

Lesson Plan Title: **Iditarod Trail Mix Fractions**

Developed by:

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Discipline / Subject:

Mathematics

Topic:

Fraction, decimal, percentage relationships

Grade Level:

4-6

Resources / References / Materials Teacher Needs:

- Sandwich baggies with 1/4 cup of trail mix containing raisins, M&M's, peanuts, cashews, and almonds
- "Iditarod Trail Mix Fractions" response sheet

Lesson Summary:

- Students will determine fractional parts of a bag of trail mix

Standard's Addressed: (Local, State, or National)

1. Understand numbers, ways of representing numbers, relationships among numbers, and number systems
2. Compute fluently and make reasonable estimates

Learning objectives:

- Estimate fractional parts of a whole
- Develop fractions, decimals, & percents using the trail mix
- Compare relative size and order of fractions, decimals, & percents
- Interpret concrete and symbolic representations of fractions, decimals, & percents

Assessment:

"Iditarod Trail Mix Fractions" response sheet

Procedural Activities

1. Have students estimate how many pieces are in the baggy, then have them estimate fractional parts of the baggy by estimating how many of each food type
2. Students count total number of pieces in the baggy – discuss that this is the whole amount in the bag and is the denominator (the bottom number in a fraction)
3. Students separate and count each food type in the baggy
4. Discuss that the number of each type of food is the part of the whole - the numerator, and is on the top of a fraction
5. To find the equivalent decimal, students divide the numerator by the denominator – students may use calculators if needed
6. The percentage is another equivalent, or way to express a fraction of a whole – students multiply the decimal by 100 to get the percentage
7. Students complete the “Iditarod Trail Mix Fractions” response sheet

Materials Students Need:

- Sandwich baggies with 1/4 cup of trail mix containing raisins, M&M’s, peanuts, cashews, and almonds
- “Iditarod Trail Mix Fractions” response sheet

Technology Utilized to Enhance Learning:

- www.iditarod.com

Other Information

- Discuss fraction, decimal, percentage equivalents by comparing largest to smallest
- Decide how you will handle broken pieces – will you count them as 1 whole piece? Or will you have students put broken pieces together to make 1 whole?

Modifications for special learners

- Teachers can count out ten pieces for each student sample (bag of trail mix) - this brings the lesson down a level

Enrichment Opportunities

- Students design a graph to show the percentage of each food type
- This activity can be used with any trail mix – students then make up their own response sheet
- Have students find the following landmarks: minimum, maximum, range, median, mode, & mean

Adaptations:

- Younger students can discuss which is greater than and less than