ESTABLISHING PURPOSE

What are the key content standards I will focus on in this lesson?

Content Standards:

Virginia Mathematics Standards of Learning

K.13. The student will identify, describe, extend, create, and transfer repeating patterns.

K.3. The student will (a) count forward orally by ones from 0 to 100; (b) count backward orally by ones when given any number between 1 and 10; (c) identify the number after, without counting, when given any number between 0 and 100 and identify the number before, without counting, when given any number between 1 and 10; and (d) count forward by tens to determine the total number of objects to 100.

Standards for Mathematical Practice:

- Look for and express regularity in repeated reasoning.
- Model with mathematics.
- Construct viable arguments and critique the reasoning of others.

What are the learning intentions (the goal and *why* of learning stated in student-friendly language) I will focus onin this lesson?

- Content: I am learning the predictable ways patterns repeat grow, and shrink.
- Language: I am learning the mathematical language to identify, describe, and extend patterns.
- · Social: I am learning to understand each other's ideas by listening, looking, and thinking.

When will I introduce and reinforce the learning intention(s) so that students understand it, see the relevance, connect it to previous learning, and can clearly communicate it themselves?

- Introduction of task
- Conference questions
- Think-aloud during sharing

SUCCESS CRITERIA

What evidence shows that students have mastered the learning intention(s)? What criteria will I use?

- I can identify repeating, growing, and shrinking patterns.
- I can describe the core or unit of a repeating pattern and the rule for a changing pattern.
- I can predict what comes next and extend a pattern.
- I can explain how I used a pattern to solve a problem.

How will I check students' understanding (assess learning) during instruction and make accommodations?

Formative Assessment Strategies:

- Conference/observation notes
- Student work

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Differentiation Strategies:

- Differentiate the process by readiness and personal interest: purposeful pairings based on heritage language and outside tasks
- Differentiate the process and product by situational interest: choice of materials

INSTRUCTION

- What activities and tasks will move students forward in their learning?
 - Rhythm patterns
 - Giant Hopscotch Challenge
- Sharing representations

What resources (materials and sentence frames) are needed?

Word wall index cards and pictures Anchor chart of representations Math folders Giant Hopscotch Challenge Tiles Cubes Paper tiles Number charts Number lines Markers Scissors Glue

How will I organize and facilitate the learning? What questions will I ask? How will I initiate closure? Instructional Strategies:

• Rhythm patterns

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- Word wall words
- Acting out and building hopscotch paths
- Giant Hopscotch Challenge
- Whole-group sharing representations
- · Partner-sharing representations
- · Anchor chart of representations
- BINGO pattern
- Talk knee-to-knee, eye-to-eye

Scaffolding Questions:

- How could the tiles represent the hopscotch path?
- How could you use words to describe and point to the pattern?
- What would you predict comes next? Why?
- How will you record your thinking on paper?
- What kind of pattern is each?
- What is the core of the repeating pattern?
- What is the rule for changing the growing pattern?

Extending Questions:

- How are the three hopscotch paths similar? Different?
- · How would you write a description of the core?
- How would you write a description of the rule for changing the growing pattern?
- What if I changed this? How would that change the pattern?

Connecting Questions:

- How are the cubes similar to the paper tiles?
- What numbers could you use to describe this pattern?
- How do you know what kind of pattern this is?
- Where do you see the core in the cubes and tiles?

Self-Reflection and Self-Evaluation Questions:

- Where do you see this pair working toward the success criteria?
- Where do you see evidence of you working toward the success criteria?