

Week 3: Designing the Mission

LESSON 8: WHERE IS THE BEST PLACE TO MEASURE?
GRADE LEVEL: 6-8
LENGTH: 1 DAY

TEKS/SES:

Science

Grade 6

6.2.A 6.2.B 6.3.A 6.4.A 6.6.A 6.8.E 6.11.B 6.11.C

Grade 7

7.2.A 7.2.B 7.3.A 7.4.A 7.7.A 7.9.A 7.9.B 7.10.A

Grade 8

8.2.A 8.2.B 8.3.A 8.4.A 8.6.C

Full text versions of these TEKS are available at <http://ritter.tea.state.tx.us/rules/tac/chapter112/ch112a.html>

Math

Grade 6

6.8.A 6.8.B 6.10.D 6.11.A 6.11.B 6.11.C 6.12B

Grade 7

7.9.A 7.11.A 7.11.B 7.13.A 7.13.B 7.13.C 7.14.A 7.14.B

Grade 8

8.14.A 8.14.B 8.14.C 8.15.A 8.15.B

Full text versions of these TEKS are available at <http://ritter.tea.state.tx.us/rules/tac/chapter111/ch111a.html>

Language Arts

Grade 6

6.2.A 6.2.B 6.24B 6.28

Grade 7

7.2.A 7.2.B 7.24.A 7.28

Grade 8

8.2.A 8.2.B 8.24.A 8.28

Full text versions of these TEKS are available at <http://ritter.tea.state.tx.us/rules/tac/chapter110/ch110a.html>

NATIONAL STANDARDS

Science

Science as Inquiry

- Abilities necessary to do scientific inquiry
- Understanding about scientific inquiry

Physical Science

- Position and motion of objects

Earth and Space Science

- Properties of earth materials
- Objects in the sky

Science and Technology

- Abilities of technological design
- Understanding about science and technology
- Abilities to distinguish between natural objects and objects made by humans

Personal and Social Perspectives

- Changes in environments
- Science and technology in local challenges

History of Nature and Science

- Science as a human endeavor

Math

Number and Operations

- Understand numbers, ways of representing numbers, relationships among numbers, and number systems

Geometry

- Specify locations and describe spatial relationships using coordinate geometry and other representational systems
- Apply transformations and use symmetry to analyze mathematical situations
- Use visualization, spatial reasoning, and geometric modeling to solve problems

Measurement

- Understand measurable attributes of objects and the units, systems, and processes of measurement
- Apply appropriate techniques, tools, and formulas to determine measurements.

Data Analysis and Probability

- Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them
- Develop and evaluate inferences and predictions that are based on data
- Understand and apply basic concepts of probability

Problem Solving

- Build new mathematical knowledge through problem solving
- Apply and adapt a variety of appropriate strategies to solve problems
- Monitor and reflect on the process of mathematical problem solving

Communication

- Organize and consolidate their mathematical thinking through communication
- Communicate their mathematical thinking coherently and clearly to peers, teachers, and others
- Analyze and evaluate the mathematical thinking and strategies of others;
- Use the language of mathematics to express mathematical ideas precisely.

Connections

- Recognize and use connections among mathematical ideas
- Recognize and apply mathematics in contexts outside of mathematics

Representation

- Create and use representations to organize, record, and communicate mathematical ideas
- Select, apply, and translate among mathematical representations to solve problems

Language Arts

- NL-ENG.K-12.4 COMMUNICATION SKILLS Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.
- NL-ENG.K-12.5 COMMUNICATION STRATEGIES Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.
- NL-ENG.K-12.6 APPLYING KNOWLEDGE Students apply knowledge of language structure, language conventions (e.g., spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and nonprint texts
- NL-ENG.K-12.12 APPLYING LANGUAGE SKILLS Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).