

# LESSON PLANS: ALBERTA

## Grade 3: Patterns and Relations

 45 MINS

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 Mathletics

### General Outcome:

- Use patterns to describe the world and to solve problems.

### Specific Outcomes:

- Demonstrate an understanding of increasing patterns:
  - Describing
  - Extending
  - Comparing
  - Creatingnumerical (numbers to 1000) and non-numerical patterns using manipulatives, diagrams, sounds and actions.

## Introduction to Lesson

 10 MINS

### Teacher Background:

Provide students with manipulatives and ask them to create patterns. Ask, What kind of patterns can you 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 might mean. How can we create increasing patterns or growing patterns? Create a pattern on the interactive whiteboard showing the first two figures and ask if they know how to find the next two figures.

### Further students extension by asking:

- Are there other attributes we can use to create increasing patterns?
- How can we create increasing patterns with numbers? with sounds?
- Do you see any increasing patterns in the classroom?

### ITEMS NEEDED

- ✓ Interactive whiteboard
- ✓ Mathletics teacher login
- ✓ Student handouts from eBooks
- ✓ Student Mathletics logins
- ✓ Classroom manipulatives
- ✓ Computers/tablets
- ✓ Math journals

### ASSESSMENTS

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

### ACCOMMODATIONS/ MODIFICATIONS

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

### EXTENSION OF LEARNING

- ✓ Problem solving from the student Mathletics center
- ✓ Curriculum activities
- ✓ Explore Rainforest Maths (Grade 3, Space) within Mathletics
- ✓ Students can play Live Mathletics.

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### The Lesson

 30 MINS

#### Centres

- **Background for teacher**—You can add more centres to the ones indicated below. 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, you can rotate about every 10 minutes. Groups will vary depending on class size.



- o **Centre 1: Rainforest Maths**— On the interactive whiteboard, go to **Teacher Console > Demonstrations > Rainforest > Maths > Grade 3 > Algebra > Patterns > 10s; 100s; and other number patterns**. These show patterns using numbers. Have students take turns answering the questions on the whiteboard. Students record the questions and answers in their journals.
- o **Centre 2: Computers/tablets**—Students are to work in their Mathletics Student Console to complete pattern curriculum activities. These activities are located in the Student Console under "Patterns, Relations, Variables, Equations." Suggested activities: Counting Forward Patterns, Describing a Pattern and Increasing Patterns
- o **Centre 3: eBooks**—Students complete the pre-selected pages. Teachers can place manipulatives to help support various learning styles. Students can complete the recommended eBook pages, "Patterns and Relationships," pages 1–9, in pairs or individually.

- **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 art work. 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 image with 6 petals, and so forth.

### After the lesson

 5 MINS

- Discuss some of the patterns students came 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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