedure:** Do the following:

- Place the numeral cards into the paper bag.
- Have a child reach into the bag without looking and pull out a numeral card. If the child correctly names the numeral, he keeps the card.
- Give each child a turn.
- When all the numeral cards have been identified, have children count the number of cards they have collected.

## 10. Go Fish

**Materials:** Four identical sets of numeral cards: playing-card size.

**Group Size:** Small group.

**Procedure:** Do the following:

- Pass out five cards to each child, and put the rest of the set in the center of the table.
- Explain to children that the goal is to get sets of four numeral cards that are the same.
- Have players take turns asking other players for particular cards by saying the names of numerals. For example, "Do you have a seven?"
- If a player who is asked has the card, he gives it to the child who asked for it. If he does not have the card, he says, "Go fish." Then the child who asked picks a card from the set.
- Once a player has all four of the same cards, he places the set of four face up on the table.
- At the end of the game, have players count how many sets of four they have.

# Numeral Comprehension

## Objective

To demonstrate comprehension of the numerals 1–10 by matching the correct quantity of objects with the printed symbol (numeral).

### RATIONALE

For a child to comprehend numerals, he must combine the skill of counting objects with the skill of reading numerals. He must be able to associate a numeral with the abstract concept of how many. Knowing the quantity that a numeral represents is a basic math skill, on which many higher-level math skills depend.

## Sequence

### SEQUENCE OF PREREQUISITE SKILLS

The following prerequisite skills are included as a general guide for planning your instruction. Before a child is expected to associate a quantity with a numeral, he should be able to:

- count objects to represent quantities through ten. (See Number Concepts.)
- point to a numeral (0–10) in sequence when requested. (See Reads Numerals.)
- read a numeral (0–10) when it is presented randomly. (See Reads Numerals.)

### SEQUENCE OF TEACHING ACTIVITIES

#### Initially, Use Concrete Objects

When you begin to work on numeral comprehension, use concrete objects. A child at the readiness level attaches meaning more readily to concrete objects than he does to printed material. Initially, have the child associate familiar concrete objects from his environment with a numeral.

#### Next, Use Pictorial Representations

Once the child is able to relate the correct number of concrete objects with a numeral, use pictures that show quantities. Have the child associate the pictured quantity with its corresponding numeral.

# Recommendations for Effective Teaching

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## USE FUN, INTERESTING OBJECTS

A child may be more attentive and may become more readily engaged in the learning process if you provide interesting objects. For example, if you know that a child enjoys toy cars, occasionally use toy cars when a teaching activity requires that you supply small objects.

## TEACH ORDINAL POSITIONS IN EVERYDAY SITUATIONS

When the children are lined up, ask questions about the positions in the line, such as, "Who is first?" "Who is last?" "Who is third?" Relate the ordinal positions with numeral sequence. For example, say, "Tony is number two in line. That means he is second in line."

## READ WITH YOUR CHILDREN

Here are some books on numerals that children will enjoy reading.

Bang, Molly. *Ten, Nine, Eight*.

Ehlert, Lois. *Fish Eyes: A Book You Can Count On*.

Hague, Kathleen. *Numbears: A Counting Book*. Illus. by Michael Hague.



# Factors That Impact Development

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Be alert to factors that might affect development.

## **CHILD HAS NOT ACQUIRED THE PREREQUISITE SKILLS**

A child may not be able to associate quantities with numerals if he has not had experience counting objects or reading numerals. (See Number Concepts and Reads Numerals for appropriate teaching activities to strengthen these skills.)

## **TOO MANY NUMERALS INTRODUCED AT ONE TIME**

A child may be confused if too many numerals are introduced at one time. Make certain that the child has a good understanding of the quantity that a numeral represents before introducing another numeral.

## **CHILD HAS VISION PROBLEMS**

A child may have difficulty showing the correct quantity of objects for a numeral because he cannot see the numeral clearly. Some vision problems that may cause difficulty include astigmatism (blurring effects), poor visual acuity (inability to focus on an object or a printed symbol and perceive a single, clear image), farsightedness, and nearsightedness. If you suspect that a child has a vision problem, refer him to the appropriate medical professional.

# Teaching Activities

## 1. Count and Match the Numeral

**Materials:**

- Eleven paper plates.
- Fifty-five small objects, such as beans, buttons, blocks, beads, or pegs.
- A set of numeral cards for 0–10.

**Group Size:** Individual or small group.

**Preparation:** Place the paper plates on a table. Put the appropriate number of objects on each plate to create quantities from zero through 10. In this arrangement, the first plate has zero objects and the last plate has ten objects.

**Procedure:** Do the following:

- Have children sit facing the plates.
- Show children the numeral cards. Review the number name for each numeral.
- Count the objects on each plate, say the number that tells how many, and place the appropriate numeral card above each plate.
- Remove the numeral cards and rearrange the plates.
- Have a child count the objects on one of the plates, select the corresponding numeral card, and place it above the plate.
- Continue the routine until each child has had a turn, and each plate has been assigned its corresponding numeral card.

## 2. Read the Numeral, Then Show How Many

**Materials:**

- A set of numeral cards for 0–10.
- A collection of at least fifty-five small objects, such as shells, buttons, or acorns.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Have children sit at a table. Show them the numeral cards. Review the number name for each numeral. Then give each child a numeral card.
- Place the collection of objects on the table.
- Ask a child to show his numeral card to the group, say the number name for the numeral, and count out the corresponding quantity of objects from the collection of objects. When he has finished, have him place his numeral card with the corresponding number of objects on the table.
- Continue the routine until each child has had a turn.

## 3. Show Me!

**Materials:** A set of large numeral cards for 0–10.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Have children sit so that they can see the numeral cards when you hold them up.
- Explain that you want them to show you the corresponding number of fingers when you hold up a numeral card. For example, if you hold up the numeral card 7, each child should hold up seven fingers.
- Tell children that when they see the numeral card 0, they should show no fingers.

#### 4. Stand Up and Be Counted

**Materials:** A set of numeral cards for 0–10.

**Group Size:** Small group.

**Procedure:** Have children sit in a circle. Tell them that you will walk around the circle and will lightly tap different children on the head. When you tap someone on the head, that person should stand up. Ask the child who is tapped to remain standing until you return to sit in the circle. Then do the following:

- Hold up a numeral card. Tell children that you will tap the number of children that corresponds to the numeral on the card.
- Walk around the outside of the circle and lightly tap the number of children the card shows.
- When you return to your place in the circle, have children count aloud the children who are standing to make sure that you tapped the correct number of children.
- Select a child to be the tapper. Hold up a numeral card, and have the child tap the number of children that the card shows.
- If the tapper has tapped the correct number of children, he may select the next child to be the tapper.
- Continue the routine until each child has had a turn as the tapper.

#### 5. Grocery Shopping

**Materials:**

- Eleven grocery bags.
- A marker.
- Fifty-five empty food boxes and cans. (Be careful not to use cans with sharp edges.)
- An empty bookshelf: optional.

**Group Size:** Individual or small group.

**Preparation:** Using the marker, write a large numeral (0–10) on each grocery bag. Place the empty food boxes and cans on the bookshelf or on a table.

**Procedure:** Do the following:

- Give each child a grocery bag.
- Tell the children that they will shop for items to fill their bags.

- Have each child read the numeral on his bag. Then, one at a time, have each child fill his bag with the appropriate number of items.
- After all the children have shopped and filled their bags, have each child take his items out of his bag and count them for the other children.

#### 6. Number Bounce

**Materials:**

- A rubber playground ball.
- A set of numeral cards for 0–10.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Have children stand in a circle.
- Hand the ball to one of the children, and hold up a numeral card.
- Ask the child to read the numeral on the card and bounce the ball the number of times that the card shows. For example, if you hold up the numeral card 6, the child will bounce the ball six times.
- Ask the other children to count silently to make sure that the child bounces the ball the correct number of times.

**VARIATION:** Hold up a numeral card. Have children clap their hands the number of times shown on the numeral card.

#### 7. Take a Spin

**Materials:** A spinner with 0–10 on it.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Have a child spin the spinner. When the arm of the spinner stops, have the child read the numeral that the arm is pointing to.
- Ask the child to perform a task the same number of times that the numeral points to. For example, if the arm of the spinner stops on 5, have the child hop on one foot for five hops.
- Continue the routine until each child in the group has had a turn.

**VARIATION:** The children can play this game using a number cube that has a numeral on each side. Each child rolls the number cube to determine how many times to perform a task.

## 8. Pin the Cans

### Materials:

- Eleven clean, empty, wide-mouthed cans. Coffee cans are a good size. Be careful not to use cans with sharp edges.
- Sheets of construction paper.
- Tape.
- A marker.
- Fifty-five clothespins.
- A box large enough to hold the clothespins.

**Group Size:** Individual.

**Preparation:** Wrap the cans in construction paper. Using the marker, write a numeral (0–10) on each can. Place the clothespins in the box.

**Procedure:** Do the following:

- Tell the child to read the numeral on a can. Then ask her to count out the corresponding number of clothespins from the box, and to clip the clothespins to the can.
- Have the child continue the routine for each can. Then ask the child to put the cans in numerical sequence.

## 9. Fill It Up

### Materials:

- An egg carton.
- A marker.
- Fifty-five small objects, such as seeds, beans, or corn kernels.
- A box large enough to hold the objects.

**Group Size:** Individual.

**Preparation:** Using the marker, write one numeral (0–10) in the bottom of each of eleven egg-carton compartments. Place the small objects in the box.

**Procedure:** Do the following:

- Ask the child to read the numeral in a compartment. Then have the child count out the corresponding number of objects from the box and place them in the compartment.
- Have the child continue this routine for each compartment.

**NOTE:** If the child fills each compartment with the correct number of objects, he will use all fifty-five objects.

## 10. Goldfish in Fish Bowls

### Materials:

- Sheets of construction paper.
- A marker.
- Scissors.
- A large envelope.

**Group Size:** Individual.

**Preparation:** Do the following:

- Draw eleven fish bowls on construction paper.
- Cut out the fish bowls, and write a numeral (0–10) on each bowl.
- Draw fifty-five goldfish on construction paper. Cut out the goldfish, and place them in the large envelope.

**Procedure:** Tell the child to read the numeral on one of the fish bowls. Then have the child count out the corresponding number of goldfish from the envelope and place the goldfish on the fish bowl.

- Have the child continue this routine for each fish bowl.

**NOTE:** The goldfish and the fishbowls will be more durable if you laminate them.

**VARIATION:** You can make this game using pickles and pickle jars or pine cones and pine trees.

## 11. Match the Footprints

**Materials:**

- Sheets of construction paper.
- A marker.
- Scissors.

**Group Size:** Individual or small group.

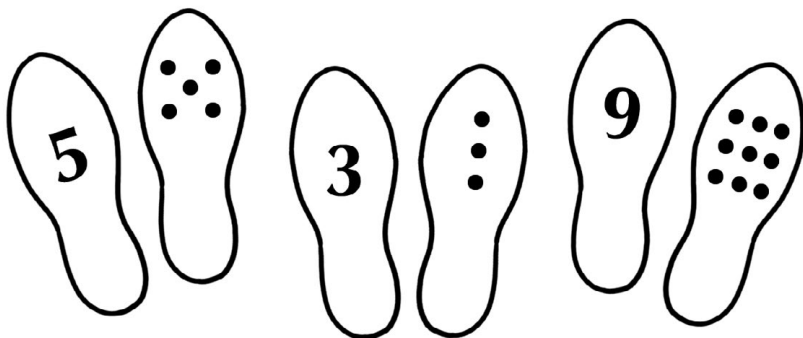
**Preparation:** Do the following:

- Draw eleven left footprints and eleven right footprints on construction paper.
- Cut out the twenty-two footprints.
- With the marker, write a numeral (0–10) on each of the left footprints.
- On each right footprint, draw dots to represent the quantities one through ten so that one footprint would have one dot, another footprint would have two dots, and so on.
- Leave one footprint blank to represent zero.

**Procedure:** Do the following:

- Have the child place the footprints face up on a table.
- Ask the child to match each numeral footprint with the footprint that has the corresponding number of dots.
- Once all the children have matched left and right footprints, place them on the floor and then have children take turns walking and reading the numerals aloud. "Left 8, right 8, left 9, right 9," and so on.

**NOTE:** The footprints will be more durable if you laminate them.



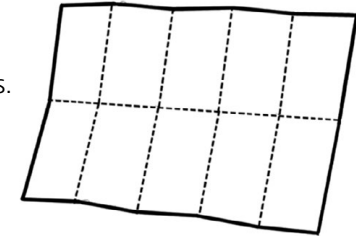
## 12. Stamp Prints

**Materials:**

- A large sheet of manila paper (12" × 18") for each child.
- Rubber stamps for the numerals 0–9.
- Small objects with which to make prints, such as blocks, spools, pieces of sponge, or filling.
- Ink pads.

**Group Size:** Individual or small group.

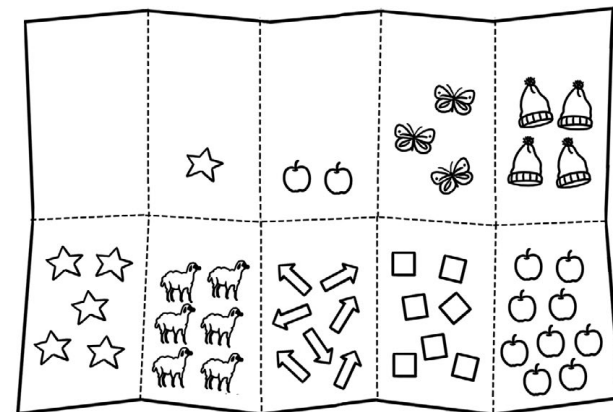
**Preparation:** Fold a sheet of paper for each child so that creases in the paper create ten rectangular sections.



**Procedure:** Do the following:

Give each child:

- a folded sheet of paper
- some objects with which to make prints
- rubber stamps for the numerals 0–9
- an ink pad
- Demonstrate to children how to use the rubber stamps and the objects with the inkpad to make prints.
- Have each child take the rubber stamps and press them into the inkpad. Then have them print the numerals 0–9 successively in the ten sections of the paper.
- Ask each child to take the objects and press them into the inkpad. Have them make the corresponding number of prints in each section.
- Display the completed stamp prints in the classroom.



### 13. The Silly Green Monster

**Materials:**

- Twenty-three blank cards (4" × 3").
- Two markers: One green marker, one of a different color.

**Group Size:** Small group (2 to 4 children).

**Preparation:** Do the following:

- Use the markers to make playing cards.
- On eleven cards, write the numerals 0–10.
- On the other eleven cards, draw quantities that represent zero through ten.
- On the last card, draw a silly green monster.

**Procedure:** Do the following:

- Tell children that the object of the game is to make pairs. Explain that a pair consists of a numeral card and its corresponding picture card.
- Tell children there is one green monster card in the deck. Mention that one child will be left holding the green monster card at the end of the game.
- Shuffle the cards and pass out the entire deck to the children. Depending on the number of children playing, some children may have more cards than others.
- Tell children to look at their cards and make matches. Match the numeral card to the quantity card. Allow time for each child to match and make pairs and to place those pairs on the table.
- Have one child at a time hold up his remaining cards so that the child on his right sees only the backs of the cards.
- The child on the right picks one of the cards. If the child on the right picks a card that makes a pair with one he already has, he places the pair on the table. If the card picked does not make a pair, he holds up his hand and lets the child on his right pick one of his cards.
- Continue play in this way until all of the numeral cards and corresponding picture cards are matched.
- Remind children that no one wants to be left with the silly green monster!

### 14. Can You Find a Match?

**Materials:** Two sets of cards. One set should consist of eleven cards, each with a numeral from 0–10. The other set should consist of eleven cards, each with a set of objects representing a quantity from 0–10.

**Group Size:** Small group.

**Procedure:** Do the following:

- Shuffle the cards, and place them face down on a table in front of the children.
- Have one child take a turn selecting any two cards. As the child selects two cards, she holds up the cards so that the other children can see them.
- If the cards match (a numeral card and a card with the matching quantity), the child keeps the pair of cards and goes again hoping to draw another set of matching cards.
- If the cards selected by the child do not match, the child places them in their original positions, face down on the table.
- Invite the next child to take a turn. Play continues until all the cards have been matched.

# Numerals in Sequence

## Objective

To write numerals in sequence from memory

### RATIONALE

When children are learning to read and write numerals, it is important that teachers continuously describe the meaning of the numerals. Although children need to write numerals while engaged in mathematics, they also write numerals in a variety of reading and science contexts. Writing numerals in sequence is a basic math skill that is prerequisite to the mastery of higher computational skills.

## Sequence

### SEQUENCE OF PREREQUISITE SKILLS

The following prerequisite skills are included as a general guide for planning your instruction. Before a child is expected to write numerals in sequence from memory, she should:

- develop fine-motor and visual-motor skills.
- count by memory to 100. (See Counting.)
- read a numeral (0–100) when it is presented randomly. (See Reads Numerals.)

### SEQUENCE OF TEACHING ACTIVITIES

#### 1. Begin with Tracing Activities

To help a child learn to form numerals correctly, allow the child to trace numerals. Be sure that the numerals to be traced have directional arrows to help the child learn the proper direction of the stroke.

#### 2. Next, Provide Copying Activities

Once the child has experience with tracing numbers, have her copy the numerals. Provide the child with good models and continue to stress the proper direction and form of each numeral.

#### 3. Provide Writing Activities Last

When the child can copy numerals, have her write them in sequence. At this point models should still be available, but the child should use a model only if she cannot recall the form of a particular numeral.

# Recommendations for Effective Teaching

## USE A NUMERAL CHART

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

As an aid for teaching the children to write numerals to 100, display a numeral chart in the classroom. Use a chart that shows the numeral formation that has been adopted by your school. A child can refer to the chart to see how a particular numeral is formed. The child also can trace the numeral with her finger a few times before attempting to write the numeral.

## CHECK PENCIL POINTS

It is important that a beginning writer use a pencil with a point that is not too sharp. If the point is too sharp, the pencil will be difficult to use and will make holes in the paper.

## TEACH THE APPROPRIATE NUMERAL FORMATION

Some numerals can be written in more than one way. Make the child aware of these alternate formations. When teaching a child to write a numeral, however, use the style that has been adopted by your school.

## PROGRESS FROM LARGE TO SMALL

Give the child an opportunity to trace and write numerals using the large-muscle movements of the arm before using the small-muscle movements of the hand and fingers. This may include tracing and writing numerals on the chalkboard, in sand, in finger paint, or in the air with a finger.

## PROVIDE EXPOSURE TO HORIZONTAL AND VERTICAL PATTERNS

Most readiness activities should progress from left to right across the page. This is the directional pattern that will be developed for reading and most writing activities. However, in this book, the child will see numerals and letters written in both horizontal and vertical patterns in different materials. The child needs the experience of writing the numerals both horizontally and vertically. Therefore, some reproducible pages are designed so that the numerals are arranged horizontally and other reproducible pages are designed so that the numerals are arranged vertically. Select the reproducible pages that show the numeral formation that has been adopted by your school.

## READ WITH YOUR CHILDREN

Here are some books on numerals in sequence that children will enjoy reading.

Lobel, Anita. *One Lighthouse, One Moon*.

Micklethwait, Lucy. *I Spy Two Eyes: Numbers in Art*.

Morozumi, Atsuko. *One Gorilla: A Counting Book*.



## Factors That Impact Development

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Be alert to factors that might affect development.

### VISION PROBLEMS

Some vision problems that may cause difficulty in writing numerals include astigmatism (blurring effects), poor visual acuity (inability to focus on an object or a printed symbol and perceive a single, clear image), farsightedness, and nearsightedness. If you suspect that a child has a vision problem, refer her to a medical professional.

### WEAK FINE-MOTOR COORDINATION

A child is likely to experience difficulty writing the numerals if her fine-motor coordination is weak. Look for the following indicators of weak fine-motor coordination:

- The small muscles of the child's fingers and thumb are rigid.
- The child has difficulty controlling the movement of the small muscles of the fingers and thumb.
- The child has difficulty touching each fingertip with the thumb of the same hand.
- The child grasps a pencil with more than two fingers.
- The child clutches a pencil in the palm of the hand.
- The child holds a pencil more than or less than one inch above the point.

### EYE-HAND COORDINATION

Writing activities require a child to use visual information to control hand movements. Some children have poor eye-hand coordination. These children may have difficulty changing the direction of movement when writing numerals.

### NUMERALS REVERSED

Reversal problems often disappear as a child matures. It is common for young children to reverse numerals when they are first learning to form them. If a child reverses a numeral, show the correct configuration and direction of the numeral. Have the child trace a sandpaper numeral to reinforce the correct direction of the numeral.

# Teaching Activities

## 1. Sandy Numerals

**Materials:**

- Ten tag board squares: 5" × 5".
- Glue.
- Sand or salt.

**Group Size:** Individual.**Preparation:** Do the following:

- Make a set of numerals 0–9.
- Use glue to write a numeral on each tag board square.
- Pour some sand over the glue and shake off any excess.
- Allow the glue to dry.

**Procedure:** Do the following:

- Give the child a set of numerals. Have the child trace the numerals with her finger. Talk about how to form each number as the child traces, using terms *up*, *down*, *right*, and *left*.

**EXTENSION:** You might have children choose the numbers in their address or phone number and trace these sandy numerals.**VARIATION:** Give children practice writing numerals in many different media. Children can use different writing tools on a variety of writing surfaces.

## 2. Write in Sand

**Materials:**

- A shallow box for each child: the top of a shoe box or candy box for each child.
- Sand.
- Models of the numerals to be written.

**Group Size:** Individual or small group.**Procedure:** Fill each box  $\frac{1}{4}$ " to  $\frac{1}{2}$ " deep with sand, then do the following:

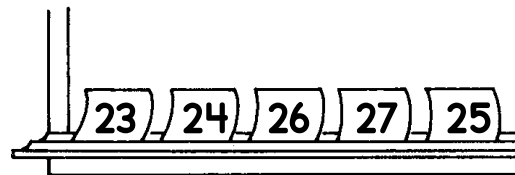
- Give each child a box and a model of the numeral to be written.
- Have children write the numeral in sand.
- Once children have shown you their numerals, have them erase the numeral by gently shaking the box.
- Follow this procedure with all the numerals you want children to learn.

**EXTENSION:** Write a child's phone number in the sand, then have the child copy it. Ask them to gently shake the box to erase the information.

## 3. Numerals Out of Sequence

**Materials:** A set of numeral cards. Use cards with numerals appropriate to the skill level of the children.**Group Size:** Individual, small group, or class.**Procedure:** Do the following:

- Place a sequence of numeral cards in the chalk tray. Have children read them aloud with you.
- Arrange the cards differently so that one or two numerals are out of order.



- Ask children to look carefully at the numerals and decide if the numerals are in the correct order. If not, have a child come to the chalkboard and arrange the numerals in the correct order.
- Continue this routine, giving all children a turn to sequence the numerals correctly.

**VARIATION:** This activity may also be done with magnetic numbers on a magnetic board.

#### 4. Numeral Cards

**Materials:** A set of numeral cards for each child with numerals appropriate to the skill level of the child.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Give children their own set of cards.
- Have each child arrange the cards in the correct order on a desk or table.
- After the numerals are sequenced, have each child point to each numeral and say its name. Ask children to draw a picture to show the quantity of each numeral. They can draw stars, or dots, or buttons, for example.

#### 5. Which Numeral Are You?

**Materials:**

- Sheets of colored construction paper. One sheet for each numeral in the sequence you plan to teach.
- A marker.
- Yarn.
- A hole punch.

**Group Size:** Class.

**Preparation:** Do the following:

- Decide what sequence of numerals you want to teach and then write one numeral on each sheet of construction paper.
- Hole punch the two uppermost corners of each sheet of construction paper, run a length of yarn through the holes, and knot the ends of the yarn.

**Procedure:** Have children wear a numeral card around their necks. Have them work together to arrange themselves in numerical sequence.

- Ask children to read the numerals aloud.
- You might want to take a group photo and use it to create a poster showing numerical sequence.

#### 6. Finger Paint Numerals

**Materials:**

- Finger paints.
- Sheets of glossy finger-paint paper for each child.
- A smock for each child.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Write a sequence of numerals (8 to 12 inches tall) on the board for children to use as a model.
- Give each child a smock and encourage classmates to help each other button their smocks.
- Give each child finger paints and finger-paint paper.
- Ask children to copy the numerals in sequence on their papers.
- Once the children can complete this without difficulty, have them finger paint the numerals without looking at the numerals on the board.

#### 7. Missing Numerals

**Materials:**

- A chalkboard.
- Chalk.
- A chalkboard eraser.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Decide what sequence of numerals you want to teach and then write the numerals on the chalkboard.
- Leave out a few numerals but substitute a blank line in place of each numeral.
- Tell children that some of the numerals are missing.
- Have a child come to the chalkboard and complete the sequence by printing the numerals on the blank lines.
- Let each child have a turn filling in the blanks with the missing numerals. When the children have completed the task, have them read aloud the numerals in sequence.

## 8. I Am Thinking of . . .

**Materials:** A numeral chart.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Display a numeral chart in the classroom.
- Have children read the numerals as you point to them in order.
- Then, point to numerals out-of-order and have children read those numerals.
- Tell children that they are going to play a guessing game. Explain that you will give them some clues, and they need to guess the numeral.
- Give children clues of numerals that come before and after the numeral you are thinking of. For example, say: "I am thinking of a numeral that comes after 4 but before 10."
- Encourage them to guess what numeral you are thinking of. Allow children to refer to the numeral chart to help them make good guesses.
- Invite each child to give clues while you and the other children guess the numeral.

## 9. What's the Numeral?

**Materials:**

- A numeral chart.
- A set of numeral cards made from 8" × 8" squares of construction paper. Use numerals that are appropriate for the children's skill levels.
- A large safety pin or double-sided tape.

**Group Size:** Small group or class.

**Procedure:** Do the following:

- Display a numeral chart in the classroom.
- Choose a child to stand at the front of the room with his back to the class.
- Pin or tape a numeral card to the back of his shirt. Position the child so the other children can clearly see the numeral card.
- Have the child try to guess the numeral on his back by asking questions. For example, the child might ask: "Does the numeral come before 10?" Or: "Does the numeral come after 15?"

- Give the child a reasonable range of numerals from which to choose. For example, if the child's numeral is 34, say: "Your numeral is between 30 and 40."
- Let children take turns answering his questions.
- When the child guesses the correct numeral, remove the numeral card and show him the numeral. Let him choose the numeral the next child must guess.
- Continue the routine until each child has had a turn.

## 10. Let's Write Numerals 0–9

**NOTE:** Two handwriting styles are provided for writing numerals: Zaner-Bloser and D'Nealian. Choose the style that you'd like your children to use.

**Materials:**

- D'Nealian, page 126; Zaner-Bloser, page 127  
Make one copy for each child and one for you.
- A pencil for each child and one for you.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Give each child a copy of page 126 or page 127 and a pencil.
- Direct children's attention to the numerals 0–9 on the page.
- Explain that the small numerals and directional arrows indicate the sequence of pencil strokes. Remind children that they will start at the top and trace in the direction of the arrow.
- Turn your page to face children and demonstrate by tracing the first numeral. Begin at the top and trace in the direction of the arrow.
- Have each child trace the first numeral several times on his copy. Make sure that each child is tracing in the correct direction. Verbalize the direction as the children trace.
- When children can trace a numeral correctly and without difficulty, have them copy the numeral in the space provided on the blank lines.
- Have children continue tracing and then copying the other numerals.
- Once children have practiced copying the numerals, encourage them to practice writing the numerals in sequence from memory on primary lined paper.

## 11. Let's Write Numerals 1–50

**NOTE:** Two handwriting styles are provided for writing numerals: Zaner-Bloser and D'Nealian. Choose the style that you'd like your children to use.

**Materials:**

- D'Nealian: Make a copy of page 128 for each child and one for you.
- A pencil for each child and one for you.

**NOTE:** Children will see numerals written both vertically and horizontally and should practice writing them in both directions.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Give each child a copy of page 128 and a pencil.
- Have children trace the numerals in the first row with their pencils. Have them say the numeral name as they trace.
- Explain that when you write numerals larger than 9, you use two digits. Tell the children to write the numeral 1 first when writing 10–19.
- Have children trace the numerals in the next row and fill in the blanks by writing the correct numerals.
- Have children refer to the numeral chart for the correct formation of the numerals.
- Continue this routine with the remaining three rows.

**NOTE:** Explain that the numeral 2 is written first when writing 20–29. The numeral 3 is written first when writing 30–39. The numeral 4 is written first when writing 40–49. And the numeral 5 is written first when writing 50.

## 12. Let's Write Numerals 1–50

**NOTE:** Two handwriting styles are provided for writing numerals: Zaner-Bloser and D'Nealian. Choose the style that you'd like your children to use.

**Materials:**

- A numeral chart.
- A pencil for each child.
- Zaner-Bloser: Make a copy of page 129 for each child.

**NOTE:** Children will see numerals written both vertically and horizontally and should practice writing them in both directions.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Give each child a copy of page 129 and a pencil.
- Have children trace the numerals in the first column with their pencils. Have them say the numeral name as they trace.
- Explain that when you write numerals larger than 9, you use two digits. Tell children to write the numeral 1 first when writing 10–19.
- Have children trace the numerals in the next column and fill in the blanks by writing the correct numerals.
- Have the children refer to the numeral chart for the correct formation of the numerals.
- Continue this routine with the remaining three columns.

**NOTE:** Explain that the numeral 2 is written first when writing 20–29. The numeral 3 is written first when writing 30–39. The numeral 4 is written first when writing 40–49. And the numeral 5 is written first when writing 50.

### 13. Let's Write Numerals 1–100

**NOTE:** Two handwriting styles are provided for writing numerals: Zaner-Bloser and D'Nealian. Choose the style that you'd like your children to use.

**Materials:**

- A numeral chart.
- A pencil for each child and one for you.
- D'Nealian: Make a copy of page 130 for each child and one for you.

**NOTE:** Children will see numerals written both vertically and horizontally and should practice writing them in both directions.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Give each child a copy of page 130 and a pencil.
- Have children trace the numerals in the first row with their pencils. Have them say the numeral name as they trace.
- Explain that when you write numerals larger than 9, you use two digits. Tell the children to write the numeral 1 first when writing 10–19.
- Have children trace the numerals in the next row and fill in the blanks by writing the correct numerals.
- Have the children refer to the numeral chart for the correct formation of the numerals.
- Continue this routine with the remaining rows.

**NOTE:** Explain that the numeral 2 is written first when writing 20–29. The numeral 3 is written first when writing 30–39, and so on.

### 14. Let's Write Numerals 1–100

**NOTE:** Two handwriting styles are provided for writing numerals: Zaner-Bloser and D'Nealian. Choose the style that you'd like your children to use.

**Materials:**

- A numeral chart.
- A pencil for each child and one for you.
- Zaner-Bloser: Make a copy of page 131 for each child and one for you.

**NOTE:** Children will see numerals written both vertically and horizontally and should practice writing them in both directions.

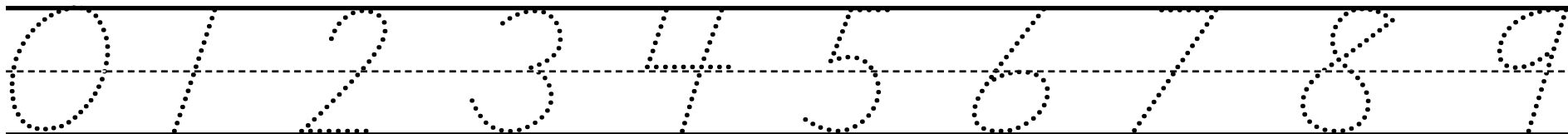
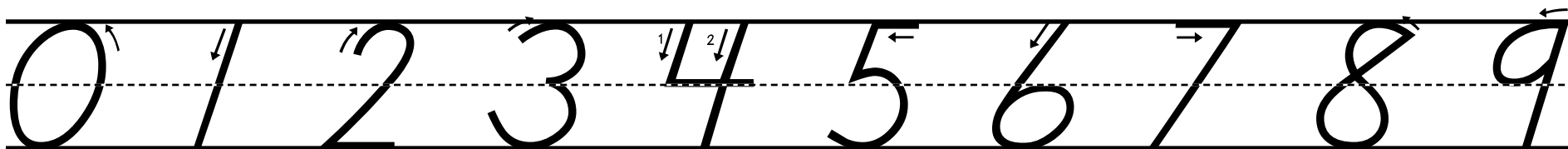
**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Give each child a copy of page 131 and a pencil.
- Have children trace the numerals in the first column with their pencils. Have them say the numeral name as they trace.
- Explain that when you write numerals larger than 9, you use two digits. Tell the children to write the numeral 1 first when writing 10–19.
- Have children trace the numerals in the next column and fill in the blanks by writing the correct numerals.
- Have the children refer to the numeral chart for the correct formation of the numerals.
- Continue this routine with the remaining columns.

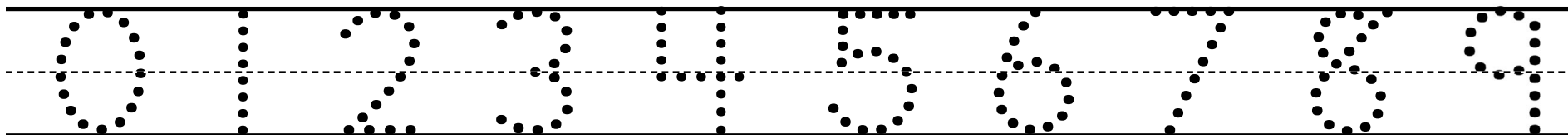
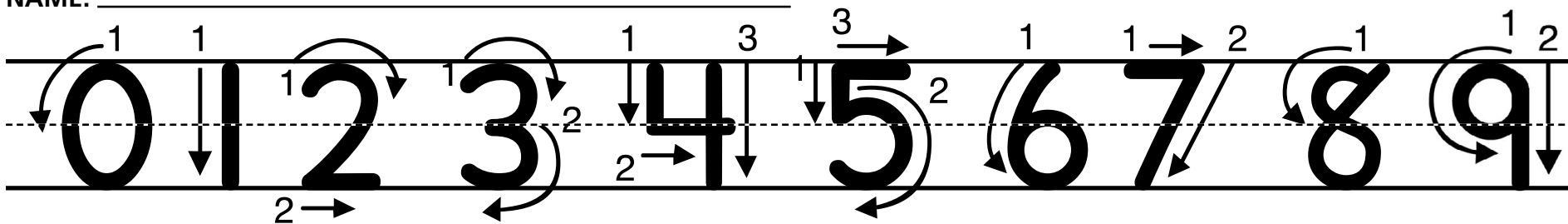
**NOTE:** Explain that the numeral 2 is written first when writing 20–29. The numeral 3 is written first when writing 30–39, and so on.

NAME: \_\_\_\_\_



D'Nealian® style. D'Nealian® is a registered trademark of Scott, Foresman and Co.

NAME: \_\_\_\_\_



Zaner-Bloser™ style. Zaner-Bloser is a trademark of Zaner-Bloser, Inc.



NAME: \_\_\_\_\_

1 2 3 4 5 6 7 8 9 10

11 12 13 14 \_\_\_\_\_ 2

21 22 \_\_\_\_\_

31 \_\_\_\_\_

4 \_\_\_\_\_

# Mathematics Numerals in Sequence

NAME: \_\_\_\_\_

1	2	3	4	5	6	7	8	9	10
11	12	13	14						
21	22								
31									
4									

Zaner-Bloser™ style. Zaner-Bloser is a trademark of Zaner-Bloser, Inc.

NAME: \_\_\_\_\_

1	11								
2									
3									
4									
5									
6									
7									
8									
9									
10									

D'Nealian® style. D'Nealian® is a registered trademark of Scott, Foresman and Co.

NAME: \_\_\_\_\_

1	2	3	4	5	6	7	8	9	10

Zaner-Bloser™ style. Zaner-Bloser is a trademark of Zaner-Bloser, Inc.

# Quantitative Concepts

## Objective

To demonstrate understanding of quantitative concepts:

big/little	deep/shallow
one/one more	thick/thin
full/empty	wide/narrow
heavy/light	more/less
tall/short	many/few
fast/slow	huge/tiny
all/none	most/least
long/short	
large/small	

### RATIONALE

Quantitative concepts give children the language they need to talk about size, amount, and weight. For children to develop an awareness of quantitative concepts, it's important to take advantage of opportunities that arise in everyday activities.

## Sequence

### TEACHING SEQUENCE

#### Initially, Teach Concepts at the Receptive Level

Initially, teach the child quantitative concepts at the receptive level. For example, hold up a long paper strip, and have the child match one of his long strips to yours. Later, have him sort materials according to the concepts that are being taught. For example: have the child sort paper strips into two groups, long strips and short strips.

Once the child can discriminate and sort, teach him to respond to verbal requests. For example, say, "Give me the small blocks." Reinforce learning and, say, "That's right. That's a small block."

#### Next, Teach Concepts at the Expressive Level

Teach concepts at the expressive level when the child is ready. Ask questions such as, "Is this the light toy or the heavy toy?" "Is the glass of milk full or empty?" Encourage the child to use complete sentences. Model how to ask and respond to questions when talking about quantitative concepts.

# Recommendations for Effective Teaching

## TEACH ONE PAIR OF CONTRASTING CONCEPTS AT A TIME

Teaching too many concepts at a time may confuse some children. Teach the children just one pair of contrasting concepts at a time.

## USE CONCRETE OBJECTS

Use concrete objects to teach quantitative concepts. When a child sees the three dimensions of an object and handles the object, it helps him make comparisons. Using concrete objects also provides a child with visual and tactile memories of the objects.

## USE INTERESTING MATERIALS

A child may be more motivated to learn when you use objects that interest him. Use materials that are fun to handle, such as little bears, shells, toy cars.

## USE OBJECTS THAT DIFFER SUBSTANTIALLY IN SIZE, AMOUNT, OR WEIGHT

To make sure that the child understands the difference between contrasting concepts, present exaggerated examples. For example: When teaching light and heavy, choose something that is practically weightless and something that is heavy enough so children can feel the difference.

## TEACH CONCEPTS IN DIFFERENT CONTEXTS

Quantitative concepts are relative, not constant. They vary in degree according to the items that represent the concept. Present different contexts for each concept. For example:

- Show the children a seed and a few grains of sand. Comment that the seed is bigger than the grains of sand. Now show the seed in relation to a lemon. Comment that a seed may be labeled big in comparison to a grain of sand and small when compared to a lemon.
- You might use the term wide to describe both a watchband and a river, although a watchband is actually much narrower than a river.

## DEVELOP UNDERSTANDING THAT REPRESENTATIONS ARE NOT IN PROPORTION TO ACTUAL SIZE

Because pictures in books usually are not realistic, printed photos and other illustrations might cause confusion. For example, a child might not understand that an apple tree is big when a picture of an apple tree is smaller than a real apple. A child may be confused if a mouse in the foreground of a picture looks larger than a cat in the background. You might need to use concrete objects to reinforce size and weight for children.

## PROMOTE BUILDING ACTIVITIES

Children enjoy building things. Building provides children with many opportunities for language development related to quantitative concepts. When children build, they use materials of different sizes (thick/thin, long/short, large/small) and weight (light/heavy, full/empty). Engage children in conversation about what they are doing. Prompt them to use quantitative concepts to describe their constructions. Support their learning by asking questions that invite them to think.

## INCLUDE WITH OTHER ACTIVITIES

Include quantitative concepts in daily activities. For example,

- When the children are forming two lines, ask, “Which line is short?” or “Which line has many children?”
- When the children are lifting or carrying objects, comment, “That looks heavy. Do you need some help?”
- When foods are cut and shared at snack time and lunchtime, use quantitative words. For example, ask a child, “Who has many raisins? Who has only a few?”

### HAVE EACH CHILD MAKE A SIZE-AND-QUANTITY BOOK

Have each child make a size-and-quantity book. For each pair of contrasting concepts, have the child draw pictures to illustrate the concepts. For example, give the child a piece of drawing paper folded in half. Tell the child to draw something short on one half of his paper and something long on the other half. When the child finishes, have him label the drawings short and long, punch holes in the left side of the paper, and place the page in the child's book.

### READ WITH YOUR CHILDREN

Here are some books that children will enjoy reading.

Hoban, Tana. *Exactly the Opposite*.

Minters, Frances. *Too Big, Too Small, Just Right*. Illus. by Janie Bynum.

Pittau, Francesco and Bernadette Gervais. *Elephant Elephant: A Book of Opposites*.

# Teaching Activities

## CONCEPT: BIG/LITTLE

### 1. Match the Buttons

**Materials:** A collection of like objects: buttons, blocks, or Cuisinaire® rods. Some objects should be big and some should be small.

**Group Size:** Individual, small group, or class.

**Procedure:** Use two sets of like objects that are of two different sizes. For example, display big buttons and little buttons. Then do the following:

- Hold up a big button and say: "This button is big."
- Hold up a little button and say: "This button is little."
- Have children take turns matching the buttons to the two buttons shown. After a child has correctly matched a button, have him state whether the button is big or little.

### 2. Big Box, Little Box

**Materials:**

- Two boxes: one big and one little.
- Pairs of objects: blocks, crayons, spools, balls, pieces of chalk. Each pair should consist of one little object and one big object.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Display the two boxes. Hold up the big box and say: "This box is big. We will put big things in this big box." Do the same with the little box.
- Put the two boxes and the pairs of objects on a table.
- Pick up a pair of objects of different sizes, and state the size of each object.
- Put each object into the appropriate box. For example, hold up a big spool and a little spool and say: "This spool is big. I am putting it in the big box. This spool is little. I am putting it in the little box."
- Ask children to put each object into the appropriate box. Prompt them to talk about the size of each object.

### 3. Stringing Necklaces

**Materials:**

- Big beads and little beads.
- Big macaroni and little macaroni.
- A piece of string or yarn for each child.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Give each child some big and little beads, some big and little macaroni, and a piece of string or yarn.
- Have children string the beads and macaroni in whatever pattern they like.
- When children have completed their necklaces, have them take turns touching each bead or piece of macaroni and stating whether it is big or little.

### 4. Our World Mural

**Materials:**

- A long sheet of heavy-duty white paper or several sheets of large construction paper taped together.
- Crayons or markers.
- Tape.

**Group Size:** Individual, small group, or class.

**Procedure:** Tape the paper to a wall at children's eye level. At the top of the paper, write the words "Our World." Then do the following:

- Talk to children about things in their world that are big and little and make a list on the board. Look around the room and outside the classroom window to identify other things that are big and little. Add them to the list.
- Place crayons and markers in containers on the floor beneath the paper. Encourage children to draw pictures of things that are big and little.
- Help children label their pictures. For example, if a child has drawn a picture of a fire station, label the drawing "a BIG fire station."
- Keep the mural on the wall for as long as you are teaching quantitative concepts.

**EXTENSION:** Invite children to draw pictures that illustrate other quantitative concepts: tall/short, hot/cold, fast/slow, long/short, deep/shallow, huge/tiny.



**CONCEPT: ONE/ONE MORE****5. One More, Please**

**Materials:** Snack food: raisins, grapes, small crackers, cheese sticks.

**NOTE:** When gathering snacks for the activity, be aware of children with food allergies.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Give each child one raisin. Say, "How many raisins do you have?" The children should answer, "One." If necessary, prompt them by pointing and saying: "Here is one raisin. Let's count it together: One."
- Ask, "Would you like one more?" The children should answer: "Yes, please!" Pass out another raisin. Then ask: "Do you have one more raisin now?" The children should answer: "Yes! We have one more."
- Invite children to eat their raisins.
- Repeat the activity throughout snack time to help children understand the concept of one/one more.

**EXTENSION:** Encourage children to use quantitative words in their dramatic play. For example, when children are playing house and serving tea and cookies to guests, they can ask "Would you like a cookie? Would you like one more?"

**6. One More in the Circle**

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Have children join hands to form a circle. Then do the following:

- Choose one child to stand in the center of the circle. Ask: "How many children are in the center?" The children should answer: "One."
- Have the child in the center say: "I'd like one more child to join me." Let him choose someone to join him.
- Have all the children (including the two in the center) hold hands and skip in a circle.
- After a few skipping circles, choose another child to stand in the center and have him choose one more child to join him.

**CONCEPT: FULL/EMPTY****7. Fill the Heart**

**Materials:** Masking tape.

**Group Size:** Small group or class.

**Procedure:** Use masking tape to form an outline of a large heart on the floor of your classroom or on outside pavement. Then do the following:

- Have children stand outside the heart.
- Tell children that when you say the word *full*, they should run into the heart. When you say the word *empty*, they should run out of the heart.
- Let each child take a turn directing his classmates to make a full and empty heart.
- Remind children that when everyone is inside the heart, it is full, and when they are outside the heart, it is empty.

**8. Snack Time, Lunch Time**

**Materials:** A snack or lunch for each child and one for you.

**NOTE:** Before choosing food items, be aware of children with food allergies.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- At the start of snack time or lunch, tell children you are going to talk about the words *full* and *empty*.
- Show them some food from your own snack or lunch. For example, hold up a juice box and say, "Today I brought a box of juice. It's a full box." Shake the juice box to demonstrate.
- Go around the room and ask children to show something they brought that is full.
- Repeat the routine with the word *empty* at the end of snack or lunch. For example, say: "I drank all my juice, and now the box is empty."
- Have each child show something that is empty at the end of snack or lunch.

**CONCEPT: HEAVY/LIGHT****9. Heavy or Light?****Materials:**

- Twelve plastic eggs.
- Sand.
- Filling or crumpled paper.
- An empty egg carton to store the eggs.

**Group Size:** Individual, small group, or class.

**Procedure:** Fill six eggs with sand and fill six eggs with filling or paper pieces. Then do the following:

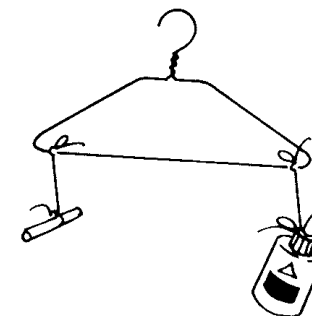
- Demonstrate heavy and light eggs. Hand one of the heavy eggs to a child. As he holds the egg, tell him that it is heavy.
- Take the egg away, and hand him a light egg. Tell him that the egg is light.
- While the child is holding the light egg, put a heavy egg in his other hand so that he can feel the difference.
- Have children take turns sorting the twelve eggs into two groups—light and heavy.
- Have each child close his eyes, and give him one egg at a time. Let him tell you whether each egg is light or heavy.

**10. Hanger Scale****Materials:**

- A wire coat hanger.
- String.
- Objects of different weights, such as a pair of scissors and a feather.

**Group Size:** Individual, small group, or class.

**Procedure:** Suspend a wire coat hanger so that it can move freely. With string, attach a heavy object to one end of the hanger. Attach a light object to the other end. Then do the following:



- Tell children to look closely at the hanger and the objects hanging from it. Say, “What do you see? What can you tell me about the objects that are hanging?” Ask them to describe what they see.
- Explain to children that a heavy object weighs more than a light object. Mention that the heavier object makes its side of the hanger dip lower.
- Remove these objects from the hanger then have children choose other objects to attach to the hanger. Before you attach the objects, let the children guess which items will be heavy and which will be light.
- For each set of objects attached to the hanger, help children form an explanation. For example, “This side of the hanger dips down. The scissors is heavy. It weighs more than the crayon.”

**EXTENSION:** Make a poster of heavy and light objects for display.

**CONCEPT: TALL/SHORT****11. Stretch and Bend****Materials:** None.**Group Size:** Individual, small group, or class.**Procedure:** Have children stand in a circle. Then do the following:

- Have children place their arms overhead and stretch. Say: “Stretch up to the sky and become tall, tall, tall!”
- Have the children bend down to the ground. Say: “Bend down to the ground and become short, short, short!” Repeat several times.

**12. I’m Tall, I’m Small!****Materials:** None.**Group Size:** Individual, small group, or class.**Procedure:** Have children stand in a circle. Then do the following:

- Teach children the words to the poem using the accompanying hand motions. Emphasize the words tall and short.

*When I stretch, I’m really tall**As tall as tall can be.*

(stand, put arms overhead and stand on tip toes)

*When I bend, I’m really short**As short as short can be.*

(bend down and curl self into ball)

- Repeat the poem and have children join in saying the second line in each verse.

**13. Build It Tall****Materials:** A set of building blocks of various shapes and sizes.**Group Size:** Individual, small group, or class.**Procedure:** In an open area of the classroom, set out the building blocks. Then do the following:

- Ask children to watch you use blocks to construct a tall building and a short building. Talk about the size of the buildings then have children construct their own tall and short buildings.
- Talk to children while they are engaged in building. For example, say: “Keisha, you put these little blocks on top of this big block. Your building is becoming a tall tower.”
- After they have constructed their buildings, ask children about the size of their buildings. For example, ask: “Rafa, is your building tall or short?” or “Ana, what size is your building?”

**CONCEPT: FAST/SLOW****14. Drum Roll Boogie****Materials:** A drum.**Group Size:** Individual, small group, or class.**Procedure:** Have the children sit in a circle. Then do the following:

- Demonstrate fast and slow beats on the drum with your hands. Talk about moving your hand more quickly to make faster beats and how your hand goes at a much different pace to make slower beats. As you explain this, say the words more slowly as you slow down the tapping on the drum.
- Have children stand. Tell them that when you beat the drum fast they should move quickly, such as jogging in place. Explain that when the beat slows down, children should slow down, too, and move like their feet are stuck in mud.
- Do this several times, alternating between fast and slow beats.

## 15. Guess the Animal

**Materials:** Picture cards of animals.

**Group Size:** Individual, small group, or class.

**Procedure:** Have children sit in a group. Then do the following:

- Tell children that animals move in different ways. Mention that some move slowly and some move fast.
- Display a picture of a turtle. Ask children whether they think the turtle moves fast or slow. Then encourage them to move slowly like a turtle.
- Display a picture of a galloping horse. Ask children whether this animal moves fast or slow. Then, have them gallop like a horse.
- Repeat the routine with other animals, such as a caterpillar and a lion.
- Display the picture cards. Say the following riddles to children and have them guess the animal. Have them look at the pictures to help answer the riddle. For example:

*It looks like a cat*

*But it's bigger, you see.*

*It roars and it runs.*

*It's bigger than me! (a lion)*

*It inches along.*

*It's slow as can be.*

*It's really quite tiny.*

*It's smaller than me! (a worm)*

- After they guess the animal, invite children to imitate their movements.

## 16. Pop, Pop, Pop!

**Materials:**

- Microwaveable popcorn.
- A microwave oven.

**NOTE:** Be aware of children with food allergies and provide an alternate snack after completing the demonstration.

**Group Size:** Small group or class.

**Procedure:** Have children sit at a table or on the floor within hearing range of the microwave oven. Then do the following:

- Explain to children that, at first, popcorn pops slowly. The pops speed up then become fast, and then very fast. Finally, the popcorn pops slow down right before it is ready to eat.
- Place the bag of popcorn in the microwave. As it pops, say, "These pops are slow." "These pops are fast." "These pops are very fast." and "The pops are now slowing down." "These pops are slow."
- When the popcorn is done and cool enough, say: "The bag is full of popcorn. Ready to eat. The bag will be empty as soon as we eat all the popcorn!"

### CONCEPT: ALL/NONE

## 17. Fun with None

**Materials:**

- Clear containers.
- Objects: buttons, beads, paper clips, rice, pennies.

**Group Size:** Individual, small group, or class.

**Procedure:** Place the empty containers on a table. Have children watch as you put one set of objects into one container. Leave the other containers empty.

- To introduce the concept of *all*, point to the container that has the objects in it and say: "This container has all of the beads in it."
- To introduce the concept of *none*, point to an empty container and say: "This container has none."
- Fill several of the containers with objects, one kind of object in each container. Be sure to leave some containers empty.
- Say to one of the children: "Point to a container that has all the rice in it." Then say to another child: "Point to a container that has none of the rice in it."
- Repeat the routine with a variety of objects.

**EXTENSION:** When appropriate use the words *all* and *none* when you're getting ready for snack or cleaning up after snack.

**CONCEPT: LONG/SHORT****18. The Long and Short of It****Materials:**

- Two empty boxes: one short and one long.
- Pairs of objects: pieces of yarn, spaghetti, shoelaces, string, pencils. Each pair should consist of one short object and one long object.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Show children the two boxes. Hold up the short box and say: "This box is short. We will put short things in this short box." Repeat the routine with the long box.
- Display the two boxes and the pairs of objects on a table.
- Pick up a pair of objects with two different lengths. For example, say: "This piece of string is short. I am putting it in the short box. This piece of string is long. I am putting it in the long box."
- Tell children to watch carefully as you sort the objects into the boxes. Tell them that if they see you put an object in the wrong box, they are to clap once.
- Sort the objects into the appropriate boxes, and occasionally put an object in the wrong box. When the children clap, have someone tell you what you did wrong. Remove the object and ask the children to tell you in which box it should go.

**19. Long and Short Snacks****Materials:**

- A variety of snacks cut into long and short servings: carrot sticks, celery sticks, cucumber sticks, breadsticks, bread.
- Cream cheese, jelly, cheese spread.

**NOTE:** Before beginning the activity, take note of children with food allergies.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- During snack time, give children a variety of long and short snacks. Display all the ingredients that are available for snack.
- Talk about which snacks are long and which are short and hold up the different length snacks for the children to see. For example, say: "Here is a long carrot stick, and here is a short carrot stick."
- Ask each child what they would like for snack. Prompt them to use the words *short* or *long* when making their requests. For example: "May I have a long carrot stick with cream cheese." "May I have a short breadstick with jelly."

**CONCEPT: LARGE/SMALL****20. Play Ball!****Materials:**

- Balls of various sizes: basketball, soccer ball, kickball, tennis ball, baseball, ping pong ball, tiny bouncy ball.
- A box.

**Group Size:** Individual, small group, or class.

**Procedure:** Sit with the children in a circle. Do the following:

- Tell children you are going to show them a variety of large and small balls.
- Bring the balls out of the box one at a time and state whether they are large or small. Pass the balls around the circle. Encourage children to say “large” or “small” when they hold the ball.
- Roll the balls back and forth to each other in the circle.
- Ask children to help you place the balls according to size, from the smallest to the largest in the center of the circle.

**EXTENSION:** Take the balls outside and toss them back and forth, throw them against a wall, throw them up into the air, and bounce them on the ground. Discuss different concepts they’ve learned and ask children questions. For example: “Is the kickball or the ping pong ball heavier?” “Which ball bounces higher, the basketball or the tiny plastic ball?” “Which ball rolls faster, the soccer ball or the tennis ball?”

**21. What’s in the Box?****Materials:**

- A box with a lid.
- An assortment of large items, such as a large block, a beanbag, a stuffed animal, a tennis ball.
- An assortment of small items, such as a small block, a pair of number cubes, a small teddy bear, a ping pong ball.
- Scissors.

**Group Size:** Individual, small group, or class.

**Procedure:** Cut a hole in one end of the box. Place the box on a table. Then do the following:

- Fill the box with large and small objects. Have children describe the objects as large and small as you put them in the box.
- Once the box is full of objects, you’re ready to play “What’s in the Box?” Put your hand through the hole in the box. Say, “I’m reaching into the box, and I’m touching something small. It’s smooth and round. I think it’s a kind of ball. Hmmmm, I think it’s a ping pong ball!” Take it out. “Yes it’s a ping pong ball!”
- Give each child a turn to play “What’s in the Box? Tell the child to reach into the hole, feel for an object, pick it up, and then hold it while keeping his hand inside the box. Then tell the child to say whether it is large or small and guess the object.

**EXTENSION:** You also can fill the box with items that focus on other quantitative concepts, such as:

- **Heavy/Light:** (Heavy) a rock, a toy car, a golf ball, an apple; (Light) a feather, a candy wrapper, a baggie, a piece of popcorn, a sock.
- **Long/Short:** Use like items of different lengths, such as noodles, blocks, pencils, rulers, or strips of poster board.

**CONCEPT: DEEP/SHALLOW****22. Fill the Water Buckets****Materials:**

- 2 plastic buckets or dishpans.
- Towels.
- Water.

**Group Size:** Individual or small group.

**Procedure:** Put water in the two buckets so that the water level is shallow in one bucket and deep in the other. Then do the following:

- First, let a child put one arm in one bucket. Then, have her put the other arm in the other bucket.
- Next, have her put her right arm in the shallow water and her left arm in the deep water.
- Point to the left bucket and say: "The water in that bucket is shallow. The water doesn't come up very far on your arm."
- Point to the other bucket and say: "The water in that bucket is deep. The water comes up high on your arm."
- Continue the routine until each child has had a turn.

**23. Can You Dig It?****Materials:**

- A sandbox or sand in a box.
- A sand shovel for each child.
- Measuring sticks of the same length: six-inch rulers, twelve inch rulers.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Discuss shallow and deep things, such as the shallow and deep ends of a swimming pool. Ask children in which end they are allowed to swim.
- Tell children that they are going to experiment with sand to make shallow and deep holes. If the school has a sandbox, take them outside. If not, use a large box filled with sand.
- Have one child dig in the sand with his shovel. When he has dug a deep hole, tell him to stop digging. Have another child measure the depth of the hole. Mark the stick at the correct depth.

- Ask another child to dig a hole. Tell her to stop after she has removed only one or two shovelfuls. Have another child measure that hole and mark a stick to show the depth.
- After children look at the holes, ask: "Which is the deep hole? Which stick shows how deep this hole is? Which is the shallow hole? Which stick shows how shallow this hole is?"
- Give each child a stick and a shovel. Divide children into pairs and have one partner dig a deep hole while the other partner digs a shallow hole. Have each child measure his hole and mark his stick. Have each pair of children compare their sticks, and then switch the deep and shallow digging roles.

**24. Plant Seeds and Watch Them Grow****Materials:**

- Bean or pea seeds.
- Clear containers, such as baby-food jars, small jelly jars, or clear plastic cups.
- Potting soil.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Tell children that seeds are usually planted in shallow holes. Explain that as seeds sprout and begin to grow, roots form and grow deep into the soil.
- Give each child two or three seeds and a container filled with soil.
- Have children make shallow holes near the edge of the container. The holes must be next to the edge of the container so they can see the roots as they grow.
- Have each child place seeds into the holes and cover them with soil.
- Have children water the seeds and place the containers on a shelf near light. Soon roots will appear, and the children can see them grow deeper each day.
- Record the growth of the roots over time. Have children take photos or draw pictures of each stage of growth. Prompt children to use the language, "The roots are growing deeper."



**CONCEPT: THICK/THIN****25. A Tasty Lesson****Materials:**

- One loaf of unsliced fresh bread.
- A serrated knife.
- Softened cream cheese, cheese spread, or jelly.

**NOTE:** Before beginning the activity, be aware of children with food allergies; have other foods available, if needed.

**Group Size:** Individual, small group, or class.

**Procedure:** Gather children around you. Then do the following:

- Tell children that for snack time you will have bread topped with something tasty.
- Cut a thick slice of bread and a thin slice of bread from the loaf. Show the children the thin slice. Say: "This slice is thin." Then, have the children look at the thick slice. Say: "This slice is thick."
- Ask each child whether he wants a thin slice or a thick slice of bread. Next, let each child decide whether he wants a thin or thick layer of jelly or cream cheese on top.

**26. Create a Collage****Materials:**

- A collection of thick items: rope, corrugated cardboard, sponges, swatches of quilted fabric, tongue depressors.
- A collection of thin items: tissue paper, twine, thread, wrapping paper, swatches of fabric, toothpicks.
- Glue sticks.
- A piece of poster board (12" × 18") for each child.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Distribute the thick items for children to touch. Tell children the items are thick. Then pass out the thin items and give children an opportunity to touch them.

- Have each child choose some thick and thin items and arrange them on poster board in any way they like. Once they are satisfied with their design, they can glue the items to the poster board.
- Have children present their posters to the group and talk about the thick and thin items they chose for their poster. Display the finished collages.

**27. Through Thick and Thin****Materials:**

- Pieces of crayon with outer paper removed, or peeled.
- Crayons with fine points.
- Scrap paper for each child.
- Two sheets of drawing paper for each child.
- Thin ribbon.
- Four-inch-thick crepe paper.

**Group Size:** Individual, small group, or class.

**Preparation:** Tape a large piece of drawing paper to the chalkboard. Draw large examples of thick lines and thin lines on your drawing paper. Use the side of a piece of peeled crayon to make thick lines and a pointed crayon to make thin lines.

**Procedure:** Do the following:

- Give each child a piece of scrap paper and at least two crayons: a pointed one and a peeled crayon.
- Invite children to experiment with crayons to make thick and thin lines.
- Give each child a piece of drawing paper. Let children draw whatever they like, using only the peeled crayons to draw thick lines. Then, have each child draw a picture with thin lines, using only the pointed crayons.
- Display children's pictures on a bulletin board. Decorate the display of thick-line pictures with twirled, four-inch-thick crepe paper. Decorate the display of thin-line pictures with thin ribbon.



**CONCEPT: WIDE/NARROW****28. Nibble the Noodles****Materials:**

- Cooked spaghetti or another narrow pasta.
- Cooked lasagne or other wide noodles.
- Butter.
- Tomato sauce.
- Grated cheese: optional.

**NOTE:** If children have food allergies, adjust the menu accordingly.

**Group Size:** Individual, small group, or class.

**Preparation:** Cook the spaghetti and lasagne noodles.

**Procedure:** Do the following:

- Show children the two types of noodles. Tell them that the lasagna noodles are wide, and the spaghetti is narrow.
- Ask children if they would like to eat wide noodles or narrow noodles. Serve children whatever they prefer, topped with butter, tomato sauce, and grated cheese.

**29. Make a Paper Chain****Materials:**

- Strips of construction paper in two sizes: 1" × 6" and 2" × 6".
- Glue sticks.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Give each child several paper strips in both sizes and a glue stick.
- Show children how to make one chain loop by gluing the ends of one strip together. Describe what you are doing as you work.
- Thread a second strip through the first loop, and glue the ends of that strip together.
- After children understand the process, hold up a narrow strip and say, "This strip is narrow." Have the children glue a narrow strip to form a loop.
- Show children a wide strip. Continue the procedure, having the children alternate narrow and wide chain loops.

**CONCEPT: MORE/LESS****30. Can You Guess: More or Less?****Materials:**

- Several paper drinking cups: two for each child.
- A pitcher of juice or water.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Give each child two cups.
- Pour only a small amount of juice or water in one cup, and almost fill the other cup.
- Tell children that the cup with a lot of juice has more juice, and the cup with only a small amount of juice has less juice.
- Ask children to identify the cup with more juice. Then have them identify the cup with less juice. Observe children who don't grasp the concept and need more experiences with more and less.
- Invite children to drink the juice from the cup with more juice, but ask them to leave a little in the cup. Have them look at both cups and tell which cup has more juice in it.
- After the activity is concluded, invite them to finish both cups.

**CONCEPT: MANY/FEW****31. Snacking with Raisins****Materials:**

- A large box of raisins.
- Two paper plates.

**NOTE:** Substitute raisins for another snack if children have food allergies.

**Group Size:** Small group or class.

**Procedure:** Do the following:

- Introduce the term *few* by showing children a plate with two or three raisins on it. Say, "This plate has a few raisins on it."
- To illustrate the term *many*, show children a plate with perhaps ten to fifteen raisins on it and say, "There are many raisins on this plate."
- Ask children whether they would like a few raisins or many raisins for their snack. Give children the amount they request.

**EXTENSION:** Prompt children to use the words *few* and *many* throughout the day as they engage in a variety of activities.

**CONCEPT: HUGE/TINY****32. The Elephant and the Ant**

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Divide children into pairs, then do the following:

- Tell children that they are going to pretend to be huge elephants. First, discuss what it would feel like to be a huge elephant. For example, say, "An elephant is huge. If you were an elephant, what things would seem big to you?" Point out that these things would have to be bigger than an elephant.
- Invite children to walk like elephants, bending over and using their hands clasped together to form a trunk. As they move, ask them to tell about huge things they might see if they were an elephant, such as tall trees and mountains.
- Repeat the routine for tiny ants. Ask the children: "If you were an ant, what things would seem tiny to you?" Then have them crawl like ants as they say what they might see, such as a blade of grass or grains of sand.

**33. Paint Huge and Paint Tiny****Materials:**

- Paintbrushes.
- Paint.
- Large sheets of paper: one for each child.
- Small sheets of paper: one for each child.
- Smocks.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Have children put on smocks. Tell them that they are going to paint pictures of huge shapes.
- On a large sheet of paper, demonstrate a huge shape.
- Give children a large sheet of paper and encourage them to paint a huge shape, such as a circle, a letter, or the moon.
- When the children finish painting huge shapes, give each child a small sheet of paper and repeat the routine for tiny shapes.
- Help children label their drawings of huge and tiny shapes.

**CONCEPT: MOST/LEAST****34. Show Me the Most Sand****Materials:**

- Three clear plastic containers of the same size for each pair of children.
- Sand.
- Scoops.
- Small cups.
- Sets of measuring cups.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Gather children around a sand table. If you do not have a sand table in your classroom, use a box filled with sand.
- Add a different amount of sand to three containers.
- Show children the container with the least amount of sand and say: "This container has a small amount in it. It has the least amount of sand."
- Show children the container with the greatest amount of sand and say: "This container has a lot of sand in it. It has the most amount of sand."
- Mix the order of the containers. Ask a child to identify the container that has the least amount of sand. Then, have another child identify the container that has the most amount of sand.
- Let children work in pairs to fill three containers with progressively greater amounts of sand. Listen to children as they work to see if they use the words *most* and *least*.
- Encourage children to pour the sand back and forth among containers. When they finish, let them say which container holds the least amount of sand and which container holds the most.

**35. Redder Than Red**

**Materials:** Children's paintings that feature the use of a single color of paint.

**Group Size:** Individual or small group.

**Preparation:** Select three paintings that have one color paint in common. For example, one painting should make use of a lot of red paint, another a lesser amount of red paint, and a third a small amount of red paint.

**Procedure:** Do the following:

- Place the three paintings where children can see them.
- Encourage children to talk about each painting. Point to a red area in one of the paintings and say, "This area is red." Have a child point to all the other red areas in the painting. Follow the same procedure with the other paintings.
- Say: "One painting has a lot of red in it. Show me the painting that has the most red." Have a child point to that painting.
- Say: "One painting has very little red in it. Show me the painting that has the least amount of red." Have a child point to that painting.
- Rearrange the three paintings. Ask a child to order the paintings from the one with the most red to the one with the least amount of red paint.

# Shape Concepts

## Objective

- To recognize, name, and compare geometric shapes.
- To identify the characteristics of the shapes.

### RATIONALE

Familiarity with shapes and their attributes contributes to learning across domains of knowledge. Early on, children notice shapes in the natural world. In math, knowledge of shapes helps to develop children's spatial reasoning. In literacy, children acquire a vocabulary that allows them to compare shapes, directions, and positions in space. In art and social studies children use their spatial sense in making and reading maps. In reading, distinguishing between letters of the alphabet involves attention to shape and position. Children develop concepts of shape through a variety of activities that encourage experimentation including painting, drawing, playing with play dough, and learning finger plays.

## Sequence

Although each child's developmental rate and pattern is unique, the following is a sequence of skills that children typically develop through the age of seven years. Use the skill sequences as a general guide when planning your instruction.

- Traces different kinds of shapes and forms.
- Draws shapes and forms in the air using a finger.
- Uses cookie cutters to make shapes and forms.
- Matches shapes and forms to corresponding shapes and forms.
- Identifies shapes through the sense of touch.
- Begins to draw shapes and forms.
- Identifies characteristics of shapes.

## Recommendations for Effective Teaching

### ENJOY A SHAPE DAY

Choose one day each week to highlight a different shape. Collect related items that resemble the shape of the week and display them throughout the classroom. During group time, have each child find an object in the classroom that is the same shape.

### TAKE A SHAPE WALK

Take a shape walk around the school neighborhood and observe as many different shapes as possible, including road signs, store signs, and houses. Later, draw the shapes you saw on a chart. Write the kind of shape below each drawing. Post the chart in the classroom.

### EAT SHAPED SNACKS

During snack time, serve cheese cut into circles, squares, rectangles, and diamonds. Cut fruit into circles (bananas, grapefruit, apples, and orange slices) and triangles (wedges of oranges and apples). Serve the children shaped crackers. Talk about the shapes of the snacks as the children eat.

**CAUTION:** Some children are allergic to the ingredients in certain foods. Before starting any activity, check package labels for ingredients that may cause allergic reactions.

### ACCOMMODATE EACH CHILD'S DEVELOPMENTAL LEVEL

Activities should be open-ended so that each child can participate on his own developmental level. For example, when working with play dough, one child might create a shape with a lot of detail. Another child may use the same amount of time and energy rolling, pounding, and squishing the play dough. Although the end results are different, each child benefits from working with the play dough.

### READ WITH YOUR CHILDREN

Here are some books about shapes that children will enjoy reading.

Bruna, Dick. *I Know About Shapes*; Carle, Eric. *Draw Me a Star*; Onyefulu, Ifeoma. *A Triangle for Adaora: An African Book of Shapes*.

# Teaching Activities

## 1. It's Puzzle Time!

**Materials:** A variety of puzzles, such as floor puzzles, puzzles with knobs, puzzles with large pieces, puzzles with smaller pieces, puzzles with few pieces, puzzles with many pieces, alphabet puzzles, shape puzzles, picture puzzles, object puzzles, animal puzzles.

**Group Size:** Individual, small group.

**Procedure:** Do the following:

- Show children several picture puzzles and invite them to choose one they would like to do. Observe them as they work on their puzzle. Join in and engage children in conversation about their work.
- Provide prompts to discuss the shapes and colors of puzzle pieces and discuss picture details. For example, "What color piece goes next to this one?" "That piece looks like the shape of the moon."
- Help children identify corner and outside puzzle pieces and find their correct positions in the puzzle.

## 2. Finger Plays

**Materials:**

- Large sheets of paper.
- A marker.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Have children sit in a circle on the floor and do the following finger plays with you.
- Recite a finger play and do the accompanying motions. Do the finger play again, but this time have the children join in with the words and motions. Go slowly enough so that children are able to follow along.
- Recite the finger play for a third time. Have children complete the second word in a rhyming pair of words (line/sign; there/square; round/sound; me/see; square/air).
- Post the poems in the classroom so the children can refer to them.

## Lines and Shapes

*One straight finger makes a line.*

(Hold up one index finger.)

*Two straight fingers make this sign.*

(Cross your index fingers to form an X.)

*Three lines make a triangle there.*

(Form a triangle with your index fingers touching and your thumbs touching.)

*One more line will make a square.*

(Form a square using both hands.)

## Circle, Triangle, and Square

*A circle has no corners.*

(Draw a circle in the air with your finger.)

*It's really rather round.*

*Now draw a great, big circle.*

*But please don't make a sound!*

*A triangle has three corners.*

(Draw a triangle in the air with your finger.)

*Please draw one now with me.*

*A square has one more corner.*

(Draw a square in the air with your finger.)

*A square has four, you see!*

## What Am I Drawing?

*This is a circle.*

(Draw a circle in the air with your finger.)

*This is a square.*

(Draw a square in the air with your finger.)

*What am I drawing in the air?*

(Draw another shape in the air with your finger for the children to guess.)

### 3. Shapes in Play Dough

**Materials:**

- Play dough (either homemade or purchased).  
Ingredients for homemade play dough:
  - 1½ cups of flour
  - ½ cup of salt
  - 1 T. cream of tartar
  - 3 T. vegetable oil
  - 1½ cups of water
  - Food coloring (optional)
- Airtight container.
- Wax paper.
- Tape.
- Cookie sheets.
- Shaped cookie cutters: circles, plus signs, Xs, squares, rectangles, triangles, and diamonds.

**Preparation:** Do the following:

- In a large saucepan, mix the dry ingredients: flour, salt, and cream of tartar.
- In a separate bowl, mix the wet ingredients: oil, water, and food coloring.
- Pour the combined wet ingredients into the saucepan containing the dry ingredients and stir to mix.
- Cook over low heat, stirring constantly until dough is the consistency of thickened mashed potatoes.
- Let the play dough cool before the children handle it.
- Store the play dough in an airtight container.

**Group Size:** Individual, small group, or class.**Procedure:** Do the following:

- Have children sit at tables.
- Tape wax paper to the tables or have the children work on cookie sheets.
- Place various shaped cookie cutters in the center of each table.
- Give each child a generous amount of play dough. Encourage children to squish and flatten the dough with their hands.
- Have them cut out shapes. Talk about the different shapes the children are making.

- If children are ready, encourage them to make shapes without using the cutters.
- When children are finished, guide them in sorting their shapes: circle, triangle, rectangle, and square.

### 4. Paper Plate Faces

**Materials:**

- Paper plates.
- Markers.
- Construction paper.
- Scissors.
- Cut-out construction paper shapes.
- Snips of yarn.
- Glue sticks.

**Group Size:** Individual, small group, or class.**Preparation:** Do the following:

- On each paper plate, draw facial features using triangles, squares, circles, diamonds. For example, draw circles for eyes, a triangle for a nose, and so on.
- On construction paper, draw and cut out the same sized shapes that you drew on the paper plates.

**Procedure:** Do the following:

- Have children sit at tables. Place a pile of various cutout shapes in the center of each table.
- Give each child a paper plate face. Encourage each child to match the shapes on his paper plate face with the shape cutouts.
- Have children glue the shapes into place on the face.
- When all the facial features have been added, children can use the yarn to make hair.
- Have children talk about the shapes on their paper plate faces.

**EXTENSION:** Children can create their own paper plate faces. Give them a clean paper plate and have them use the shapes to create their own faces. Prompt children to talk about the shapes they used to make their paper plate faces.

## 5. What's in the Bag?

**Materials:**

- Small bag or pillowcase.
- Blocks (circles, squares, rectangles, triangles, diamonds).

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Have children sit in a circle on the floor.
- Show the different shaped blocks to children and name each shape.
- Describe a block's shape. For example, say: "A square has four sides that are all the same size." Run your hand over each side. Say, "This is one side of a square." Turn the block. "This is another side of the square."
- Pass each block around the circle so that children have a chance to look at and touch each side of the object.
- Place a few round blocks and a few square blocks into the bag. Say: "I am going to reach in the bag and see if I can find a square. Yes! I think I have it." Pull out a square and show children. "This is a square."
- Have children take turns finding a square. Ask them to name the shape as they remove it from the bag.
- Discuss each shape as it is pulled from the bag. For example, say, "Yes, you found the square. It has four sides that are the same."
- Continue the activity, filling the bag with different-shaped blocks.

## 6. Let's Go on a Shape Hunt!

**Materials:**

- Construction paper shapes, six of each kind: circles, triangles, squares, rectangles, and diamonds. Laminate, if possible, for durability.
- Heavy-duty tape.

**Group Size:** Individual, small group, or class.

**Preparation:** Using tape, stick the shapes around the classroom—on walls, bookshelves, chairs and chair backs, tables (on top of and underneath), doors, cubbies, the floor, and so on.

**Procedure:** Do the following:

- Tell children that they are going on a shape hunt around the room.
- Hold up the shapes and ask children to name them.
- Assign each child a specific shape and give them one of the cutout shapes to refer to as he hunts. You may wish to have children work in pairs.
- Explain that each child is searching for a different shape. Tell children that there are five shapes: circle, square, rectangle, triangle, and diamond.
- To make the game fun and challenging, explain that there are 6 of each shape that they will need to find. For example, if your shape is a circle, you will need to find 6 circles, all in different places around the room.
- Have the children go on a shape hunt. When they find all of their shapes, have them sit down.
- Play again another time and assign each child a different shape.

## 7. Circle Collage

**Materials:**

- Small circular objects, such as pom-poms, plastic milk tops, pennies, buttons, beads, and construction paper circles.
- Circles cut from construction paper, sandpaper, foil, and newspaper.
- Glue sticks.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Have children sit at tables.
- Place objects in the shape of circles in containers on the tables.
- Place piles of pre-cut construction paper circles on the tables.
- Invite children to make circle collages by gluing the circular objects onto the construction paper (that is shaped in a circle).

**EXTENSION:** Create collages using squares, rectangles, triangles, and diamond shapes. Children can form shapes using a variety of materials, such as dried beans, peas, pasta, beads, popcorn, seeds, torn bits of paper, string, or lace. Have the children glue the materials onto pre-cut shapes.

## 8. Chalk Drawings

### Materials:

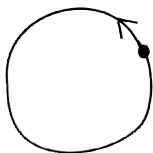
- A large flat surface, such as a sidewalk or chalkboard.
- Sidewalk chalk of different colors: one stick of chalk for each child and one for you.
- Buckets of water and large sponges: to clean the chalk from the surface when the children have finished.

**Group Size:** Individual or small group.

### Procedure:

 Do the following:

- Demonstrate drawing a large shape or form on a flat surface, as children observe.
- Explain your movements as you draw. For example, as you draw a circle, say: "Start here in the two o'clock position and go up and around until you close the circle to make its shape."
- Give each child a piece of chalk. Have children imitate what you just demonstrated.
- Verbalize the correct sequence of movements as children draw.
- When children finish, have them "erase" their drawings with dampened sponges, and draw other shapes.
- As they draw, encourage children to use the chalk to decorate their shapes. For example, a child might add facial features and hair to a circle, or he might turn his triangle into a tree.





# Joins Sets

## Objective

To demonstrate addition by joining two sets.

### RATIONALE

The skill of counting objects in two sets and determining the total quantity comes before the basic computation skills of addition and subtraction. Learning to join sets helps to practice these skills.

## Sequence

The following is a sequence of skills that children typically develop through the age of seven years. Use the skill sequence as a general guide when planning your instruction.

- Can count consecutively when counting objects in two separate sets.
- Understands that putting two groups of objects together will make a bigger group.
- Uses concrete models and verbal word problems for adding up to five objects.
- Uses concrete models and verbal word problems for adding up to ten objects.

## Recommendations for Effective Teaching

### WHEN JOINING SETS, TEACH THE CHILD TO COUNT CONSECUTIVELY

Teach the child to count consecutively when counting objects in two separate sets. Many children have difficulty counting when the sequence is interrupted. Demonstrate counting consecutively by assigning aloud the next number in sequence to the first object of the second set.

### BEGIN BY JOINING A SET OF ONLY ONE TO ANOTHER SET OF OBJECTS

When a child is first joining sets, have her join a set of only one object to another set of objects. For example, if you are teaching the child to join sets to make a total of six, have her join a set of one to a set of five.

### PROVIDE OPPORTUNITIES FOR PRACTICE AND REVIEW

After children have learned to join sets, most children will need frequent review and practice until the concept is mastered. An effective instructional program will include various activities for practice and review.

### READ WITH YOUR CHILDREN

Here are some books about counting that children will enjoy reading.

Berenstain, Stanley and Janice Berenstain. *Inside, Outside, Upside Down*.  
Rosen, Michael. *We're Going on a Bear Hunt*. Illus. by Helen Oxenbury.  
Vail, Rachel. *Over the Moon*. Illus. by Scott Nash.

# Teaching Activities

## 1. Now There Are Two!

**Materials:** Paper cutouts of 2 little birds, 3 ladybugs, 4 puppies, 5 bees, 4 kittens, 5 dolphins.

**Group Size:** Individual, small group, or class.

**Procedure:** Begin by joining a set of only one to another set of objects. Do the following:

- Recite the finger play and do the motions. Each time you say a number, hold up that amount of fingers. Be sure that children can see your hands.
- Recite the finger play again, and, this time, have the children join in. Do the motions slowly so that children can follow along.
- Display cutouts one verse at a time. Recite the first verse of the finger play, then demonstrate joining sets. Show set 1: 1 little bird; show set 2: 1 little bird. Have children count consecutively: 1 . . . 2. Then ask, "How many?"

- Repeat the routine for each of the verses.

*1 birdie plays peek-a-boo.*

(hold up one finger on left hand)

*1 more joins her. Now there are [2].*

(hold up one finger on right hand)

*2 ladybugs have some tea.*

*1 more joins them. Now there are [3].*

*3 puppies knock at the door.*

*1 more joins them. Now there are [4].*

*4 yellow bees buzz in a hive.*

*1 more joins them. Now there are [5].*

*2 kitties play on the floor.*

*2 more join them. Now there are [4].*

*3 dolphins swim and dive.*

*2 more join them. Now there are [5].*

- After children have joined sets, recite the finger play again. When you come to the second rhyming word in a pair, stop and invite children to chime-in the correct numeral.

## 2. How Many All Together?

**Materials:**

- Small paper plates: Two for each child.
- Several snack pieces: Cereal, raisins, small crackers, and so on.

**NOTE:** Be aware of children with food allergies and choose snacks accordingly.

**Group Size:** Individual, small group.

**Procedure:** Do the following:

- Set two small paper plates in front of each child.
- Give each child 5 raisins.
- Ask children to put 2 raisins on one plate. Ask: "How many raisins are on this plate?"
- Have children place the remaining 3 raisins on the other plate. Ask: "How many raisins are on this plate?"
- Ask children to look at both plates and count consecutively across sets. (1 . . . 2 . . . 3 . . . 4 . . . 5.) Ask: "How many raisins are there all together?"
- Invite children to eat their snack. Then begin the routine again with another kind of snack. This time, have them put 4 pieces of cereal on one plate, and one piece of cereal on the other plate.

**EXTENSION:** When children are ready, repeat the routine by having them join sets up to 10.

### 3. Let's Grow a Garden!

**Materials:**

- Oversized index cards or construction paper: One for each child.
- Counters: 10 for each child.

**Group Size:** Individual, small group.

**Procedure:** Do the following:

- Give each child an index card and 10 counters.
- Hold up the index card and say: "Here is your pretend garden." Display the counters and say: "Here are your pretend flowers."
- Tell children to put two flowers in their garden. Look at each "garden" to make sure children put the correct amount of "flowers" in it.
- Ask children to put two more flowers in their garden. Then say: "Let's count the flowers in the garden: 1 . . . 2 . . . 3 . . . 4. How many flowers are there altogether in the garden?"
- Continue this routine by having children join different sets of numbers to five.

**EXTENSION:** Have children use their "garden" and "flowers" to join sets to 10.

### 4. Spin, Count, and Join!

**Materials:**

- Spinners (with numbers from 1–5 on them): One spinner for each pair of children.
- Paper plates: One for each child.
- Counters: 10 for each child. Assign one child red counters and the other child yellow counters.

**Group Size:** Pairs, small group.

**Procedure:** Do the following:

- Give each child a paper plate and 10 counters. Tell them that they are going to share a spinner.
- Have the first child in the pair spin the spinner. When it lands on a number, have her say the number aloud then place that amount of counters on her plate.
- Have the other child repeat the routine.
- Have the pair look at both plates, then count the counters consecutively across 2 sets. Then say: "How many counters are there all together?"
- Repeat this routine several times to give children the opportunity to join different sets of numbers.

### 5. Roll, Count, and Join!

**Materials:**

- Number Cubes: One for each child.
- Counters: 10 for each child (in two different colors).

**Group Size:** Pairs, small group.

**Procedure:** Do the following:

- Give each child a number cube and 10 counters.
- Divide the group into pairs.
- Have the first child in the pair roll the number cube. Have him say the number and place that amount of counters on the table.
- Have the other child repeat the routine.
- Have the pair look at all of the counters and count consecutively. Say: "How many counters are there all together?"
- Repeat this routine several times to give children the opportunity to join different sets of numbers.

# Directional/Positional Concepts

## Objective

To demonstrate understanding of various directional/positional concepts

### RATIONALE

Learning directional/positional concepts will help a child understand the spatial relationships that exist between her body and other objects. Thinking spatially is important to a young child's development. A child needs to understand directional/positional concepts to accomplish many school tasks including following verbal directions, writing between lines on paper, and placing written work on paper in an organized manner.

## Sequence

### TEACHING SEQUENCE

#### Initially, teach at the Receptive Level

Initially, teach a child directional/positional concepts at the receptive level. This will help the child develop an understanding of abstract concepts before she has to use them verbally. For example, have the child point to an object that is inside a box, or point to a light switch high on the wall, or point to her left arm.

#### Next, teach at the Expressive Level

Once the child can consistently identify an object that is in a specific position or direction, teach concepts at the expressive level. For example, ask the child, "Is Jenny standing in front of or behind the desk?" or "Where is Jenny standing?" Encourage the child to use complete sentences. Model how to ask and respond to questions when talking about directional/positional concepts.

### SEQUENCE OF ACTIVITIES

Activities used to teach directional/positional concepts should follow a logical progression:

- 1. Teach Terms in Relation to Child's Own Body**  
Initially, use activities that require a child to move her body. For example, ask the child to raise her arm up high.
- 2. Teach Terms Using Objects in Relation to Child's Body**  
Next, use activities that require a child to place an object in a position that relates to her own body. For example, ask the child to hold a beanbag in front of or behind her body.
- 3. Teach Terms Using Child in Relation to Object**  
Next, use activities that require a child to assume a position or direction in relation to an object. For example, ask the child to move to the right of the bookcase.
- 4. Teach Terms Using Objects in Relation to Each Other**  
After a child understands the concepts in relation to her own body, use activities that require the child to place objects in relation to each other. For example, ask the child to put a pencil inside a box.
- 5. Teach Terms Using Positions and Directions on a Horizontal Plane**  
Finally, use activities that require a child to apply the positional and directional concepts on a horizontal plane. For example, ask the child to point to the top of her paper when the paper is lying flat on the table, or ask the child if the ball is above or below the star on a piece of paper.

# Recommendations for Effective Teaching

## USE INTERESTING OBJECTS

A child may be more engaged in learning if you use objects that she finds interesting. For example, if a child is interested in zoo animals, use blocks or rocks and toy zoo animals to help the child create a miniature zoo. Use this zoo to teach specific directional/positional concepts. You might place a tiger cub in front of a rock and a big tiger behind the rock, or you might ask the child to place one monkey at the top of a block and another at the bottom.

## USE GESTURES WHEN GIVING INSTRUCTIONS

Use gestures to demonstrate and emphasize the concepts as you give instructions for an activity. For example, when helping a child draw a square, say, “Begin at the top-left corner. Go down, move to the right, and then move up and to the left.” Move your hand in the appropriate direction as you speak. Then, have the child say only the direction words, down, right, up, and left, as she draws the square.

## THINK ABOUT THE CHILD’S PERSPECTIVE

Keep the child’s perspective in mind when you teach positional and directional concepts. The position or direction of an object depends on where you are when you view the object. For example, a cup doesn’t have a front or a back. If you ask a child to put a pencil behind a cup, you are asking the child to place the pencil in relation to the cup and in relation to her own body. If the child understands the concept, she will place the pencil on the side of the cup that is farther away from her.

## TEACH CONCEPTS AS THEY RELATE TO THE HORIZONTAL PLANE

Teach positional and directional concepts in the horizontal plane as well as in the vertical plane. The following concepts apply to the horizontal plane as well as to the vertical plane:

front/back	over/under
in front of/behind	above/below
up/down	center/corner
top/bottom	right/left of self

Teachers frequently give children directions that include positional or directional terms in reference to a sheet of paper or a book placed in the horizontal plane (on the child’s desk, on a work table, flat on the floor). If the children do not understand how these terms relate to items in the horizontal plane, they cannot follow the directions. Understanding how these terms relate to the horizontal plane can mean the difference between success and failure in many primary classrooms. Therefore, after a child understands the concepts as they apply to the vertical plane (to the body in a standing position), help the child transfer her knowledge to the horizontal plane. Helping the child make this transfer is very important.

## HELP THE CHILDREN LEARN RIGHT AND LEFT

Much has been written regarding the difficulties some children have in developing an awareness and understanding of right and left. Use the following suggestions and ideas to help a child overcome these difficulties:

- **One Concept at a Time**  
Some children may become confused if you attempt to teach both right and left at the same time. To avoid this confusion, thoroughly explore and teach the concept right prior to introducing or placing any emphasis on left. When you feel that the child has a solid understanding of right, introduce left.
- **Dominant Hand**  
The hand that the child consistently uses to hold a crayon, a pencil, or a cup is referred to as the dominant hand. Most children establish a degree of hand dominance by age five. If hand dominance is established, encourage the child to say, “My right (left) hand is the one I write with.”
- **Children Should Not Face Each Other**  
Activities used to teach right and left should not require children to stand in a circle. Confusion about right and left may result if the children face each other and do not see a “mirror image.”

### TALK ABOUT THE PICTURES IN BOOKS

As the children look at and share pictures in books, talk about the pictures and ask questions about the different positions and directions of objects in the pictures. (Remember that left and right are reversed for you if you are holding a book and facing the children.)

### TALK TO THE CHILDREN ABOUT THEIR ACTIONS

Children can learn directional/positional concepts from engaging in everyday activities. Talk to the children about their actions. For example, when a child is placing a book on a shelf, say, "Timmy is putting the book on the top shelf." Also, ask questions such as, "Did Timmy put the book on the top shelf, the middle shelf, or the bottom shelf?"

### DISCUSS THE PLACEMENT OF NAMES ON PAPERS

As you show the children where to write their names on their papers, point to and describe where they will write their names. For example, point to the top-right corner of a sheet of paper and say, "I want you to write your name in the top-right corner of the paper." If necessary, explain and demonstrate each word: top, right, and corner.

### TALK ABOUT POSITIONS IN LINE

When the children are lining up, discuss positions of the children in line. Ask questions. For example, say, "Jill is behind Mark. Who is in front of Perry?" When a child seems to understand the different positions, have her tell her position in the line and the positions of others.

### PROVIDE THE CHILDREN WITH CHOICES

When possible, let a child state her choice of alternatives. For example, ask, "Do you want the window open or closed?" "Do you want to hold the beanbag in your right hand or your left hand?" "Do you want to sit in the front or in the back?"

### TALK ABOUT WHAT THE CHILDREN WILL DO

Use directional/positional concepts when you tell the children what you want them to do. For example, when walking to lunch, say, "Let's walk on the right side of the stairs." When going outside, say, "Today we'll play at the back of the field."

### VERBALIZE WHAT IS HAPPENING AS CHILDREN PERFORM ACTIVITIES

During many activities (cooking, painting, working with clay, cutting with scissors, pasting, working with wood), there are opportunities to use directional/positional terms. If you verbalize these terms as the children participate in activities, the children will understand how the terms apply in many situations. This auditory input will help children develop language skills.

### READ WITH YOUR CHILDREN

Here are some books that children will enjoy reading.

Berenstain, Stanley and Janice Berenstain. *Inside, Outside, Upside Down*.  
Rosen, Michael. *We're Going on a Bear Hunt*. Illus. by Helen Oxenbury.  
Vail, Rachel. *Over the Moon*. Illus. by Scott Nash.

# Factors That Impact Development

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Be alert to factors that might affect development.

## POOR AUDITORY DISCRIMINATION

Some children at the readiness level have not developed adequate auditory discrimination skills. These children may experience confusion because they cannot discriminate words that sound similar. The following are examples of words that may cause confusion:

in/end	top/stop
off/of	front/from
left/lift	

## HEARING OR VISUAL PROBLEMS

Observe children for indications of a hearing problem or a visual problem. If a child appears to have a hearing impairment, be sure she can see your face and your gestures. If a child appears to have a visual impairment, use different kinds of physical prompts (tactile and kinesthetic).

## DIFFICULTY TRANSFERRING THE SKILL TO A DIFFERENT PLANE

A child with learning difficulties frequently has trouble transferring new learning to different situations. Therefore, a child may have difficulty transferring her understanding of directional/positional concepts from the vertical plane to the horizontal plane.

# Teaching Activities

## 1. Open, Close Them

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Reinforce the concept open/close by doing the finger play “Open, Close Them” with children: Do the following:

- Have children sit in a circle.
- Tell children that you are going to teach them a song called “Open, Close Them.” Sing the song to the children as you demonstrate the actions.

*Open, close them. Open, close them.*  
(open hands and make fists two times)  
*Give a little clap, clap, clap.*  
(clap three times)

*Open, close them. Open, close them.*  
(open hands and make fists two times)

*Put them on your lap.*  
(place hands in lap)

*Creep them, crawl them. Creep them, crawl them.*  
*Right up to your chin.*

(take index and middle fingers on one hand and walk them up other arm and up to your chin)

*Open up your little mouth.*  
(point to mouth and open mouth)

*But do not let them in!*  
(quickly put hands behind back)

- Sing the song again and invite children to join in and do the hand motions with you.

**CONCEPTS:** Repeat this activity using other directional/positional words: in/out, closed/open, up/down, front/back, behind/in front of.

## 2. Shake, Shimmy, and Wiggle

**Materials:** None. Or, you may wish to play a tape or CD so children can move to music.

**Group Size:** Individual, small group, or class.

**Procedure:** Use body movements to introduce positional and directional concepts. This will also provide an opportunity to develop kinesthetic, or bodily awareness. Do the following:

- Have children stand so that each child has enough room to move freely and can see each other. Avoid having children stand in a circle if you are teaching right and left.
- Ask children to show you different ways they can move their body parts. Describe the movements as the children perform them. For example, say: “Hugo, show me one way that you can move your leg.” After the child makes the movement, describe it. (“You kicked your leg forward, then backward.”) Then, ask the other children to make the same movement and describe it again.
- Let children take turns showing ways to move a body part. After most of the children know the movements they can make with different body parts, give directions to the whole group.

**CONCEPTS:** Repeat this activity using other directional/positional words: in/out, front/back, behind/in front of, up/down, low/high, forward/backward, away from/toward, right/left.

## 3. Hokey Pokey

**Materials:** None.

**Group Size:** Small group or class.

**Procedure:** Do the following:

- Have children stand far enough apart to allow for movement.
- Tell them that you are going to teach them a song called the Hokey Pokey, and they will move their arms, legs, heads, and bodies.
- Sing the song while demonstrating the movements. Repeat the song using “other arm,” “both arms,” “one leg,” “other leg,” “both legs,” and “whole body.”

*You put one arm in, you take one arm out,*

*You put one arm in and you shake it all about.*

*You do the Hokey Pokey and you turn yourself around,*

*That's what it's all about!*



#### 4. Beanbag Boogie

**Materials:** Beanbags: one for each child and one for you.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Give each child a beanbag.
- Have children stand far enough apart to allow for movement.
- Give directions that require the children to use directional/positional concepts in relation to their body parts. Pause after each direction. For example, tell children to:
  - hold the beanbag in front of them with both hands.
  - lift the beanbag above their heads using both hands.
  - hold the beanbag behind their heads using both hands.
  - place the beanbag on their right wrists and hold it in front of them.
  - hold the beanbag on the left side of their bodies.
  - hold the beanbag on the right side of their bodies.
  - hold the beanbag in their right hands and lift it as high above their heads as they can.
  - hold the beanbag as low as possible with their left hands.
  - hold the beanbag above their head with both hands and sit down slowly.
- Begin with simple one-step directions. Give more difficult directions when children are ready.
- If a child does not understand a direction, demonstrate it again, or have the child watch another child perform the direction.

**CONCEPTS:** Repeat this activity using other directional/positional words: front/back, behind/in front of, up/down, low/high, over/under, above/below, right/left of self.

**NOTE:** When you demonstrate a direction that requires the children to apply the concept of left and right, turn your back to children to avoid confusion.

#### 5. Move to the Music

**Materials:**

- Chairs.
- A tape or CD.
- Tape/CD player.

**Group Size:** Small group or class.

**Procedure:** Set up a row of chairs, one chair for each child. Space chairs evenly apart. Then do the following:

- Give children directions on how to play. For example, say: “When I start the music, walk around the chairs. When the music stops, find a chair to sit on.”
- Tell children that when the music begins again, they should stand up and walk around the chairs until the music stops.
- Repeat the routine using the directions and positions you want to teach. For example: “When I start the music, walk behind the chairs.” Or: “When I start the music, walk away from the chairs.”

**NOTE:** Chairs are not removed during this activity. All children can play throughout the activity.

**CONCEPTS:** Repeat this activity using other directional/positional words: front/back, behind/in front of, over/under, away from/toward, right/left of self.

## 6. Tunnel Bugs

**Materials:** A crawling tunnel or a large appliance box such as a refrigerator box.

**Location:** A level, smooth-surfaced, open area.

**Group Size:** Individual, small group, or class.

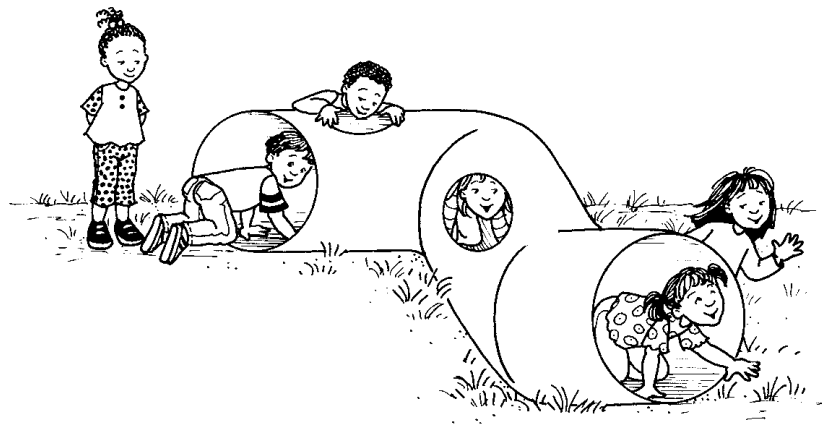
**Preparation:** If you are using a large appliance box, open the ends of the box so the children can easily climb in and out. Cut a child-size opening or door in the center of the box. Refer to the box as “the playhouse.”

**Procedure:** Do the following:

- Place the crawling tunnel or playhouse in the center of the open area.
- Tell the children that they are going to play a game and you will be using the words *in* and *out*.
- Have children form a line.
- Ask the first child to crawl into the playhouse and then to crawl out of it.
- Tell children they can decide how they will crawl out of the playhouse. For example, a child might crawl straight through to the opposite end, or come back out the way she went in.
- Give each child a chance to crawl into and out of the structure. Describe the location of the child as she crawls. For example, say, “I can’t see Samantha. She is in the playhouse.” Or “I see Lee backing out of the playhouse.” After the children have mastered *in* and *out*, introduce other concepts you would like them to learn.

**EXTENSION:** While children play the game, ask them to respond to questions about location. For example, as Samantha crawls through the tunnel, ask: “Samantha, where are you?” Encourage her to respond: “I’m in the playhouse!”

**CONCEPTS:** Repeat this activity using other directional/positional words: *in/out*, *into/out of*, *front/back*, *behind/in front of*, *forward/backward*, *away from/toward*, *center/corner*.



## 7. Hula Hoops

### Materials:

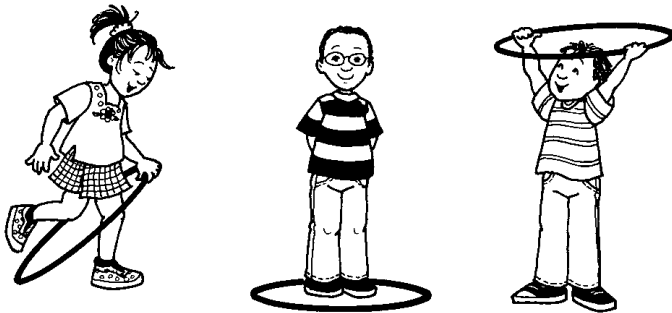
- A hula hoop for each child.
- A tape or CD.
- Tape/CD player.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Have children stand far enough apart to allow for movement.
- Give each child a hoop. Have children lay their hoops flat on the ground in front of them.
- Turn on the music. Give children the following verbal directions:
  - Walk into the hoop.
  - Walk out of the hoop.
  - Walk toward the hoop.
  - Walk away from the hoop.
  - Walk forward into the hoop.
  - Walk backward (carefully!) out of the hoop.
  - Walk to the center of the hoop.
- Have children do the above routine again, except jump instead of walk.
- Have children hop on their right foot and repeat the above routine, then do it again on their left foot.

**CONCEPTS:** Repeat this activity using other directional/positional words: into/out of, front/back, in front of/behind, inside/outside, over/under, forward/backward, toward/away from, right/left of self.



## 8. Looking High, Looking Low

### Materials:

- Large sheet of paper.
- Marker.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Tell children that they are going to take a walk to look for objects up high and for objects down low.
- Take a walk inside or outside of the school.
- Point out examples of objects as you walk. For example: “The Exit sign is high.” “The plant is low.”
- After you return, list the items the children observed on a large sheet of paper. List the high items up high and the low items down low on the paper.

**CONCEPT:** Repeat this activity using other directional/positional words: low/high.

## 9. Where Is the Toy?

### Materials:

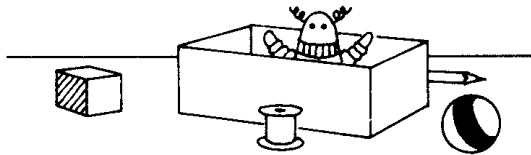
- A container with a lid, such as a shoebox.
- A collection of small toys, such as blocks, spools, small plastic animals.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Invite children to play with the container and the toys.
- As the children put the toys in different places, talk about where they are placing the toys. Use phrases such as: “in the box,” “under the box,” “on top of the box.”
- Ask children questions that require receptive and then expressive understanding of the concepts. For example, ask: “Can you put the dog behind the box?” or “Where is the dog?”
- Encourage children to respond in complete sentences.

**CONCEPTS:** Repeat this activity using other directional/positional words: in/out, into/out of, behind/in front of, over/under, center/corner, right/left of self.



## 10. Toys on the Shelves

### Materials:

- A bookcase with a top shelf and a bottom shelf. If a bookcase is not available, tape or glue the sides of two shoeboxes together to form the structure. Also, two steps of a staircase may be used.
- A collection of small toys that can be placed on the shelves: animals, cars, blocks, spools.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Tell children the location of each shelf—top or bottom—and have the children repeat each location.
- Place the toys on the shelves, and tell children on which shelf you are placing each toy.
- When children understand the shelf positions, have them place a toy on the shelf that you specify. For example, say, “Kareem, put the stuffed turtle on the bottom shelf.” Continue this routine until each child has had a turn.
- Invite children to give instructions using the words top and bottom. Have them take turns telling the others where to place a toy on the shelf.
- Use the bookcase to teach other positional and directional concepts. For example, say: “Put the block in the center of the top shelf.” Or: “Put the car at the back of the bottom shelf.”
- Use the bookcase to teach positional and directional relationships between objects. For example, say: “Put the crayon behind the rabbit.” Or: “Move the car away from the block.”

**CONCEPTS:** Repeat this activity using other directional/positional words: bottom/top, in/out, into/out of, behind/in front of, low/high, away from/toward, center/corner, right/left of self.

## 11. Build a Snack!

### Materials:

- Thin slices of cheese, apples, and bananas.
- Crackers.
- Napkins.

**NOTE:** If children have food allergies, replace the snack with other food.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Show children how to build a cracker sandwich. For example, say: "I'm going to build a cracker sandwich. First, I take a cracker. Next, I put a slice of cheese on the cracker. Then, I put a slice of apple on top of the cheese. Last, I put another cracker on top of the apple. Now I take a bite! Yum!"
- Give each child a napkin, four slices of cheese, four slices of apple, four slices of banana, and eight crackers.
- Let children experiment with the food items. Describe children's actions as they build their snack. For example, say: "Mia put banana in the center of her cracker." Or: "Paulo nibbled the corner of his cheese."

**CONCEPTS:** Repeat this activity using other directional/positional words: on/off, bottom/top, above/below, center/corner.

## 12. Float or Sink?

### Materials:

- A water table or a large clear bowl filled with water.
- Objects that will float on the water: a tennis ball, a ping pong ball, a pine cone.
- Objects that will sink to the bottom: a small rock, a crayon, a key, a wooden block, a paper clip.
- Towels.

**Group Size:** Individual, small group, or class.

**Procedure:** Have children gather around the water table or sit in a circle around a bowl of water. Then do the following:

- Tell children that they will help conduct an experiment to find out which objects float on top of the water.
- Show and name one of the objects. Place the object in the water and ask children whether the object floated on top of the water or sank to the bottom.
- Invite children to predict whether the next object will float or sink before you put it in the water. Repeat the routine with other objects.
- Keep the water table or bowl available with different objects so that children can experiment with the concepts on their own.

**CONCEPTS:** Repeat this activity using other directional/positional words: in/out, into/out of, bottom/top.

### 13. Building Blocks

**Materials:** Identical sets of small blocks: one set for each child.

**Group Size:** Individual, small group, or class.

**Procedure:** Have children sit beside you or in a semi-circle so they have the same perspective as you. Then do the following:

- Build a simple structure using a set of blocks. Talk about the placement of each block as you build. For example, say: "I am putting the red block behind the green block. Now I am putting the yellow block on top of the green block."
- Continue building with blocks until you have demonstrated and discussed the concepts that you plan to teach during this session.
- Give each child a set of blocks. Allow children to build freely with the blocks before you begin the structured building activity.
- Comment on the child's placement of the blocks. For example, say: "I see you put a green block on top of the red block."
- Give children specific building instructions. For example, say: "Put a blue block to the right of the yellow block."

**CONCEPTS:** Repeat this activity using other directional/positional words: behind/in front of, bottom/top, over/under, above/below, center/corner.



### 14. Going on a Bear Hunt

**Materials:** None.

**Group Size:** Individual, small group, or class.

**Procedure:** Make up a story using positional and directional concepts that you want to teach. Create hand movements to illustrate the concepts. Or use the example below.

- Tell children that you are going to tell them a story, and you want them to act out the story as you tell it.
 

"We're going on a bear hunt."  
(Have the children make walking sounds by patting the floor with the palms of their hands.)

"We're going to start our bear hunt with a walk in the woods. Is everybody ready? Okay! Let's go!"  
(Motion to children to follow you and begin walking.)

"I see a giant tree that has fallen. It's too high for us to climb over and too low for us to walk under. I guess we'll have to walk around it. Good! Let's keep walking. Now, we've walked all the way out of the woods."  
(Walk around a row of chairs and have children follow you.)

"Now, we're out of the woods. I see some cows in a field and there's a gate in front of us. Let's open the gate and walk through it. Don't forget to close the gate behind you. We don't want the cows to get out of the field."  
(Pretend to open and close a gate as you keep walking.)

"Now, we're standing at the bottom of a very high hill. Are you ready to start up the hill? Let's go."  
(Pretend to walk up hill)

"Whew! We finally made it! We're at the top of the hill."  
"There are a lot of flowers up here. Let's look to the right. Let's look to the left. Let's look below. I see a lake down there. Let's run down the hill to the lake."  
(Look to the right, to the left, then below. After, run in place.)
- CONCEPTS:** Repeat this activity using other directional/positional words: in/out, closed/open, into/out of, front/back, behind/in front of, up/down, bottom/top, low/high, over/under, forward/backward, above/below, away from/toward.

## 15. I Spy

**Materials:** Objects in the classroom.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Tell children that you are going to give them a clue about an object in the classroom. Mention that they should listen closely for the position of the object. After you give the clue, tell children they should guess what you spied. For example, say, "I spy, with my little eye, something on top of the bookshelf."
- If a child guesses an object on top of the bookshelf but not the object you selected, praise her for looking in the correct place.
- If a child guesses an object that is not on top of the bookshelf, tell her the position of the object she chose. For example, say: "That's a good guess, but the flag is above the bookshelf. We are looking for something that is on top of the bookshelf."
- Invite the child who guesses correctly to become the next leader and "spy" the next object.

**CONCEPTS:** Repeat this activity using other directional/positional words: behind/in front of, high/low, in/out, center/corner, above/below, top/bottom.

## 16. An Album of Positions

**Materials:**

- A camera.
- A photo album.
- Labels.

**Group Size:** The class.

**Procedure:** Do the following:

- Photograph individual children, the class, and teachers as they demonstrate various directions and positions. For example, one photo may show a group of four children on top of the jungle gym, another photo may be of the entire class in front of the school, and another photo may show a teacher sitting behind her desk.
- Have children dictate a caption for each photo and place the photos in the album. For example, the captions might read: "Juan goes down the slide." "Ben runs toward the sandbox." or "Where is Tareq? He's hiding inside the playhouse!" (This photo could be of a playhouse with the door open, but no child visible.)
- As you take photos, be sure to get a snapshot of everyone.
- Place the album in the book area. Encourage children to flip through the photographs and "read" the captions, retelling what happened in each picture.

**CONCEPTS:** Repeat this activity using other directional/positional words: up/down, into/out of, front/back, behind/in front of, bottom/top, low/high, over/under, above/below, away from/toward, center/corner, right/left of self.



## 17. Flannel Board

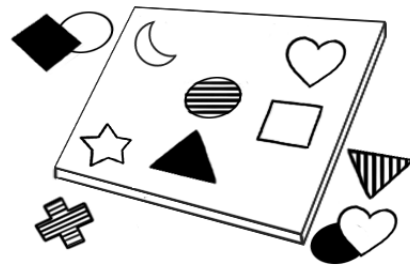
### Materials:

- A large flannel board.
- Identical sets of felt cutouts, one set for each child.

**Group Size:** Individual or small group.

**Procedure:** Display the flannel board, then do the following:

- First, place felt cutouts in different positions on the flannel board. Talk about the position of each cutout. For example, say: "I am putting this star on the flannel board."
- Next, state the positional relationship of one object to another object. For example: "Now, I am putting this heart below the star." Continue until you have demonstrated and discussed all the relationships that you plan to teach during this session.
- Then, place one cutout at a time on the flannel board. Tell children the position of the cutout in relation to the flannel board. For example, place a felt cutout in the center of the flannel board and say: "This cutout is in the center of the flannel board." Remove the cutout and place another cutout in a corner of the flannel board. Say: "This cutout is in the corner of the flannel board."
- Then, provide each child with a set of felt cutouts. Give the children specific directions. For example, say: "Latoya, place a circle in the middle of the flannel board. Will, place a square to the right of Latoya's circle."
- When children can consistently place the cutouts correctly on the flannel board, lay the flannel board flat on the floor. Have the children sit in a semi-circle around the flat board.
- Repeat the routine, applying the concepts to the flat, horizontal surface.



**CONCEPTS:** Repeat this activity using other directional/positional words: on/off, up/down, bottom/top, above/below, center/corner, right/left of self.

## 18. Peg-Boards®

### Materials:

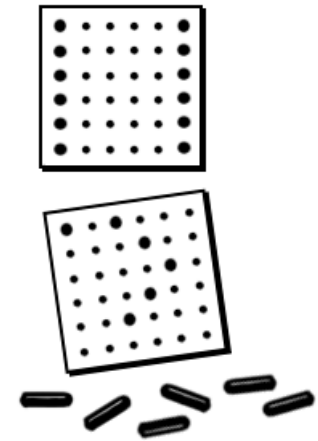
- Peg-Boards®: one for each child.
- Identical sets of pegs, one set for each child.

**Group Size:** Individual, small group, or class.

**Procedure:** Do the following:

- Place pegs in the board as the children watch. Talk about the placement of each peg. For example, with the Peg-Board flat on a table, place a peg in one of the holes in the center of the Peg-Board. Say: "I am putting this peg in the center."
- Place another peg above the one in the board and say: "I am putting this peg above the other peg."
- Continue this routine until you have demonstrated and named all the concepts that you want children to learn.

**CONCEPTS:** Repeat this activity using other directional/positional words: in/out, behind/in front of, above/below, center/corner.





## 19. Board Game

**Materials:** A board game that uses the following directions: forward, backward, up, down, and center.

**Group Size:** Small group.

**Procedure:** Do the following:

- Choose a board to play with children. Explain the purpose and the rules of the game to children.
- As the children play, ask questions such as: “Whose playing piece is in front of the green one?” Make statements such as: “Good, you get to move three spaces forward.”
- Encourage children to use the directional/positional words as they play. For example: “Look, I moved up the ladder three spaces.”

**CONCEPTS:** Repeat this activity using other directional/positional words: on/off, forward/backward, behind/in front of, center/corner.

## 20. Left, Right, Left, Right!

**Materials:**

- Red and blue construction paper.
- Spools or strips of ribbon: red and blue.
- Tape.
- Scissors.

**Group Size:** Individual, small group, or class.

**Preparation:** Make tracings of a left foot on blue paper and tracings of a right foot on red paper. Cut out the footprints and place them in a walking pattern on the floor. Tape the backs of the footprints to the floor so that they do not slide.

**Procedure:** Do the following:

- Tie a blue ribbon onto your left foot and a red ribbon onto your right foot. Do the same for the children.
- Have children follow you as you walk the pattern. Remind them to begin with their right foot on the first red footprint.
- When children take their first two steps, say: “Right,” then “Left.”
- After you and the children have practiced the walk, let children walk the pattern alone. Encourage them to say which foot they place on each footprint.

## 21. Post Office

**Materials:**

- Pencils, markers, crayons.
- Paper, envelopes, address books, postcards, junk mail: donated by families.
- Stamp pads and stamps, rubber date stamps.
- Cash register.
- Mailbags: an old pocketbook with straps.
- Mailboxes: old shoeboxes.
- A scale.

**Group Size:** Small group or class.

**Procedure:** Set up a “post office” in the Dramatic Play area.

Do the following:

- Participate in children’s play in the post office. Create opportunities to teach the directional/positional concepts you want children to learn. Comment on what children are doing. For example, say: “Julie is doing a great job putting a stamp on the corner of the envelope.” “Mario put the letter into the mail slot on the front of the mailbox.”
- Encourage children to tell what they are doing. For example: “Look, I licked the back of the envelope.” “I am going to take out the letters and deliver them!”

**CONCEPTS:** Repeat this activity using other directional/positional words: in/out, closed/open, into/out of, front/back, behind/in front of, bottom/top, over/under, above/below, center/corner, right/left of self.

# General Social and Emotional Development

## Objective

To develop social and emotional skills to succeed both in and out of school, including:

- identifying and understanding the feelings of others
- controlling one's own feelings and behaviors
- getting along with one's peers and adults
- cooperating
- following directions
- demonstrating self-control

## RATIONALE

Strong social and emotional skills help children prepare for the challenges of school. These skills promote the development of a strong sense of self, a healthy independence, a developing ability to form social relationships, and the ability to resolve conflicts, regulate emotions, and respond to the emotions of others.

## Sequence

### SEQUENCE OF SKILLS

Although each child's developmental rate and pattern is unique, the following is a sequence of skills that children typically develop through the age of seven years. Use the skill sequence as a general guide when planning your instruction.

- Plays simple group games such as "Ring Around the Rosy."
- Begins to play with other children with adult supervision.
- Discovers satisfaction from doing things with others.
- Is conscious of and curious about sex differences.
- Shows preference for some friends over others.
- Begins to take turns.
- Takes turns with assistance.
- Gives as well as takes.
- Meets and accepts strangers comfortably.
- Forms temporary attachment to one playmate.
- Takes pleasure in doing simple favors for others.
- Usually plays cooperatively, but may need adult help.
- Seeks detailed explanations with frequent use of why.
- Is proud of accomplishments.
- Tends to fabricate, exaggerate, and boast, perhaps due to a good imagination.
- Understands the need to share and take turns.
- Prefers the companionship of children rather than adults.
- Begins to have an awareness of "good" and "bad" behavior in others.
- Begins to have an awareness of "good" and "bad" behavior in self.
- Demonstrates confidence in self.
- Reacts to disappointment and failure in an acceptable manner.
- Takes turns without adult supervision.

- Brags about new accomplishments and skills.
- Plays cooperatively with one or two children for at least fifteen minutes.
- Usually is eager to comply with class rules and activities.
- Has several friends, but one special friend.
- Pushes for autonomy (wants to be independent like an adult).
- Plays cooperatively in large-group games.
- Is satisfied and comfortable with self.
- Shows concern that playmates are not hurt in play.
- Plays cooperatively with two or three children for at least twenty minutes.
- Usually offers apologies for unintentional mistakes.
- Values friendship.
- Has a close friend.

## Teaching Activities

### 1. Simon Says

**Materials:** None.

**Group Size:** Small group or class.

**Procedure:** Do the following:

- Have children stand in a circle. Explain that you are going to give them a direction to follow that begins with the words, “Simon Says.”
- Demonstrate by saying: “Simon says, ‘Put your hands on your hips.’” As you say the command, do the action and have children imitate you.
- Practice giving “Simon Says” commands and encourage children to do what you do.
- Tell children you are going to give a direction, but you won’t say the words “Simon Says.” Explain that when you do this, they should stop and freeze.
- Practice giving commands without the words “Simon Says.” Encourage children to freeze.
- When children are comfortable with the commands, mix them up. For example:
  - “Simon says, ‘Blink your eyes.’”
  - “Clap your hands.”
  - “Simon says, ‘Wave to a friend.’”
- If a child moves when he shouldn’t, ask him to sit down. Play the game until one child is left standing.

## 2. Duck, Duck, Goose

**Materials:** None.

**Location:** A large play area for the group to form a circle that two children can run around safely.

**Group Size:** Small group or class.

**Procedure:** Do the following:

- Have children sit cross-legged in a circle.
- Choose one child to be the tapper. The tapper walks quickly around the circle and taps each child lightly on the head. As she taps each head, the tapper says, "Duck."
- When she taps a child and says, "Goose," that child stands and chases the tapper back to the empty place in the circle.
- If the tapper reaches this space safely, the goose becomes the new tapper. If the tapper is tagged by the goose, she must continue to be the tapper.
- As the game progresses, encourage the tappers to tap children who have not yet had a turn.

## 3. It's Time to Cook!

**Materials:**

- Child-sized kitchen appliances: stove top, refrigerator, cupboards, sink.
- Pots, pans, cups, bowls, plates, wooden spoons, cutlery.
- Aprons, dishcloths, napkins, tablecloths.
- Small table with a few chairs.
- Shopping list.
- A recipe for making muffins or popcorn.

**Location:** Dramatic Play area.

**Group Size:** Small group.

**Procedure:** Set up a kitchen area in the dramatic play area.

- Encourage children to act out daily family activities around cooking with other children using props.
- If children choose to dramatize mealtime, ask them to make decisions about who they want to be: mom, dad, older brother, grandma, or someone else in the family.
- Prompt them to talk about what that person might do at mealtime. For example, a child might say, "I will be the cook. What would you like for breakfast?" Someone else might say, "Dinner is over. It's time to wash the dishes. Will you help me?"
- Engage children in conversations about their play. You might say, "Let's look at your shopping list. What are you cooking for dinner tonight?"

# Play Skills and Behaviors

## Objective

To exhibit play skills and behaviors that will enhance and promote cooperation in the group life of the class and encourage participation in activities with peers.

### RATIONALE

Play is vital to the growth and development of young children. Play is recognized as an excellent means of helping children develop social skills in following group rules, cooperation, and in interacting with peers by helping, sharing, and through discussion.

## Sequence

### SEQUENCE OF SKILLS

- Uses a doll or other toy to act out a scene.
- Watches others play and plays near them (parallel play).
- Engages in domestic make-believe play, imitating an adult activity for five minutes.
- Engages in domestic make-believe play, imitating an adult activity for ten minutes.
- Engages in domestic make-believe play, imitating an adult activity for fifteen minutes.
- Engages in domestic make-believe play, imitating an adult activity for twenty minutes.
- Plays simple group games such as “Ring Around the Rosy.”
- Begins to play with other children with adult supervision.
- Begins to take turns.
- Usually plays cooperatively, but may need adult help.
- Takes turns with assistance.
- Has an imaginary companion/playmate.
- Plays games with rules.
- Incorporates verbal directions into play activities.
- Takes turns in play without adult supervision.
- Plays cooperatively with one or two children for at least fifteen minutes.
- Plays a pretend career/professional role in play.
- Plays two or three table games.
- Plays cooperatively with two or three children for five minutes.
- Plays cooperatively with two or three children for ten minutes.
- Plays cooperatively with two or three children for fifteen minutes.
- Plays cooperatively with two or three children for twenty minutes.

# Teaching Activities

## 1. Let's Take Turns

### Materials:

- Yarn ball or bean bag.
- CD/tape recorder and CD/audiotapes.

**Group Size:** Small group or class.

**Procedure:** Do the following:

- Have children sit cross-legged in a circle.
- Play the music and have children pass the beanbag around the circle.
- When the music stops, invite the child holding the bean bag to tell about her favorite toy or favorite food.
- When the music starts again, have that child extend her legs in front of her to indicate that she's had a turn sharing.
- Continue the routine until everyone has had an opportunity to talk.

**EXTENSION:** Invite children to think of other things they'd like to talk about, such as a favorite pet, a game they like to play, and so on.

## 2. Puppet Show

### Materials:

- Puppets (hand puppets, finger puppets, stick puppets, or puppets made by the children).

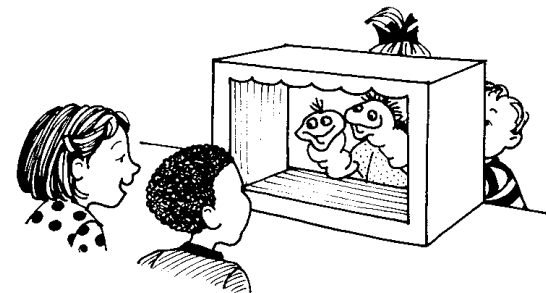
For a puppet stage:

- A large appliance box with the upper front panel cut out.
- A towel draped over the back of a chair.
- A blanket or sheet hung over a card table.

**Group Size:** Small group or class.

**Procedure:** Do the following:

- Have each child make a puppet.
- Encourage children to name their puppets and take turns introducing their puppets to the class.
- Divide the class into groups of two or three children. Have children make up stories about their puppets and put on a puppet show. Encourage them to gather props to help tell their stories.
- Ask questions to spark imagination and help children expand their stories. For example, you might ask, "Ana, your puppet Stella looks excited? Tell me about that." Or you might ask the questions to the puppets directly: "Stella, what will you do now?"
- You might see if some children would like to put on a musical show instead, and have their puppets sing and dance.



### 3. My Turn, Your Turn

**Materials:**

- Building blocks.

**Group Size:** Small group.

**Procedure:** Do the following:

- Divide the class into pairs and provide each pair with a bucket of blocks to build a tower.
- Demonstrate taking turns with an aide or a child by putting a block on the floor and saying, “My turn.” Then point to the aide and say, “Your turn.” Continue talking through your actions until a tower is built.
- Now have children build their own block towers. Remind them to take turns.
- Remind children to take turns when they play games or use equipment on the playground.

### 4. The Matching Game

**Materials:**

- Pairs of matching picture cards.

**Group Size:** Small group.

**Preparation:** Make sure that each picture card has a matching card in the deck. Shuffle the cards. Turn all the cards face down on a flat surface.

**Procedure:** Do the following:

- Explain to children that the object of the game is to pick up two cards that are the same.
- Tell them to pick up two cards on each turn. If the cards do not match, they should turn them over and put them back where they were. If the two cards do match, set them aside. Explain that two cards that are the same are called “a pair.”
- Tell children to pay close attention to where each unmatched card is placed so they remember them on their next turn.
- As children take turns playing the game, remind them of the rules. Say: “Each person gets one turn at a time.” Or: “Each person can only turn over two cards at a time.”

### 5. Shoe Store

**Materials:**

- Empty shoeboxes.
- Old shoes of various sizes and styles.
- Measuring tape.
- Toy cash register.
- Shoe horns.
- Tissue paper.
- Paper bags with handles.
- Mirror.

**Location:** Classroom.

**Group Size:** Small group.

**Procedure:** Set up a shoe store in the dramatic play area. Then do the following:

- Invite children to be salespeople and customers.
- Encourage the “customers” to try on the shoes, walk around in them, and look in the mirror.
- Encourage the “salespeople” to help by measuring feet and shoes, boxing and bagging shoes, and running the cash register.
- Observe children. Help them get into character by asking questions like, “What color shoes do you want?” “What size do you wear?” “How much are these shoes?”

# Initiative and Engagement Skills and Behaviors

## Objective

To exhibit initiative, curiosity, and engagement and approach activities with imagination, flexibility, and self-direction.

### RATIONALE

It is important that a young child's environment promote the development of initiative and curiosity, engagement and persistence, and flexibility and inventiveness. Children get excited and curious about new things: they like to try out new ideas, choose their own activities, and want to do things on their own. They are active learners and thrive in an environment rich in materials and opportunities to engage in a variety of activities with varied approaches to learning.

## Sequence

### SEQUENCE OF SKILLS

- Engages with an adult by doing an activity for five minutes.
- Engages in domestic make-believe play, imitating an adult activity for at least ten minutes.
- Uses blocks or other objects to build simple enclosures such as pens or yards.
- Watches TV for five minutes.
- Watches TV for ten minutes.
- Watches TV for fifteen minutes.
- Watches TV for twenty minutes.
- Engages in activities for five minutes.
- Engages in activities for ten minutes.
- Engages in activities for fifteen minutes.
- Engages in activities for twenty minutes.
- Engages in a small-group activity or project for at least five minutes.
- Engages in a small-group activity or project for at least twelve minutes.
- Uses blocks or other objects to build more complex enclosures such as a house, barn, or garage.
- Performs simple errands.
- Usually remains at a ten- to twelve-minute task until it is time to quit or change.
- Likes to finish what she starts with less dawdling than at an earlier age.
- Pushes for autonomy (wants to be independent like an adult).
- Works on a small-group project or activity for at least twenty minutes.
- Remains engaged in an assigned task even when minor distractions are present.



# Teaching Activities

## 1. A Barn Raising

### Materials:

- Lincoln Logs®, Legos®, Duplos®, or assorted wooden blocks.
- Plastic or wooden animal figures.

**Group Size:** Individual or small group.

**Procedure:** Do the following:

- Tell children that you need their help: The barnyard was destroyed in a storm, and the animals have gotten loose. You need everyone's help to rebuild the barnyard.
- Encourage children to form a plan to rebuild the structure using the building materials in the block area.
- Prompt them as needed to include features such as gates, stalls, and feeding troughs.
- Ask questions and make comments as children construct the barnyard.
- For example, "Hmm. I think the horse can jump over this fence. Maybe you need to make it higher." or "How many logs will you need to fix the fence?"
- Observe children as they resolve their building problems working on the barnyard. Offer help as needed.

## 2. Classroom Pets

### Materials:

- A small aquarium.
- Hardy, easy-to-care-for fish.
- Aquarium accessories: pebbles, artificial aquatic plants, small-handled net.
- Fish food.

**Group Size:** Individual, small group, or class.

**Preparation:** Do the following:

- Visit a local pet shop to purchase the supplies you need to set up an aquarium.
- Talk to the owner about varieties of fish. Make sure you choose fish that can get along with each other.
- Gather information about the care and feeding of fish, and cleaning and maintenance of the tank.
- Ask the school librarian to help you select books on fish and aquariums and display them near the tank or in the book area.

**Procedure:** After you have set up the aquarium, do the following:

- Talk about the variety of fish in the tank. Read the descriptions of the fish and what they need to stay healthy from the books you gathered.
- Talk about the care and feeding of the fish.
- Demonstrate how and when to feed the fish. Show children how much food to put in the aquarium each day.
- Create a feeding schedule. Have children take turns feeding the fish.

# Self-Regulation Skills and Behaviors

## Objective

- To consistently regulate feelings, thoughts, attention and impulses, sometimes with the help of an adult.
- To take initiative in resolving conflicts and identifying solutions to problems.

### RATIONALE

Self-regulation is an essential part of healthy emotional development. Helping children learn how to actively participate in their own regulation will help them build healthy friendships and relationships with others. The capacity for self-regulation grows as a child matures. When self-regulation is mastered, it often leads to resilience when a child faces other stresses.

## Sequence

### SEQUENCE OF SKILLS

Although each child's developmental rate and pattern is unique, the following is a sequence of skills that children typically develop through the age of seven years. Use the skill sequence as a general guide when planning your instruction.

- Takes turns with assistance from an adult.
- Has strategies to wait for a turn.
- Waits patiently for a turn.
- Shares space and materials with other children.
- Responds to signals for transitioning from one activity to another.
- Refrains from impulsive responding.
- Can self-soothe during difficult transitions.
- Communicates appropriately to make needs known.
- Is familiar with a variety of feeling words.
- Can identify own feelings when prompted.
- Uses words to express feelings.
- Explains reasons for a behavioral rule.
- Tries to control distress during or after a conflict.
- Asks teacher for help in resolving a conflict.
- Attempts to work out problems with a peer before seeking help from an adult.
- Can focus attention on a task and is not easily distracted.
- Takes responsibility for a task.
- Appropriately handles materials during an activity.
- Shows initiative while completing a task or during cleanup.
- Readily accepts and carries out classroom "helper" jobs.
- Shows empathy and caring.
- Offers help and assistance to a friend.

# Teaching Activities

## 1. Attention, Please!

**Materials:** None.

**Group Size:** Small group or class.

**Procedure:** To help get children's attention or get them focused after transition time, do the following:

- Give nonverbal signals or cues, rather than raising your voice, such as turning out the lights or raising your hand.
- Do a finger play or motions to a familiar song. Using eye contact, encourage children to join in imitating the motions.
- Here is an example:

*The eentsy, weentsy spider*

*Went up the water spout.*

(Make circles out of thumbs and forefingers by putting tips together. Twist hands upward)

*Down came the rain*

(Wiggle fingers in a downward motion.)

*And washed the spider out.*

(Push hands outward.)

*Out came the Sun*

*And dried up all the rain.*

(Place your arms overhead and make a big circle.)

*And the eentsy, weentsy spider*

*Went up the spout again.*

(Repeat first action.)

## 2. Zip Up Your Bubble!

**Materials:** None.

**Group Size:** Small group or class.

**Procedure:** To encourage children to keep their hands to themselves, do the following:

- Invite children to stand in a circle with space in-between children.
- Say: "Before we begin the next activity, let's step into our pretend bubbles." As you say this, pretend you are carefully stepping into a giant imaginary bubble and have children imitate the motion.

- Say: "Okay, now grab the zipper by your toes and zip up your bubble all the way to the top of your head." As you say this, pretend you are carefully zipping up your bubble, from your toes to the top of your head. Encourage children to imitate you.
- Say, "Now that you're ready, let's play . . ." (Name the activity or game.)

## 3. Pass Around the Microphone

**Materials:** Aluminum foil and cardboard toilet roll.

**Group Size:** Small group or class.

**Preparation:** Cover an empty toilet roll with foil. Ball up another piece and tape it to the top of the roll to make a pretend microphone.

**Procedure:** To encourage children to learn how to wait their turn, do the following:

- Invite children to sit in a circle.
- Pass the microphone around the circle and ask children to tell what they will do during choice time.
- Encourage children who are waiting their turn to look at the speaker and be good listeners.

## 4. Waiting My Turn

**Materials:** Egg timer.

**Group Size:** Small group or class.

**Procedure:** To help children learn how to be patient while waiting their turn, do the following:

- When a choice center is full, set an egg timer or clock near a child who is waiting his turn.
- Encourage the child to go to another center that is not full.
- You might want to set up a "turns list" where children sign up for the center of their choice.

**VARIATION:** If many children are waiting their turn, play a song on the CD player. When the song ends, invite children to trade places.

## 5. Let's Help Out!

**Materials:** Chart paper and markers.

**Group Size:** Small group or class.

**Preparation:** Create a jobs chart that shows pictures of each classroom job.

**Procedure:** To encourage children to follow rules and routines, have them take on classroom jobs each week. Do the following:

- Create a jobs chart. Each week assign a job to each child or have a child volunteer for a job. Place each child's name next to a picture of the job.
- You might include the following jobs on the chart:
  - water plants
  - clean up the book area
  - feed the fish
  - set the table for snack time
- At the beginning of the week, discuss each child's responsibility. Demonstrate how to do the job and give children opportunities to practice.
- Discuss why each job is important, and why we take turns doing the class jobs.
- Rotate roles so that everyone gets an opportunity to do all the jobs during the school year.

## 6. Let's Show We Care

**Materials:**

- Construction paper, stickers, ribbons, glitter, and other decorative materials.
- Crayons and markers.
- Glue.

**Group Size:** Small group or class.

**Procedure:** To encourage children to show empathy and caring for others, do the following:

- Set up a "We Care" center in the classroom. On a table, display a variety of writing tools and materials.
- Initiate a discussion about a classmate or family member who is sick.
- Invite children to create get well cards using construction paper, glitter, and other decorative materials.
- Help children write or dictate get well messages. Have them sign their name on the card. Offer help if needed.

## 7. Circle Time Feelings

**Materials:** A large construction paper heart. Laminate for durability.

**Group Size:** Small group or class.

**Procedure:** To help children feel secure in expressing their feelings in positive ways, do the following:

- Invite children to sit in a circle. Hold the paper heart and demonstrate how to express a feeling. For example, say: "I feel happy today. It's my son's birthday. He's six."
- Then say: "How do you feel today?"
- Call on a volunteer and pass him the heart. Invite him to share a feeling. When he finishes, encourage him to say: "How do you feel today?" Then have him pass the heart on to the next volunteer.
- If a child says she's sad or angry, give her a chance to talk about it, if she feels comfortable. If possible, help her figure out some kind of solution to the problem.
- If a child prefers not to share, say, "It's okay if you don't want to share today. Maybe you'd like to next time."

## 8. Use Your Words!

**Materials:** Puppets.

**Group Size:** Pairs, small group, or class.

**Procedure:** To help children express their feelings during a conflict, use puppets to express feelings and think of creative solutions.

Do the following:

- Invite children to sit in a circle.
- Share a possible situation, such as: “What would you do if someone pushed you when you were getting on a swing?”
- Prompt a discussion about how to handle the situation when someone breaks a rule. Encourage children to think about what they could do to stop themselves before they get angry, such as counting to five or taking five deep breaths. Offer a solution, such as seeking an adult’s help or taking turns.
- Use puppets to act out the conflict and resolve the problem.

For example:

Puppet 1: “I don’t like being pushed. It makes me mad.

Please don’t do it again.”

Puppet 2: “But I want to go on the swing.”

Puppet 1: “Me too. But I didn’t push you.”

Puppet 2: “I’m sorry.”

Puppet 1: “What can we do? We both want to go on the swing.”

Puppet 2: “Let’s take turns. You go first. I’ll ride the tricycle.”

Puppet 1: “Okay.”

## 9. Draw It, Then Talk About It

**Materials:** Construction paper, markers, and crayons.

**Group Size:** Small group or class.

**Procedure:** When a classroom conflict arises, help children express their feelings by doing the following:

- Give the child a piece of paper and crayons.
- Have him draw a picture of what happened.
- Encourage the child to show you the picture and talk about his feelings. Comment on his picture. “You look angry here. What happened? What did you do? What can you do if it happens again?”

- Offer suggestions as to what the child could say the next time, such as: “Please don’t take my ball. I was playing with it.” Or, “It’s my turn. Please wait your turn.” Or, “It makes me angry when you take my things.”
- If children feel comfortable, have them share their pictures with the class. Encourage them to tell about how they resolved the conflict or what they would do next time.

## 10. It’s Time for a Story

**Materials:** Books about feelings and resolving conflicts.

**Group Size:** Individual, small group, or class.

**Procedure:** When a classroom conflict arises and emotions flare up, do the following:

- Gather children around you. Read a book that illustrates a conflict that gets resolved. Or share a book that addresses a feeling that children are experiencing, such as jealousy when a new baby is born (e.g., *Peter’s Chair* by Ezra Jack Keats; *Noisy Nora* by Rosemary Wells).
- After you read the book, have a brief discussion about the characters and events in the story. Then read the book again. This time ask children to tell you what’s happening on each page. Talk about the character’s feelings and actions, the problem the character experienced, and how the problem was resolved. Connect the character’s feelings to children’s feelings.