

The Story Behind the Graph

Developed by: Jen Reiter, 2014 Iditarod Teacher on the Trail™ **Revised 9/15 UPDATED 12/17**

Discipline / Subject: Math

Topic: Graphing

Grade Level: 2-5

Resources / References / Materials Teacher Needs:

Student worksheets, attached

Lesson Summary:

The students will write a story to match the set of data shown on a graph.

Standards Addressed: (Local, State, or National)

Third Grade Math Common Core:

CCSS.Math.Content.3.MD.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs.

Third Grade English/Language Arts:

CCSS.ELA-Literacy.W.3.10 Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Learning Objectives:

TLW add missing key elements to a graph.
TLW write a story to match a set of data recorded on a graph.

Assessment:

The students’ stories can be assessed.

Procedural Activities:Prior Knowledge:

Students should be familiar with pictographs and line graphs. They should know the basic parts of a graph.

Introduction:

Review with students the role of graphs and why we use them. There is a good reference tool here: https://nces.ed.gov/nceskids/help/user_guide/graph/whentouse.asp

Procedure:

1. Tell the students that today you are going to present them with two graphs that have some problems.
2. Display the two graphs for the students to see.
3. Challenge the students to identify problems with the graphs.
 - a. They are missing titles and labels
 - b. You can't determine what the data is trying to tell you
4. Tell the students that their job today is to determine the solutions to the problems they have just identified.
5. I would have them choose one assignment to work on. You may want to require them to complete both, or break the assignment up into two days. Or, one could be a class assignment and the other a homework assignment.

Summary:

Have several students share their stories. The other students can listen to the story and then guess which graph it matches.

Materials Students Need:

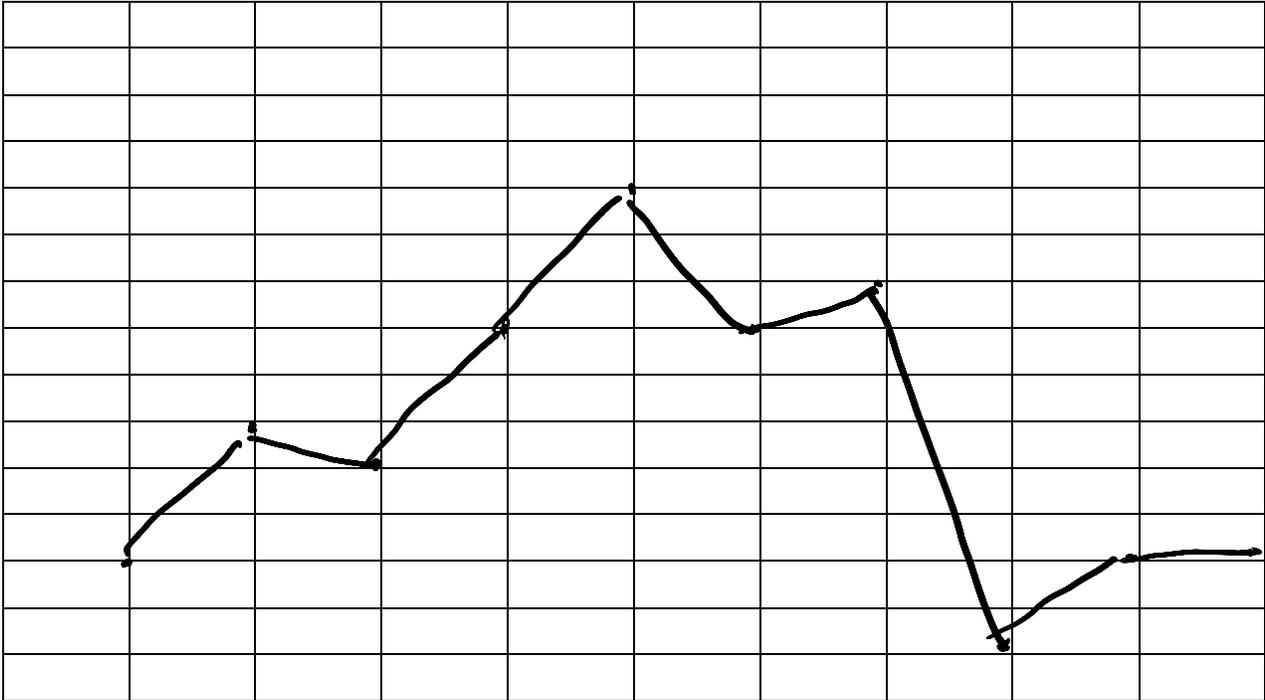
Worksheet, attached

Technology Utilized to Enhance Learning:**Other Information:****Modifications for Special Learners/ Enrichment Opportunities:**

- Students could work with a partner.
- Students could tell their stories orally and have a recorder or use a digital voice recorder.
- As an extension, students could create a graph and then trade it with a partner to have the story written by a classmate.

Interpreting the Graph

Below you will find a line graph that tells information about something related to the Iditarod.... Well sort of. It's missing several elements. Complete the graph by adding the missing elements. On the following page, write the story that goes with the graph. The story should explain the highs and lows of the graph as well as what it is measuring. Remember, line graphs are usually used for showing change over time. Be prepared to share your graph and story with the class.



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