

LESSON PLANS: ONTARIO

Grade 3: Patterning and Algebra Increasing/Growing Patterns

 45 MINS

powered by

 Mathletics

Overall Curriculum Expectations:

- Describe, extend, and create a variety of numeric patterns and geometric patterns.

Specific Curriculum Expectations:

- Extend repeating, growing, and shrinking number patterns
- Create a number pattern involving addition or subtraction, given a pattern represented on a number line or a pattern rule expressed in words.
- Represent simple geometric patterns using a number sequence, a number line, or a bar graph.

Introduction to Lesson

 10 MINS

Provide students with manipulatives and ask them to create patterns.

- Ask what kind of patterns they can create.
- Give students some time to create and discuss their patterns.
- On the whiteboard, write down the term increasing patterns and ask what they think this term might mean.
- How can we create increasing patterns or growing patterns?
- Create a pattern on your interactive whiteboard showing the first two figures and ask if they know what the next two figures should be.

ITEMS NEEDED

- ✓ Interactive whiteboard
- ✓ Mathletics teacher and student logins
- ✓ Student handout from eBooks
- ✓ Classroom manipulatives
- ✓ Computers/tablets
- ✓ Math journals

ASSESSMENTS

- ✓ Observation and participation
- ✓ Reviewing completed worksheets or reviewing journaling responses
- ✓ Group participation
- ✓ Curriculum activities results

ACCOMMODATIONS/ MODIFICATIONS

- ✓ Allow student to access manipulatives to help create patterns.
- ✓ Encourage students to click on the "Something Easier and Something Harder", within the curriculum activities of Mathletics.
- ✓ eBooks from Grade 2 or Grade 4 from Patterns

EXTENSION OF LEARNING

- ✓ Problem solving from the student Mathletics center.
- ✓ Curriculum activities
- ✓ Explore "Rainforest Maths" (Grade 3, Algebra, Patterns) within Mathletics.
- ✓ Live Mathletics.

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The Lesson

 20 MINS

Centres

- **Background for teacher**—For the eBook centre, please review which pages you would like the students to complete. Depending on how much work students can get done with each centre, rotation can occur about every 10 minutes. Groups will vary depending on class size.



- o **Centre 1: "Rainforest Maths"**—Under Algebra, Patterns, 10s, 100s and other number patterns. These show patterns with numbers. On the interactive whiteboard, place the "Rainforest Maths" Grade 3 selection from the demonstration tab within the Teacher Console. Have students take turns answering the questions on the whiteboard. Students record the questions and answers in their journals.
- o **Centre 2: Computers/iPads/Tablets**—Mathletics Student Console, under the Pattern curriculum activities (these activities are located in the middle of the Student Console, under "Patterns".) Suggested activities: Counting Forward Patterns, Describing Patterns and Increasing Patterns.
- o **Centre 3: eBooks**—Students are to complete the pre-selected pages. Teachers can place manipulatives to help support various learning styles. Students can complete in pairs or individually, recommended pages from 1–9.

- **Extra-time activity/cross-curriculum activity: "Things That Grow"** – Students create artwork of things that grow. Students can paint or use construction paper to display this artwork. They are to create a few stages of the thing to show how it's growing. For example, a student can display the first stage of a flower growing without petals, the next image with 3 petals, the next with 6 petals, and so forth...

Consolidating the lesson

 15 MINS

- Discuss some of the patterns students come across during today's lesson. What are some strategies you used to help you solve the questions?
- Exit card: Have each student create an increasing body percussion pattern as they leave the room.



For more information contact our friendly team...
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