

LESSON 5: Data Analysis

Should We Let Tundra Buggies[®] Get Close to the Polar Bears? For Teachers

Processes of Mathematics Standard

Students demonstrate the processes of mathematics by making connections and applying reasoning to solve problems and to communicate their findings.



Problem Solving

Indicator:

Apply a variety of concepts, processes and skills to solve problems.

Objectives

- Identify the question in the problem.
- Decide if enough information is present to solve the problem.
- Make a plan to solve a problem.
- Apply a strategy: i.e., draw a picture, guess and check, find a pattern, or write an equation.

Communication

Indicator:

Present mathematical ideas using words, symbols, visual displays or technology.

Objectives

- Express solutions using pictorial, tabular, graphical or algebraic methods.
- Explain solutions in written form.
- Ask questions about mathematical ideas or problems.
- Give or use feedback to revise mathematical thinking.

Connections

Indicator:

Relate or apply mathematics within the discipline, to other disciplines and to life.

Objectives

- Identify mathematical concepts in relationship to other disciplines.
- Identify mathematical concepts in relationship to life.

Assessment

Graph and data analysis

Materials

- Each student needs a copy of Student Sheet “Should We Let Tundra Buggies Get Close to the Polar Bears?”
- Equipment and PowerPoint presentation “Sound Experiment”

Lesson

1. Students will analyze the data on bear behavior after viewing the PowerPoint showing how the experiment was conducted. Have students identify the question to be answered and examine the data from the experiment.
2. Ask students to think about ways they could use the data to answer the question. Do they have enough data? Is the data the right kind of data they need to investigate the problem? How can they organize the data and display it in a meaningful way?
3. Students may display the information in a variety of ways. Have students display their information and then explain their thinking. Why did they choose that display method? How does the display method they used help to answer the research question?

