



Gold Seal Lesson

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|----------------------------------|-----|------|--|--------|---|---|
| Author(s): Linda Noyes | | | Lesson Title: Digging Up Chocolate Chips | | | |
| Grade Span | | | ICLE Application Model | | | |
| K-4 X | 5-8 | 9-12 | A | B X | C | D |

Instructional Focus:

Reading

Students read a variety of grade level materials, applying strategies appropriate to various situations

Number Operation and Concepts

Students use number, number sense, and number relationships in a problem-solving situation. Students communicate the reasoning used in solving these problems.

Algebraic Concepts and Relationships

Students use algebraic methods to investigate, model, and interpret patterns and functions involving numbers, shapes, data, and graphs in a problem-solving situation. Students evaluate and communicate the reasoning used in solving these problems.

Problem-Solving and Mathematical Reasoning

Students apply a variety of problem-solving strategies to investigate and solve problems from across the curriculum as well as from practical applications.

Basic Concepts and Knowledge

Students develop an understanding of scientific concepts using facts, theories, principles, and models.

Performance Task

The following performance task can be used as a literary response to the picture book, *Dragons In The Rock* by Marie Day. *Dragons In The Rock* is an example of historical fiction that depicts the real life event of discovery in the 1800's of an ichthyosaur in the cliffs of Lyme Regis by Mary Anning. Using rudimentary tools Mary was able to free the fossil remains of this prehistoric creature. Mirroring Mary's archaeological dig, the students will dig for chocolate chips using nothing more than a toothpick, while keeping each chip intact. As each chip is "undoughed" its location is plotted in a quadrant on graph paper. Each preserved intact chip will then be counted. Once all the chips have been counted and undoughed, data will be compiled for a class graph. Students may choose to construct a pictograph or bar graph. Unlike Mary, the students can finally dig into our diggings. Enjoy!

ICLE Essential Skills

Understand the best procedures for statistical data collection, organization, and display including making estimates and predictions and drawing inferences. (m5)

Plan and apply real or hypothetical models and constructions to facilitate investigation and learning and the solution to practical problems. (Not Ranked s115)

Examine the fossil record to understand ancient life forms and evolutionary development. (s67)

Scoring Guide:**Graph Scoring Guide For Digging Up Dinosaurs**

| | High | Medium | Low |
|---|-------------|---------------|------------|
| Labels/Titles Complete and Accurate | | | |
| Scales And Units Of Measurement Correct | | | |
| Accurate Plotting of Data | | | |
| Use of Color, Texture, and Other Graphic Techniques To Clarify What The Graph Is Intended To Show | | | |
| Neatness and Presentation | | | |

Keywords

| English Language Arts | Mathematics | Science |
|------------------------------|--|--|
| Reading | Algebra | Earth Science Archaeology Excavation Fossil Remains Skeletons Bones |
| Writing | Geometry | Life Science |
| Communications | Statistics Data Collection Data Display Graphs Sampling Labels Title Bar Graph Pictograph | Chemistry |
| Literature | Calculus | Physics |
| Other | Trigonometry | Other |
| | Other | |