Trinity University Digital Commons @ Trinity

Understanding by Design: Complete Collection

Understanding by Design

7-2-2008

Matter [2nd grade]

Trinity University

Canyon Ridge Elementary School (San Antonio, Tex.)

Follow this and additional works at: http://digitalcommons.trinity.edu/educ_understandings

Part of the Elementary Education and Teaching Commons

Repository Citation

Trinity University and Canyon Ridge Elementary School (San Antonio, Tex.), "Matter [2nd grade]" (2008). *Understanding by Design: Complete Collection.* 49.

http://digitalcommons.trinity.edu/educ_understandings/49

This Instructional Material is brought to you for free and open access by the Understanding by Design at Digital Commons @ Trinity. For more information about this unie, please contact the author(s): . For information about the series, including permissions, please contact the administrator: jcostanz@trinity.edu.

Unit: Matter Grade: 2

Stage 1: Desired Results

Understandings

Students will understand that...

- Everything is made of matter, and all matter occupies space.
- Matter is neither created nor destroyed but can change state.
- Each type of matter has it's own specific physical properties.

Essential Questions

- 1) How are all 3 states of matter alike and different?
- 2) How does matter occupy space?
- 3) How can matter undergo change?
- 4) How can we use our 5 senses to identify the physical properties of matter (color, size, shape, weight, texture)?
- 5) Can matter ever be lost?

Vocabulary

evaporate gases melts liquid water vapor matter thermometer

contract

solids

expand

condensation

temperature

Knowledge & Skill

(NEISD scope & sequence; TEKS; Core; etc.)
TEKS:

- 2.1 Scientific Processes. The student conducts classroom and field investigations following home and school safety procedures.
- 2.2 Scientific Processes. The student develops abilities necessary to do scientific inquiry in the field and the classroom.
- 2.2B Plan and conduct simple descriptive investigations.
- 2.2C Compare results of investigations with what students and scientists know about the world.
- 2.3 Scientific Processes. The student knows that information and critical thinking are used in making decisions.
- 2.5 Science Concepts. The student knows that organisms, objects, and events have properties and patterns.
- 2.5A Classify and sequence organisms, objects, and events based on properties and patterns.
- 2.7 Science Concepts. The student knows that many types of change occur.
- 2.7A Observe, measure, record, analyze, predict, and illustrate changes in size, mass, temperature, color, position, quantity, sound, and movement.
- 2.7B Identify, predict, and test uses of heat to cause change such as melting and evaporation.

Stage 2: Assessment Evidence

Performance Task:

- Classify magazine pictures according to their states of matter
- Test on facts about Matter
- Computer activity using Kidspiration
- Written response to the experiment demonstrating a solid changing into a liquid
- After classifying magazine pictures according to their states of matter, have students choose one type of matter and describe how it affects us in a specific environment

Other evidence:

(quizzes, tests, academic prompts, etc.

note – these are usually included where appropriate in Stage 3 as well)

• States of Matter Reading Comprehension

Stage 3: Learning Activities

(Steps taken to get students to answer Stage 1 questions and complete performance task)

- Read and Discuss the Poem "What's the Matter?"
- Students will work in small groups to classify objects according to their state.
- Follow the Scientific Method to identify and observe the 3 States of Matter.
- What's the Matter? Scientific Terms.
- Use common objects in the classroom to demonstrate how each state of matter occupies space.
- Observe and feel a solid changing into a liquid.
- Observe dry ice and describe its properties (color, size, shape, weight, texture).
- Using the 5 senses, explore and describe the properties of edible matter.

Self-Assessments:

Related Literature:

Matter by Christine Webster
Solids, Liquids, and Gases by Ginger Garrett
What is Matter? By Don L. Curry
Everything is Matter by David Bauer

Other Evidence, Summarized Related Media:

"Phases of Matter" by Bill Nye

"Miracle Worker" – Helen Keller