

The learner will model simple patterns and sort objects.

5

5.01 Sort and classify objects by one attribute.

A. Search Bags

Materials: an opaque bag containing a small collection of objects (four or five) that are different except for one matching pair

Instructions: Invite the children to select a search bag and, by touch alone, find the matching pair in the bag. Have children describe what they are touching. Some children will enjoy creating Search Bags for the class.

B. Sorting Box

Materials: a box for materials, squares of fabric in a variety of colors/designs

Instructions: Children sort materials at their work areas and describe their work to a friend or the teacher. They can match like patterns or sort by rules they make up.

C. Same and Different

Materials: pattern blocks or attribute blocks

Instructions: Give each child a shape. The teacher then chooses a “secret shape” from all possibilities. Have all children stand and give clues which describe the secret shape, one at a time, to describe the shape. (Example: My shape has four sides.) Children sit if that characteristic does not apply to their shape.

Notes and textbook references

The ability to recognize and describe likenesses and differences is foundational to using classification. These activities help children learn to focus on properties (attributes).

Building an appropriate oral vocabulary is an important part of this objective.

D. Colors

Materials: items children bring from home and items from class

Instructions: Select a color for the week. Set up an area in the room for a “color museum.” Invite children to bring objects for Show and Tell that are the color of the week. Discuss each item in the museum and use the items for sorting activities throughout the week.

E. Outline Match

Materials: classroom objects (scissors, pencils, crayons, blocks, erasers) in a shirt box; an outline of all objects drawn on the box or on the construction paper

Instructions: Have children match each object to its outline. Discuss the objects and their attributes. Do some figures (3-D) have different shaped faces?

F. Attribute Game

Materials: a box or bag containing 8 - 10 different items

Instructions: Divide the class into four teams or work with a group of children. The teacher picks an object from the box. Ask the children to name as many different attributes (color, shape, material made of, uses of, cost, how it feels, etc.) as they can. The team receives a counter for each different attribute they name. Play several times with different items from the box. The winning team is the one with the most counters.

Variation: Place two objects side by side. Ask the children to identify as many attributes as possible. How many ways are the figures alike? List these and count the total number. Ask children to then list all attributes which differ between the two objects. Compare this list to the first one. Exchange one of the objects and compare the new object with the original one. Would the list of likenesses and differences change?

G. Just Like Me

Materials: card with drawings of silhouettes (see Blackline Master V - 62)

Instructions: Can you do this just like me? Make multiple copies of the Just Like Me Cards. Have children create action patterns and act out the patterns.

H. What's My Attribute?

Materials: a collection of six to eight items

Instructions: Place all items in front of the children. Choose two items that have a similar attribute. Name the two items for the children. The children must then try to identify the attribute that the teacher is thinking of. Continue to play with other items using as many different attributes as possible. Let the children take turns being the leader.

I. Let's Share

Materials: one small box per group of children filled with 20-30 assorted items (buttons, shells, nuts, rocks, pasta, screws, lids)

Instructions: After children select a box, explain that it is a treasure box and they may share their treasures with a friend. The first child will keep one kind of treasure and give his or her friend the box. The teacher demonstrates by using a box and asking "How could I share these with you? I could keep the (*red or some other attribute*) ones and give you the (*other colors, shapes etc.*) ones." Encourage different sorting decisions to show that a material can be sorted many different ways. The second child could sort the remaining objects in a different way or all objects could go back into the box and the activity is repeated.

J. What is Different?

Materials: assorted materials in groups of three:

clothes: two gloves, one mitten	blocks: two long, one short
fruit: two bananas, one apple	boxes: two small, one large
toys: two balls, one truck	crayons: two red, one yellow
hats: two caps, one lady's hat	

Instructions: Show children a group of three objects. Have them select the one that is different. Discuss how that object is different from the others.

Notes and textbook references

Comparing, sorting, and classifying lead to useful generalizations.

K. What's The Secret

Materials: hoola hoops or yarn for sorting circles

Instructions: Sort several members of the class into groups, such as blue eyes/not blue eyes, wearing red/not wearing red, or shoes with velcro/shoes without velcro. Children raise their hand when they know the secret. Ask the other children if they agree or disagree and why.

L. Leaf Search

Materials: leaves collected on a fall walk ("one for each hand" - this limits the number of leaves)

Instructions: In the classroom, children sit in a circle and tell one thing about each of their leaves. A list is made of observations. (My leaf is big, little, middle-sized, red, green, orange, yellow, broken, whole, etc.) Extend the discussion by sorting the leaves as the attributes are named. This can be a whole group or a small group activity.

M. Name My Group

Materials: pictures that you have collected or cut outs from Blackline Masters V - 63 and V - 64

Instructions: The teacher will place a set of pictures on the chalkboard, table, or a flannel board. One child will divide the set into two groups. Other children will be allowed to name the sorting rule. Encourage children to name more than one correct reason for this grouping. The set is then put back together and another student sorts the pictures. Groups can be by color, size, decorations (spots/plain), items (collars/no collars), length, direction the animal is facing, etc.

N. Which Hoop?

Materials: a collection to be sorted, two hoops of different colors (such as red and blue), two different colored cubes per child (to match color of hoops)

Instructions: Begin by holding up one item from the collection and say. “This is a big(____). I’m going to put it in the blue hoop.” Hold up the next item. “This is a small (____). I’m going to put it in the red hoop.” After a few practice items, have the children respond to each new shape by holding up the cube whose color corresponds to the correct hoop. When all the items have been sorted, encourage the children to name the set in each hoop and create a label. Continue using different rules for sorting or have a child as the leader. Having cubes to match the color hoops allows every child to make a decision about each item.

O. Print and Sort

Materials: two 6-inch squares of paper per child; two colors of paint; two styrofoam trays

Instructions: Have each child choose one color of paint. After dipping one hand into the paint, make a handprint on the card. Repeat the same procedure and have each child print his or her foot on a different card. When the cards dry, children can sort the cards by a variety of attributes.

hands/feet
left hands and left feet/right hands and right feet
one color of prints/the other color of prints

If you give children a choice to do two hands or one hand and one foot, children may graph cards to see how many of each there are.

These cards can also be used for measuring. Children use Unifix cubes and/or string to measure their hand span and their foot length. These can be labeled and compared.

Label the cards with sentences such as, “My foot is eight cubes long.” The students place them in order from longest to shortest.

Variation: Let children make crayon rubbings of their shoes - both the left and the right shoes. They can cut these out and sort them in a variety of ways, including similar patterns, left or right shoes, or large and small.

P. Shoe Sort

Materials: string or hoola hoops

Instructions: Children work in small groups. Each child removes one shoe and describes it to the others in the group, listing as many attributes as possible. The group then decides on a way to sort the shoes. The children sort the shoes by placing them in the circles. As the children explain their sorting rule to the class, label each group and count the total for each section.



Q. Sorting Junk

Materials: boxes of junk items (keys, screws, nuts, bolts, plastic animals, beads, bottletops)

Instructions: Place junk boxes in a center and ask children to sort the objects on a piece of bulletin board paper. Discuss with individual children how they sorted the junk. As you label each group, ask the children to check all items to make sure they should stay in that group. As an extension, use objects which can be glued to paper and displayed in the classroom or take home to show parents.

R. Snack Mix Surprise

Materials: snack mix; one small cup for each child; napkins

Instructions: Give each child a small cup of snack mix. Ask the children to sort the mix, then look around the table to see if anyone sorted that same way. Have children explain to each other their way of (rule for) sorting. Ask for volunteers to show their way of (rule for) sorting on the overhead while explaining it to the class.

5.02 Create and extend patterns with actions, words, and objects.

Notes and textbook references

A. Follow Me

Begin a pattern and ask children to join. For example: clap, clap, point. Maintain the pattern and pace as the children join in. Remind children to watch carefully as you change the pattern to another movement such as a clap, touch your head, or clap, point, clap,



B. Holiday Pattern

Use sound or motions to make patterns. Around Halloween use the pattern of, “Wh-o-o, wh-o-o” (ghost), and flapping your arms like a bat. For Christmas make an action pattern of opening a present and saying, “Ho, Ho, Ho.” Children may take turns being the leader. Children can also draw season patterns.

Action songs such as “Hokey Pokey” and “Seven Jumps” are based on patterns. Start a collection!

C. Dance Patterns

Materials: records with songs that have a steady 4/4 beat

Instructions: Make up simple dances that go with any song having a steady 4/4 beat. Have the children do movements in groups of four. Example: Children in a circle. Walk into the circle four counts, back out four counts, clap hands four counts, turn around four counts (repeat as many times as the music allows). The chicken dance done to “The Birdie Song” is a great pattern dance.

Variation: Give each child a paper plate to hold in each hand. Include instructions that involve high-low, front-back, left-right, etc. Example: Clap (clap plates together) high four times, clap low four times, clap on the left four times, clap on the right four times.

D. Pattern Tower

Materials: Unifix cubes, die

Instructions: After creating a tower with three repetitions, children take turns rolling the die and calling out the number. They add that many cubes in the pattern of the tower. The game is over when the tower can no longer stand.

E. Flannel Pattern

Materials: flannelboard, flannel pieces

Instructions: Display a pattern unit on the flannelboard. Ask children to take turns adding the next element to the pattern. “Read” the pattern aloud after a piece is added.

Variation: Use sentence strips and have children record the pattern you are making. Toothpicks can be glued to sentence strips for patterns that look like this:

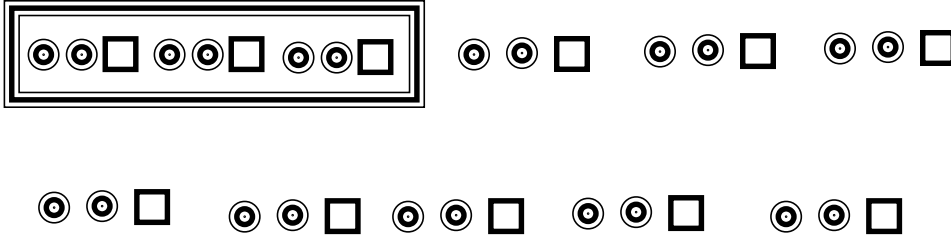


The vocabulary of
pattern unit needs to be
introduced here.

F. Pattern Cards

Materials: pattern blocks; pattern cards (see Blackline Masters V - 65 and V - 66)

Instructions: A child chooses a pattern card and works below the card to duplicate the pattern. Have the child extend the pattern as far as possible.



Notes and textbook references

When creating pattern cards there need to be at least three full repeats of the pattern.

Variation: Made additional cards, tracing materials such as keys, seashells, seeds or writing letters and numbers. These patterns can include size, shape, number, position or color. Place in a center for individual practice.

G. What's Missing

Materials: chalkboard, chalk or a magnetic board and shapes with magnetic strip on back.

Instructions: Write a pattern on the board using numbers, letters or shapes. Use at least three repetitions. Let the children “read” the pattern with you. Have the children close their eyes while you remove one element from the pattern. Ask the children to open their eyes and tell what is missing.

Variations: Use pattern blocks or teddy bear counters. Use the overhead. Elements in the pattern can be moved or switched.

H. Patterns We Wear

Materials: children's clothing

Instructions: During sharing time ask children to look for patterns worn by their friends. A child will identify the friend's pattern by saying, “John is wearing a shirt that has a pattern.” Let the class describe the pattern. Have a pattern day when all children and the teacher wear pattern clothes. Children can draw and color the pattern of their clothing on the body outline.

I. Crossing The River

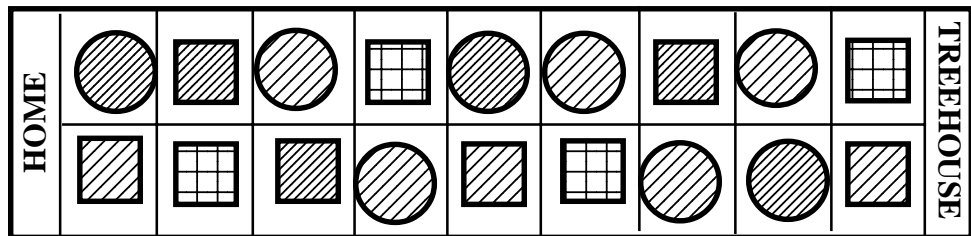
Materials: a river (blue bulletin board paper) with stepping stones; pattern cards (at least 20) to match the different stepping stones

Instructions: Divide the class into groups of four so that each group will have two teams of two children. Explain that in order to win both players must cross the river to the treehouse without getting wet. A player from the first team picks two cards and decided whether either pattern will help him or her start to cross the river. Players must go one step at a time in any direction on either “path.” If no step is possible, the player loses a turn. If a player skips over a stepping stone he or she falls in the river and has to return home for dry clothes. Teams alternate turns until one team has both players in the treehouse.

Rules:

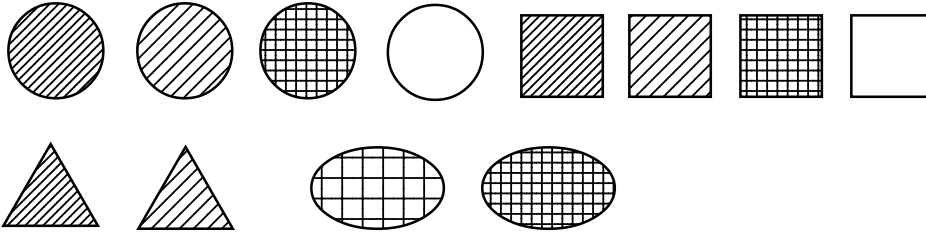
1. Players take turns (one from a team at a time).
2. Draw two cards and step toward the treehouse by matching one of the cards with a stepping stone.
3. Steps can be made forward, backward, to the left, to the right, or diagonally, but if you skip a row of stones you fall in the river and get wet.
4. Players reach the treehouse when they are standing on one of the stones in the last row.

Gameboard:



The pattern card can include color patterns, shape patterns, or direction

patterns. Some patterns should help the players to reach the treehouse while others should not appear very often.



Variation: Children may use miniature river gameboards and pattern cards to play at a table. Use counters to represent players moving along the stones.

Game cards - Blackline Master V - 67

Notes and textbook references

*Notes and textbook
references*