

LESSON PLANS: ALBERTA

Grade 5: Number

Using Pattern Blocks to Teach Fractions

 45 MINS

powered by

 Mathletics

General Outcome:

- Develop number sense.

Specific Outcomes:

- Demonstrate an understanding of fractions by using concrete, pictorial and symbolic representations to:
 - create sets of equivalent fractions
 - compare fractions with like and unlike denominators.

Introduction to Lesson

 10 MINS

Teacher Background:

- Play Dr. Marian Small's "Pattern Blocks" video to introduce pattern blocks and discussion around fractions.

Log in to

[Teacher Console](#) > [eBooks](#) > [Year 5](#) > [Marian Small's Pattern Blocks #1](#).

Click on the Pattern Blocks #1 video. Pause during the questions asked in the video. Discuss various responses.

- Hand out pattern blocks to students, as a manipulative to help them begin thinking about how they could create a shape that is one half yellow. Display pattern blocks in **Concept Search** for an added visual.
- In your Teacher Console, click on **Demonstrations** > **Concept Search** and enter pattern blocks in the **Search** bar. Have students begin to manipulate the blocks and create different fractional numbers.

ITEMS NEEDED

- ✓ Interactive whiteboard
- ✓ Mathletics teacher login
- ✓ Marian Small's printed student problems
- ✓ Pattern block manipulatives
- ✓ Laptops

ASSESSMENTS

- ✓ Observation of students working together to create fractions
- ✓ Participation in interactive
- ✓ Fraction art

ACCOMMODATIONS/ MODIFICATIONS

- ✓ Can practice easier/harder activities
- ✓ Can use Rainforest Maths at a level below or above

EXTENSION OF LEARNING

- ✓ Search number lines and/or fractions in **Concept Search**. Show students how to use a number line to represent and compare fractional amounts.
- ✓ Students can have extra practice in **Rainforest Maths**. Students can extend their learning of fractions and practice questions for reinforcement.

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The Lesson

 30 MINS

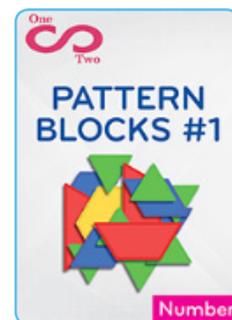
Interactive Pattern Blocks—Marion Small's Activity

- Hand out printed Marion Small's Student Problem: Pattern Blocks. Log in to **Teacher Console > eBooks > Year 5 > Marion Small's Pattern Blocks #1 > Student Problem > Print**. Have students work together to complete the question. Students can work in partners or small groups to determine various answers. Give students enough time to explore various possibilities and use a variety of different shapes, patterns, and number of blocks.
- Display Interactive problem on the Interactive Whiteboard. In your teacher console, click on **eBooks > Year 5 > Marion Small's Pattern Blocks #1 > Interactive Problem**. Students can then come up the interactive whiteboard and display their answers. Discuss with students how there are various answers to this problem. Fractions can be represented in a variety of ways.

Ask Students,

- What would happen if we could only use red and yellow blocks?
- How could we represent $\frac{1}{2}$ with using the fewest blocks?
- What different colour combinations could you use?
- Did your pattern have a line of symmetry?
- Did it need to have one?
- Can you make two equivalent fractions with your pattern blocks?

NOTE: Try Extension of Learning task to introduce fractions on a number line, if students are grasping this concept well.



Reinforcement: Equivalent Fraction Activities

- Assign curriculum activities for students to complete in the Student Console. Suggested activities include Shading Equivalent Fractions, Shading Equivalent Fractions 1, Equivalent Fractions on a Number Line 1, Equivalent Fractions on a Number Line 2, Equivalent Fraction Wall 1.
- Students can use Rainforest Maths Grade 5 fractions section for extra practice. It can also be displayed on the interactive whiteboard for students to reference while completing their assigned tasks.

Extra-time/cross-curriculum activity: Have students create fraction art. Students should represent a fractional amount and show an equivalent fraction. Students can represent their fractions using paper and glue, drawing pattern blocks, creating two real-life objects, etc.

After the lesson

 5 MINS

- Play a game of Live Math as a whole class. Log in to your Teacher Console and click on **Demonstrations > Live Math > Level 6 > World > Go**. Level 6 has some fraction computation questions.
- Have students complete an "Exit Slip" card before leaving class.
- **Ask students:** What did you learn about fractions? How do you best represent fractions? Share your learning.



For more information contact our friendly team...

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