

Iditarod Dog Bone Math

Developed by: Kim Slade 2007 WFTOTT

Discipline / Subject: Math

Topic: Estimation

Grade Level: K-2

Resources / References / Materials Teacher Needs:

- Dog bones
- Large plastic jar
- Smaller container
- Various measuring tools- measuring tapes, meter sticks, rulers (per pair)

Lesson Summary: Students use dog bones to measure (non-standard measurement) various object in the classroom and to estimate.

Standard's Addressed: (Alaska)

Math – A: Select and use appropriate systems, units, and tools of measurement, including estimation.

Learning objectives:

Students will:

- Provide and justify estimations for real-world quantities
- Measure using non-standard units with real quantities

Assessment:

Teacher Observation

Procedural Activities

Part 1

1. Talk about measuring using non-standard units or objects – you can relate it to history; before there were measurement tools, this was how people measured objects
2. Have student measure the width of their desks, books, counter, tables, etc. using the dog bones, then record the results in their math journal
3. Students use the measuring tools to get actual measurements, then record their results in their math journal (students should not measure a bone yet)
4. Ask:
 - How do the non-standard and actual measurements compare?
 - Can you figure out the measurement of one dog bone without measuring it?
6. Allow student to measure a dog bone

Part 2

1. Fill a large plastic jar full with dog bones - Have students estimate how many bones are in the jar (leave this out for one day)
2. The next day - Provide students with a smaller container (measuring cup, etc.) Take the bones out of the larger jar and allow students to see how many smaller containers make up the larger jar
3. Then they see how many bones fill the smaller container
4. Students then calculate about how many bones were in the larger jar (this process helps teach estimation)

Materials Students Need:

- Math Journals

Technology Utilized to Enhance Learning:

- www.iditarod.com

Other Information:

Use different size dog bones and compare the results

Modifications for special learners/ Enrichment Opportunities

Allow students to work in small groups or with older children