

# LESSON PLANS: ALBERTA

## Grade 6: Statistics and Probability (Data Analysis)

### Creating, Reading and Interpreting Line Graphs



50 MINS

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Mathletics

#### General Outcome:

- Collect, display and analyze data to solve problems.

#### Specific Outcomes:

- Create, label and interpret line graphs to draw conclusions.
- Graph collected data, and analyze the graph to solve problems

## Introduction to Lesson



10 MINS

#### Teacher Background:

Students should have prior knowledge of graphing from grade 5. Conducting surveys, recording data in line graphs should have been taught prior to this lesson. This lesson's main focus is reading, interpreting data, and drawing conclusions from graphs.

To introduce how to properly read and interpret data from a line graph, show students the video "Introducing Distant Time Graphs."

Log in to your

[Teacher Console > Toolkit.](#)

Type line graphs into your **Search** bar. Click **Presentations** tab on the left side. Choose "Introducing Distant Time Graphs." This video will introduce students to a line graph and how to set up a vertical and horizontal axis with a proper scale. Pause during the video to discuss what is being shown on the line graph. Ask students, Why do we use this scale for time? Is there another range we could use? Where is the highest point on the graph? Why do you think they chose this measurement? Tell a story about how this data could have been collected.

**NOTE:** There are a variety of other videos related to interpreting graphs, scatter plots, and other areas of data management you can explore with your students.



#### ITEMS NEEDED

- ✓ Interactive whiteboard
- ✓ Mathletics teacher login
- ✓ Laptops
- ✓ eBook worksheet printed
- ✓ Graph paper for practice



#### ASSESSMENTS

- ✓ Group work
- ✓ Oral presentation
- ✓ Review graphs



#### ACCOMMODATIONS/ MODIFICATIONS

- ✓ Create ability or leveled groups.
- ✓ Data disaster problem could be done individually and assessed.
- ✓ Give students the option to submit their work or do an oral presentation.
- ✓ Have students watch the video together at the beginning of class. Allow students to formulate questions. Lead your lesson by following their inquiries.



#### EXTENSION OF LEARNING

- ✓ Mathletics Year 6 eBook: "Data Representation," Collecting and analyzing data, p.30, or Types of graphs 3, p.12
- ✓ Assign curriculum activities
- ✓ Rainforest Maths, Grade 6. Data, line graph

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#### The Lesson

 30 MINS

##### Open-Ended Problem Solving—The Story of a Graph

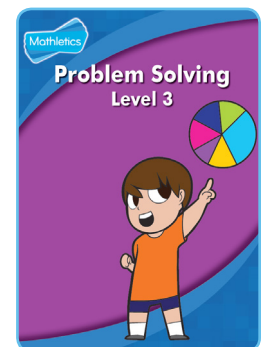
- Display open-ended problem on Interactive whiteboard.
- Log in to your [Teacher Console](#) > [eBooks](#) > [Problem Solving](#) > [Problem Solving Level 3 Book](#) > [Open Ended Problems](#) > [Worksheet 5](#).
- Review the line graph with students; ask prompting questions like, Why is this an appropriate scale to measure water on? What information can you tell from this graph? Why was a line graph chosen to organize the data? How could we graph all months of the year? What would be different about that graph?
- Have students work in their table groups or with partners to brainstorm and explore various ideas for the line graph and pie graph. Ask students prompting questions like, What would be an appropriate title? How could this data have been collected? What data would not work on these graphs? Discuss various responses from different groups.

##### eBook—Data Disaster

- Divide your students into leveled groups. Print the “Data Disaster” eBook problem sheet so each group can work collaboratively on this section of the eBook. Teacher can read aloud the Getting Ready section of the worksheet.
- Students should then begin giving their graphs data, labels, and titles and working collaboratively to determine possible solutions for the graphs.

##### Extra-time/cross-curriculum activity:

- Have students collect data prior to this lesson about some aspect of their community, an experiment, an issue in the school, or from another subject. Have students record their observations or measurements over time.
- Students can then use a line graph to represent the data and show a trend over time. Science experiments/growth plans would work best for this activity.



#### After the lesson

 5 MINS

##### Oral Presentation

- Give students time at the end of the lesson to prepare a one-minute share aloud.
- Have students present their stories related to the graphs. Formulate class discussion based on student responses.



For more information contact our friendly team...

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