Investigating Patterns

Cross-Country Adventures

Lesson 1-1 Numeric and Graphic Representations of Data

My Notes

Learning Targets:

- Identify patterns in data.
- Use tables, graphs, and expressions to model situations.
- Use expressions to make predictions.

SUGGESTED LEARNING STRATEGIES: Sharing and Responding, Create Representations, Discussion Groups, Look for a Pattern, Interactive Word Wall

Mizing spent his summer vacation traveling cross-country with his family. Their first stop was Yellowstone National Park in Wyoming and Montana. Yellowstone is famous for its geysers, especially one commonly referred to as Old Faithful. A geyser is a spring that erupts intermittently, forcing a fountain of water and steam from a hole in the ground. Old Faithful can have particularly long and fairly predictable eruptions. As a matter of fact, park rangers have observed the geyser over many years and have developed patterns they use to predict the timing of the next eruption.

Park rangers have recorded the information in the table below.

Length of Eruption (in minutes)	Approximate Time Until Next Eruption (in minutes)
1	46
2	58
3	70
4	82

1. Describe any patterns you see in the table.

2. Why might it be important for park rangers to be able to predict the timing of Old Faithful's eruptions?

3. If an eruption lasts 8 minutes, about how long must park visitors wait to see the next eruption? Explain your reasoning using the patterns you identified in the table.

CONNECT TO HISTORY

Yellowstone National Park was the first National Park. The park was established by Congress on March 1, 1872. President Woodrow Wilson signed the act creating the National Park Service on August 25, 1916.

DISCUSSION GROUP TIPS

Work with your peers to set rules for:
- discussions and decision-making
- clear goals and deadlines
- individual roles as needed

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