

LESSON PLANS: ALBERTA

Grade 2: Patterns and Relations

 45 MINS

powered by

 Mathletics

General Outcome:

- Represent algebraic expressions in multiple ways.

Specific Outcomes:

- Demonstrate and explain the meaning of equality and inequality, concretely and pictorially
- Record equalities and inequalities symbolically, using the equal symbol or the not equal symbol.

Introduction to Lesson

 10 MINS

Ask students when something is balanced and unbalanced.

Prompt questions about a scale with weighed objects. Then have the class discuss what they think/know about the terms equal and inequality. Display this on a whiteboard/poster paper.

On the interactive whiteboard, bring up

Mathletics Teacher Console > Demonstrations > Concept Search.

Search equal and unequal. The slides will display the definitions and symbols, and give examples. Have the students brainstorm items they could use these symbols for, or where they have seen these before.

Display examples on the board and have students figure out which symbol to use.

ITEMS NEEDED

- ✓ Interactive whiteboard
- ✓ Mathletics teacher login
- ✓ Mathletics student logins
- ✓ Student handouts from eBooks
- ✓ Problem solving page
- ✓ Classroom manipulatives
- ✓ Computers/tablets
- ✓ Math Journals (if teacher implemented ones)

ASSESSMENTS

- ✓ Observation, and participation
- ✓ reviewing completed worksheets or review journaling responses
- ✓ Results and reports from the Mathletics teacher console

ACCOMMODATIONS/ MODIFICATIONS

- ✓ Allow student to access manipulatives to help create patterns.
- ✓ Create heterogeneous grouping
- ✓ eBook pages from higher or lower grades.

EXTENSION OF LEARNING

- ✓ Problem solving games
- ✓ Curriculum activities
- ✓ Explore Rainforest Math
- ✓ Live Mathletics

LESSON PLANS: ALBERTA

Grade 2: Patterns and Relations

powered by

Mathletics

The Lesson

 30 MINS

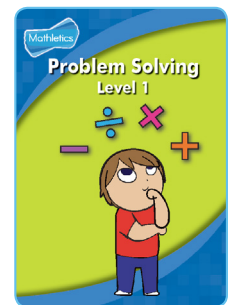
- **Discover:** Hand out Problem Solving worksheet from eBooks. This is located in
Teacher Console > eBooks > Problem Solving > Level 1.

The worksheet is located under "Open-ended" worksheet 6. This worksheet will allow students to solve a problem based on the scale being balanced/equal. Have students record their answers. Open class discussion about answers and strategies.

Extension questions:

- What if we wanted to make the scale unbalanced or unequal?
- What if we doubled the pile of books? What pile of books can be added to balance it now?
- Can you create this problem only using numbers?
- What would that look like?
- What symbols can we use while solving this problem?

Ask students to flip the page over and create their own problem using pictures. The answer can be either equal or unequal.



- **Explore:** Mathletics—Students can explore within Mathletics. They should focus on Rainforest Maths, grades 2 and 3, Algebra; Concept Search; and Problem Solving, Balance.
- **Reinforcement:** eBooks—Students are to complete the pre-selected pages. Teacher can place manipulatives to help support various learning styles. Recommend pages: Year 2/Patterns and Relationships pages 18–25 and Year 3/Patterns and Relationships pages 13–18.
- **Extra-time activity/cross-curriculum activity:** Students can create their own balance scale. This is created with a hanger, placing a cups attached to string on each end of the hanger. Students can compare various objects in the classroom and record what is equal and unequal.

After the lesson

 5 MINS

- Review the symbols for equal and unequal. What strategies did students use?
- How can they use these symbols with numbers, words, pictures, and sounds?
- Have the students play a game of Live Mathletics and compare their game to the last game.



For more information contact our friendly team...
Email: customerservice@3plearning.ca | Tel: +1 877 467 6851