LESSON PLANS: ALBERTA

Grade 1: Patterns and Relations

45 MINS

powered by Mathletics

General Outcome:

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

Specific Outcomes:

- Demonstrate an understanding of repeating patterns (two to four elements) by:
  - describing
  - reproducing
  - extending
  - creating

  patterns using manipulatives, diagrams, sounds and actions.

Introduction to Lesson — 10 MINS

Teacher Background:

On your interactive whiteboard, bring up Concept Search from your Teacher Console under the Demonstration tab. Search "Patterns" and click on the first slide. You will notice that there are a few slides in this visual. The screen can be maximized by clicking on the square and arrow icon located at the bottom right had corner.

Display the first slide and ask the students what they are noticing.

- What are the fruits creating?
- What are the snap cubes creating?
- How are they similar and how are they different?

The next slide shows the patterns with numbers; students can discuss how to complete the pattern. You can use a hundreds chart for prompting. The next two slides use snap cubes. Students can use snap cubes to create their own patterns or follow along with what is being displayed on the slide.

Ask students for further extension:

- What other patterns can you create using snap cubes or whatever objects were displayed on the slides?
- Do you see any patterns in the classroom?
- What other objects, words, and/or numbers can you use to create patterns?

ITEMS NEEDED

- ✔ Interactive whiteboard
- ✔ Mathletics teacher login
- ✔ Student Mathletics logins
- ✔ Student handouts from eBooks
- ✔ Classroom manipulatives
- ✔ Computers/tablets
- ✔ Math journals (if implemented by teacher)

ASSESSMENTS

- ✔ Observation
- ✔ Participation
- ✔ Reviewing completed worksheets or reviewing journaling responses (if implemented)
- ✔ Results from the curriculum activities within the Mathletics Teacher Console

ACCOMMODATIONS/ MODIFICATIONS

- ✔ Allow student to access manipulatives to help create patterns.
- ✔ Encourage students to click on "Something Easier" and "Something Harder" within the Mathletics curriculum activities.

EXTENSION OF LEARNING

- ✔ Complete any Problem Solving games they haven't worked on.
- ✔ Curriculum activities
- ✔ Explore Rainforest Maths (Grade 1: Space) within 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, centre rotation can be about every 10 minutes. Groups will vary depending on class size.

- **Centre 1:** Problem Solving—On the interactive whiteboard, bring up a Problem Solving game from the Demonstrations tab within the Teacher Console. Options are located under Problem Solving and then under Patterns. Have the students work in either a group or pairs to solve the problems. To further their understanding, students record ways they solved the problems in their own journals.

- **Centre 2:** Computers/tablets—Students are to work in their Student Console to complete pattern curriculum activities. These activities are located in the Student Console under "Patterns and Relations." Recommended activities: Simple Patterns, Color Patterns, and Balancing Act.

- **Centre 3:** eBooks—Students are to complete the pre-selected pages. Teachers can place manipulatives to help support various learning styles. If you would like the students to pair up and complete partner activities, please refer to pages 5, 7, 11, 14, 16, 20, 22, 25 or 27. These activities are designed to solve with a partner.

- **Extra-time activity/cross-curriculum activity:** Have the students create an acrostic poem with the word "Pattern."

After the lesson — 5 MINS

- Have the students discuss some of the patterns they came across.
- What are the different attributes used to create patterns?
- What are some of the strategies they used to solve a problem or complete a pattern?
- Have the students go home and look for patterns in their home or community.