Section 1: Math Lesson Plans

Children’s Number Sequencing

ADULT PREPARATION:
1. Write a number 0–10 on a sheet of 8½” by 11” paper. Write the number large enough to fill the page.
2. Take a picture of each child holding one of the numbers. If there are more than 11 children in the class, use numbers higher than 10 or write a second set of numbers on a different color of paper.
3. Develop the film.
4. Store pictures in a resealable plastic bag.

PROCEDURES:
1. The adult will place the pictures on the table in random order.
2. Ask children to identify each number.
3. After each number is identified, children will sequence the pictures in order from 0–10.
4. Place number in the child’s left-to-right progression.

Notes: If there are more than 11 children, separate the numbers into sets first; identify the sets by the different colors of paper the children hold.

Check center policies; some centers require special permission to take photographs of children.
Color Scavenger Hunt

ADULT PREPARATION:
1. Cut a 3" by 3" square of each color of construction paper.
2. Staple a square to each paper bag.

PROCEDURES:
1. Children will sit together at group time.
2. Give each child a paper bag.
3. Ask them to identify the colors on their bags.
4. Ask the children to find objects in the room that are the same color as the paper on their bags.
5. The children will search the room for small objects that match their colors.
6. When the children find objects, they may put them in their bags.
7. Children will return to the group to share what they have found.

EXPANSION:
For 3- to 5-year-olds, the adult may also write a number on the colored paper instructing the child to find a specific number of objects that match his or her color.

AGES: 2–5

DEVELOPMENTAL GOALS:
⋆ To identify colors
⋆ To promote muscle coordination

LEARNING OBJECTIVE:
Using a paper bag, colored construction paper, and objects in the room, the children will participate in a hunt for colors.

MATERIALS:
Lunch-size paper bags (one for each child)
Construction paper in assorted colors
Scissors
Stapler
Colored Candy Graph

**Adult Preparation:**
1. Print the graph for this activity.
2. Using fine-tipped markers write color words on the first row of the graph. Write only one word in each square of the first row.
3. Use the corresponding color of marker for each word (e.g., write with a red marker to spell the word *red*).
4. Put approximately ¼ cup of colored candy in a resealable plastic bag. Make one bag for each child.
5. Set the graph, plates, and colored candy on the table.

**Procedures:**
1. Child will wash hands before beginning activity.
2. Ask the child to empty his bag of colored candy on the plate.
3. Show the child the graph and point to the first color word.
4. Ask the child to identify the color of the word.
5. Have the child line all of that color of colored candy in the first column.
6. Repeat steps 3–5 with remaining colors.
7. When all of the colors have been put on the graph, the child will count the number of each color of colored candy.
8. The child may remove the colored candy from the graph and put them back in the resealable plastic bag.
9. Write child’s name on the bag with a permanent marker.
10. Seal the bag for the child to eat the colored candy later.

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**Ages: 3–5**

**Developmental Goals:**
- To introduce graphing
- To identify colors
- To promote classification through sorting

**Learning Objective:**
Using colored candy, a graph, and a plate, the child will identify colors, and sort and graph candy.

**Materials:**
- Graph
- Fine-tipped markers (to match the colors of the candy pieces)
- Permanent marker
- Plates
- Large bag of colored candy
- Resealable plastic bags (snack-size)
- Measuring cup

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*continued*
Colored Candy Graph

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Matching Socks

ADULT PREPARATION:
1. Place socks in basket. The number of socks depends upon the age of the children:
   - Two-year-olds: two pair
   - Three-year-olds: three pair
   - Four-year-olds: four–five pair
   - Five-year-olds: five or more pairs (depending upon the child’s attention span)
2. Put the basket on the table.

PROCEDURES:
1. Child takes all the socks out of the basket and places them on the table.
2. Ask the child, “What color are the socks?”
3. Child will identify the sock colors.
4. Tell the child, “Each sock has another that looks exactly the same. Find the pairs and put them together.”
5. When child finds a pair, he may put the matched socks back into the basket.

VARIATIONS:
The adult may lay one of each pair on the table. Keep the socks’ mates in the basket. The child may pull one sock out of the basket, and find its match on the table.
This activity may be done during a winter unit, substituting mittens or gloves for the socks.
Money in Banks

Adult Preparation:
1. Make an enlarged copy of a quarter, dime, nickel, and penny.
2. Cut out the copies.
3. Tape a paper copy of each coin onto separate banks.
4. Put a variety of coins in a bowl.
5. Set the banks and bowl on coins on the table.

Procedures:
1. Ask the child to identify the coins taped to the banks.
2. Child will select a coin from the bowl and place it through the slot of the bank with the coin’s matching picture.
3. Child will continue placing coins in the banks until the bowl is empty.
4. Adult will remove the plug from the first bank and empty its contents on the table.
5. Ask the child, “Are all these coins the same?”
6. If any coins are misplaced, the child will put them in the appropriate bank.
7. The other coins will be placed back in the bowl.
8. Repeat steps 4–7 with other banks.

Safety Precaution:
Supervise children closely as coins may be a choking hazard.

Note: Coin stickers or plastic coins may be substituted for real coins. If using stickers, laminate them if possible so they may be reused.
Recyclable Bottle Sequencing

AGES: 3–5

DEVELOPMENTAL GOALS:
☞ To sequence objects by size
☞ To promote left-right progression

LEARNING OBJECTIVE:
Using recyclable plastic bottles, the child will sequence objects by size.

MATERIALS:
An assortment of sizes and types of recyclable plastic bottles (water, soda, juice)

ADULT PREPARATION:
1. Send a note home asking parents to send in clean, empty recyclable water, soda, or juice bottles.
2. Place 4–5 bottles on the table.

PROCEDURES:
1. Ask the child, “Which is the smallest bottle?”
2. The child will select the smallest bottle. If incorrect, direct her to the smallest bottle.
3. Place this bottle on the child’s left.
4. Ask the child, “Of the bottles that are left, which one is the smallest?”
5. The child will select the bottle and place it to the right of the first bottle.
6. Repeat steps 4–5 until only the largest bottle is left.
7. The child will place the largest bottle on the right end of the row of bottles.

Note: As the children become more adept at sequencing objects by size, add more bottles including some that are closer in size. If children are unable to tell the difference in sizes, water may be added to the bottles to see which one will hold more.

VARIATION:
For two-year-olds, use a 2-liter bottle and a 20-ounce bottle. Show the children the difference between large and small. Gradually add more bottles, using different sizes.
Shape Mat

**ADULT PREPARATION:**
1. Use 9” by 12” construction paper to make a placemat.
2. Using parquetry blocks, trace shapes onto matching colors of construction paper.
3. Cut out shapes, and glue them on the placemat.
4. Laminate the placemats. If a laminator is not available, cover the placemat with clear contact paper.
5. Set the parquetry blocks and placemat on the table.

**PROCEDURES:**
1. Child identifies the shapes on the placemat.
2. Child then takes parquetry blocks and matches them to the shapes on the placemat.

**AGES: 3–5**

**DEVELOPMENTAL GOALS:**
- ✄ To recognize shapes
- ✄ To match shapes

**LEARNING OBJECTIVE:**
Using a shape mat and parquetry blocks, the child will recognize and match shapes.

**MATERIALS:**
Various colors of 9” by 12” construction paper
Scissors
Ruler
Glue
Parquetry blocks (small wooden geometric shapes)
Silverware Patterning

AGES: 3–5

DEVELOPMENTAL GOALS:

รอย To identify objects that are the same
รอย To practice patterning

LEARNING OBJECTIVE:
Using forks and spoons, the child will create an AB pattern.

MATERIALS:
Forks and spoons (may be purchased at thrift stores)

ADULT PREPARATION:
1. Place assorted forks and spoons on the table.

PROCEDURES:
1. Ask child to identify the pieces of silverware.
2. Ask the child to sort the silverware by putting the spoons together and the forks together.
3. The adult will make an AB pattern by placing a row on the table with a spoon, then fork, then spoon, then fork.
4. Ask the child, “What will come next?”
5. The child may continue the AB pattern, using all the silverware.

VARIATION:
Substitute real silverware for plastic ware or different colors of plastic ware. The pattern may then be determined by color (i.e., red, blue, red, blue...).
Spatial Relationships

ADULT PREPARATION:
1. Divide the children into groups of 3 or 4.
2. Provide a self-directed activity for those not participating in the spatial activity.

PROCEDURES:
1. Ask each of the children to sit on a chair.
2. The adult will explain that they are going to play a game. The children must listen carefully and follow the directions.
3. Tell the children to:
   - Stand beside the chair
   - Stand behind the chair
   - Sit in front of the chair
   - Sit on the chair
   - Sit under the table

EXPANSION:
The children may sit in the chair and place their hands:
- On their head
- Beside their chair
- Behind their chair
- In front of their chair, etc.

VARIATION:
This activity may be done at snack time:
- Place your napkin beside your cup.
- Place your napkin under your plate.
- Place your napkin on your lap, etc.
This activity may also be done on the playground:
- Stand behind ______________________
- Stand in front of __________________
- Stand beside ______________________
- Stand under ______________________, etc.

AGES: 2–5

DEVELOPMENTAL GOALS:
» To follow directions
» To understand spatial relationships

LEARNING OBJECTIVE:
Using a table, chair, and adult directions, the children will demonstrate spatial relationships.

MATERIALS:
Table
Chairs (one for each child)