Color Sorting Train

Classification and Patterning

Suggested Materials:
Train created from colored construction paper (see attached example)
Colored counting bears
Dice

Directions:
Lay the whole train on the floor or table. (There will be one train for the whole group.)
Children take turns to:

1. Roll both the number and color die
2. Count the dots on the number die
3. Identify the color on the color die
4. Choose the corresponding number of objects in the color that was rolled (e.g. if they roll a 5 and a red, they will count out 5 red objects)
5. Place the objects on the matching colored train car.

Play until all of the objects are sorted.

Encourage Math Skills:

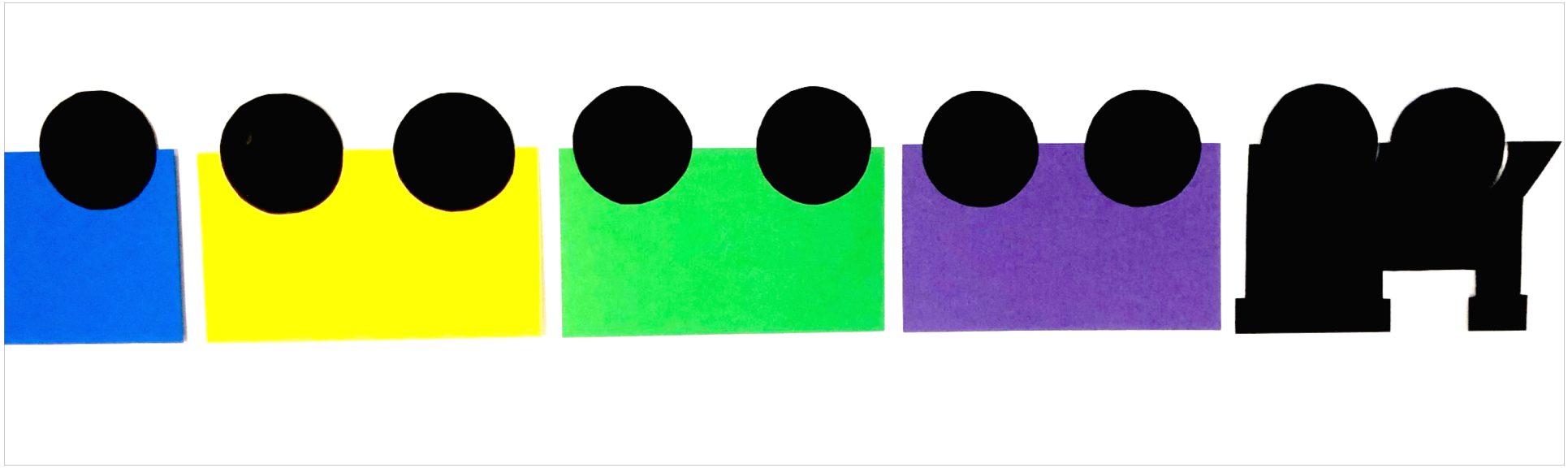
- Prompt children to Sort Objects by Characteristics
  (e.g. "You rolled a 3 and a blue. Find 3 blue objects and put them on your blue train car."
- Prompt Children to Compare Objects by Characteristics
  (e.g. "What is the difference between this train car and this one?" "Does one train car have more objects than the other?)

Ways to provide more support:

- Cover or black out higher numbers on the die (e.g. leave only numbers 1-3).
- Have children hand you the objects one at a time as they count (say "one," hand you one, say "two," hand you another one). Then, hand them back in the same way as they put them on the board. (This supports one-to-one correspondence.)

Ways to provide more challenge:

- Use 2 dice
  - Encourage children to "count on" (e.g., "We know you have 2 on this die, so we can start at 3 on this die.")
  - Encourage simple operations (e.g. "You have 2 on this die and 2 on that one. How many is that all together?")
- Compare the amounts on the different colored train cars (e.g. "Do we have more on the red car or the blue car?")
- Combine objects on the cars (e.g. "How many are on this color train car? And this one? How many objects doe we have all together on our train?")



Building Cup Towers

Suggested Math Area:
Numeracy

Suggested Materials:
Plastic cups
Number cards (see attached example)

Directions:
Clear a large space on a sturdy surface (table or floor) where there isn't a lot of traffic. Children select a number card and add the corresponding number of cups to the tower. They can build the tower wider or taller, and cups can be in any direction (i.e., facing up or down).

Encourage Math Skills:

- Model One-to-One Correspondence
  (e.g. "If you select a card with a 3, you stack 1-2-3 cups" (moving one cup at a time as you count))
- Model Addition and Subtraction Strategies
  (e.g. "You have 4 cups already, and you're adding 1 more now. How many will you have all together?")

Ways to provide more support:

- Provide fewer number cards, including only smaller numbers (e.g., leave only the 1-3 number cards)
- Have children hand you the cups one at a time as they count. (Say "one," hand you one, say "two," hand you another one.) Then, hand them back in the same way as they stack each one. (This supports one-to-one correspondence.
- Create the cup base for the children to ensure they have a solid foundation.

Ways to provide more challenge:

- Encourage children to draw two cards and do simple operations (e.g., "You have a 2 on this card and a 3 on that one. So, how many cups will you add all together?")
- Count how many there are already in the tower and how many there will be when you add your cups. (e.g., "How many are in our tower?" (count) "Okay, how many are you adding to the tower? How many will there be all together?")
- Count how many cups are in the pile waiting to be used in the tower. As you add the cups to your tower, count how many are left in the pile (e.g., "We had 10 cups in our pile, and we added 2 to the tower. How many do we have left in the pile?")
- Build on a less sturdy surface (e.g., carpet rather than table) and compare what happens.

1	2	3	4	5
6	7	8	9	10

Roll A Pattern

Suggested Math Area:
Classification and Patterning

Suggested Materials:
Game boards (see attached examples)
Colored counting bears
Dice

Directions:
Give each child a game board and a set of counting bears. Children take turns to:

1. Roll a die
2. Count the number of dots the die is showing.
3. Fill in a pattern on their game cards using the corresponding number of counting bears. For example, if the child rolls a 3, they add 3 bears to a pattern. If the A-B pattern is purple-blue, then they would a purple bear, then a blue bear, then another purple bear to that line.

The goal is to complete an entire pattern game card.

Encourage Math Skills:

- Label Patterns and Object Characteristics (e.g., "You rolled a 3, so you need to add 3 bears to this pattern. I see a purple bear, then a blue bear. I think they are repeating back and forth. What do you think comes next?")
- Prompt Children to Identify, Repeat, or Extend Patterns (e.g., "Wow – that's a 5. Can you use 5 counting bears to complete this pattern? Notice the colors, and let's figure out what you'll add next."

Ways to provide more support:

- Cover or black out higher numbers on the die (e.g., leave only 1-3).
- Have children hand you the counting bears one at a time as they count. Then, hand them back in the same way as they put each one on the pattern game board. This supports one-to-one correspondence.

Ways to provide more challenge:

- Create additional game cards with more complex patterns.
- Use 2 dice.
    - Encourage children to "count on" (e.g., "We know you have 2 on this die, so we can start at 3 on this die.")
- Encourage simple operations (e.g., "You have 2 on this die and 2 on that one. How many is that all together?")
- Use the blank rows on the back of the game cards to make patterns with small objects for children to add to. Include shapes or sizes.
- Use the blank rows on the back of the game cards to have children create their own patterns.

$

Roll A Pattern

Game Card 1

1	2	3	4

1	2	3	4

Roll A Pattern

Game Card 2

1	2	3	4

1	2	3	4

Roll A Pattern

Game Card 3

1	2	3	4

1	2	3	4