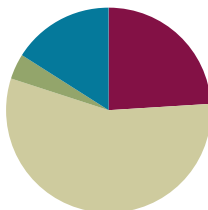


Lesson 25

Objective: Identify and duplicate patterns using sounds and movement. Represent those patterns with objects.

Suggested Lesson Structure

■ Fluency Practice	(6 minutes)
■ Application Problem	(1 minute)
■ Concept Development	(14 minutes)
■ Student Debrief	(4 minutes)
Total Time	(25 minutes)



Fluency Practice (6 minutes)

- Count Out Pennies **PK.CC.3** (4 minutes)
- Dribble and Pass **PK.CC.1** (2 minutes)

Count Out Pennies (4 minutes)

Materials: (T) Numeral cards 6–10 (Lesson 1 Template) (S) baggie of 10 pennies

Note: Watch the strategies students use to take seven pennies out of their bags. Do they count as they take them out? Take a few out and then count? Arrange those they take out in one line? In rows?

T: (Show the 7-card). What's my number?

S: 7.

T: Take seven pennies out of your bag. (Provide time to count.)

T: Count them again as you put them back in your baggie.

S: 1, 2, 3, 4, 5, 6, 7.

Show the 8-card. Gently remind any students who count past the target number to stop when they get to the number on your card.

Dribble and Pass (2 minutes)

Note: In this activity, students do counting movements in an AB pattern while reviewing one of their core fluencies, rote counting to 20.

T: Let's use a dribble and pass pattern with imaginary basketballs.

T: First we'll dribble, and then we'll pass. Then we'll dribble, and then we'll...

S: Pass!

T: You've got it! Now, let's count to 20 the Say Ten Way as we dribble and pass.

Application Problem (1 minute)

Materials: (T) Vegetables or play food, sticky notes

Set up a pattern, but remove one object as shown. Place a sticky note in place of the missing objects.

Tell children that a customer bought an item from Ms. Lee's display at her grocery store. Ask them to help Ms. Lee decide what goes in the blank space of her pattern.



Note: This activity asks children to use their knowledge of the familiar pattern to identify missing parts.

Concept Development (14 minutes)

Part 1: Concept Introduction

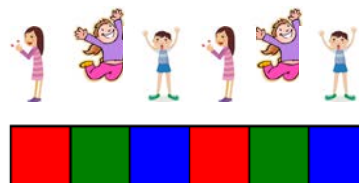
Materials: (T) Linking cubes (3 colors, e.g., red, green, blue)

1. Model the following pattern, but do not specify that it's an ABC pattern: clap, hop, hands up, clap, hop, hands up.
2. Say, "Show me the first part of the pattern. (Clap.) What is the next part? (Hop.) And the next? (Hands up.)"
3. Ask, "What should we do after we put our hands up?" Listen to student suggestions, e.g., "Start again!"
4. Say, "Yes, this part of the pattern repeats; we can call it the **repeating part**."
5. Say, "We can show this pattern with cubes. Let's choose a different color cube for each motion and build a train."
6. Show the pattern again slowly. Model building a train with the repeating part, e.g., red, green, blue, and continue the pattern with student suggestions.
7. Invite students to think of another ABC pattern with simple movements, e.g., thumbs up, pat your tummy, and clap. Repeat Steps 4–6. Be sure to highlight the repeating part.



NOTES ON MULTIPLE MEANS OF ACTION AND EXPRESSION:

Provide students with a variety of ways to respond. Some students will best recognize the pattern by only repeating the movements while others will benefit from pairing the actions with verbalizations, for example, by saying, "clap, hop, hands up" as they repeat the movements.



Part 2: Practice

Materials: (S) Linking cubes (3 colors)

Separate linking cubes according to color. Place tubs of three different color cubes at each table, e.g., red, blue, and yellow.

MP.7

1. Model a pattern similar to the one from Part 1 (hop, stomp, touch nose, hop, stomp, touch nose). Have students show the repeating part of the pattern.
2. Say, “Show this pattern with your cubes.” Guide students to choose a different color cube for each motion and to build a train.
3. Show the pattern again slowly so that students at tables can build an ABCABC pattern using colored linking cubes. Students should have at least two repeating parts in their linking cube trains when finished.
4. Say, “Break your linking cube train to show me the repeating part; it’s the group of cubes that shows all three movements in the pattern.”
5. Repeat with different movements.

Student Debrief (4 minutes)

Lesson Objective: Identify and duplicate patterns using sounds and movement. Represent those patterns with objects.

The Student Debrief is intended to invite reflection and active processing of the total lesson experience. It is also an opportunity for informal assessment. Consider taking anecdotal notes or using a simple checklist to note each child’s progress toward meeting the lesson objective.

As students complete the Practice portion of the Concept Development, listen for misconceptions or misunderstandings that can be addressed in the Debrief.

You may choose to use any combination of the questions below to help students express ideas, make connections, and use new vocabulary (**repeating part**).

- (Repeat these movements: Clap, stomp.) Repeat after me to continue my pattern. (Add another motion: Clap, stomp, stomp.) Repeat after me to continue my pattern.
- Show an ABC tower with 9 linking cubes. What is the repeating part? (Break it off.) How many times do we see that part? (Break into three ABC groups.)
- (Show the following two linking cube towers: GRBGRB, RBGRBG.) What happens to the first tower if you move one green from the beginning to the end? (Move green cube.)
- (Show a RYRY, etc. linking cube pattern that is 10 cubes long.) Look at my pattern. What is the repeating part? Let’s remove the first two cubes. (Remove them.) Does the repeating part change?

**CENTER CONNECTION:**

Create a focus on pattern at the library center with books recommended by the National Association for the Education of Young Children (<http://www.naeyc.org/files/tyc/file/MathbooklistSchickedanzexcerpt.pdf>).

- Grossman, V. *Ten little rabbits*.
- Paul, A.W. *Eight hands round: A patchwork alphabet*.
- Pinkney, B. *Max found two sticks*.