

Iditarod Stem-and-Leaf Data

Developed by: Kim Slade

Discipline / Subject: Math

Topic: Collecting Data

Grade Level: 4-7

Resources / References / Materials Teacher Needs:

- Copies of “Iditarod Stem-and-Leaf” data sheet for each student
- Read for background information <http://regentsprep.org/Regents/Math/data/stemleaf.htm>
- Wells Fargo’s ‘Hands on Banking’ website www.handsonbanking.org

Lesson Summary:

Students display musher data using a stem-and-leaf plot and find data landmarks.

Standard’s Addressed: Alaska Content Standards

1. (Mathematics: C) A student should understand and be able to form and use appropriate methods to define and explain mathematical relationships.
2. (Mathematic: D) A student should be able to use logic and reason to solve mathematical problems.
3. (Mathematics: E) A student should be able to apply mathematical concepts and processes to situations within and outside of school.

Learning objectives:

The student:

- Organizes data
- Constructs a data table
- Analyzes data

Assessment:

Check the “Iditarod Stem-and-Leaf” data sheet for accuracy

Procedural Activities

1. To teach Stem-and-Leaf plots, teachers can review the background information found above
2. Use Wells Fargo’s ‘Hands on Banking’ website to teach about budgeting and finances – see “Budgeting” activity under “Enter Program” button
3. Students complete the “Iditarod Stem-and-Leaf” data sheet
4. The number \$28 will be split so that the 8 goes under the Leaves section on the table and the 2 will be placed under the Stems section of the table
5. After students record the costs in the stem-and-leaf plot, they then find the landmarks for the data
 - Minimum – lowest amount
 - Maximum – highest amount
 - Mode – amount that occurs most often
 - Median – after putting all amounts in order from lowest to highest, find the middle number
 - Mean – add all amounts, then divide by the total number of amounts
6. Students explain how they found the median and show their work

Materials Students Need:

- Copies of “Iditarod Stem-and-Leaf” data sheet

Technology Utilized to Enhance Learning:

- <http://www.k2racing.org/>
- www.handsonbanking.org

Other Information

- Students can visit Kim Kittredge’s K2 Racing website and look at the link “Cost Breakdown” to see actual costs that he incurred for the 2006 Iditarod race

Modifications for special learners/ Enrichment Opportunities

- Older students can plot costs of greater value – gear that costs hundreds and thousands of dollars. They will need to create their own stem-and-leaf plots in order to organize that data.