

SKILLS LIST and SAMPLE ITEMS FOR

PRACTICE TEST, SCIENCE, GRADE 9

(Test items developed for skills measured in TERRA NOVA [CTBS]*)

Skills

- | | | | |
|-----|--|-----|--|
| 1.0 | Fundamental Concepts | 5.0 | Science and Technology |
| 1.1 | Understanding of the
Fundamental Concepts of
Science Inquiry | 5.1 | Understanding of How
Technology and Science
Interact |
| 2.0 | Physical Science | 6.0 | Personal and Social Perspec-
tives in Science |
| 2.1 | Fundamental Concepts and
Principles of Physical
Science | 6.1 | Personal and Social Issues |
| 2.2 | Light/Heat/Electricity | 7.0 | History and Nature of Science |
| 3.0 | Life Science | 7.1 | Science as a Human
Endeavor, Nature of Scien-
tific Knowledge, and the
History of Science |
| 3.1 | Fundamental Concepts and
Principles | 8.0 | Thinking Skills |
| 3.2 | Apply Principles | 8.1 | Generate Ideas |
| 4.0 | Earth and Space Science | 8.2 | Gather Information |
| 4.1 | Fundamental Concepts and
Principles of Earth and
Space Science | 8.3 | Organize Information |
| | | 8.4 | Analyze Information |
| | | 8.5 | Synthesize Elements |
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Number of questions: 40
Number of pages: 15
Approximate testing time: 40 minutes
CTBS and CAT are parallel tests

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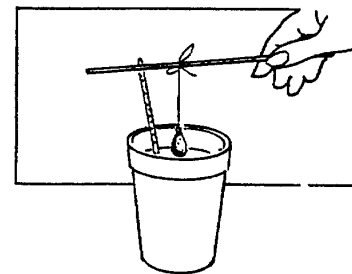
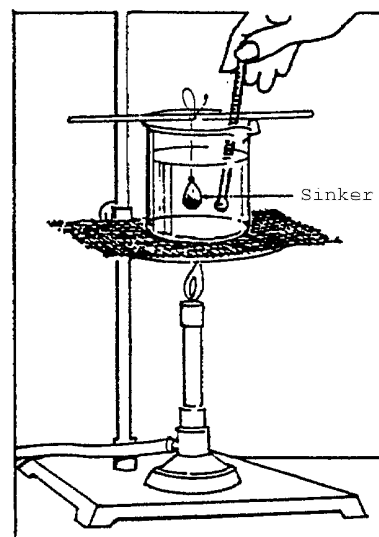
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Terra Nova PRACTICE TEST IN SCIENCE - GRADE 9

Directions: Ben's science class was experimenting to find out what would happen if a metal sinker at 100°C is placed in water at room temperature. Read the experiment procedures below to answer Number 1.

Procedure

1. Assemble the equipment using the figure on the right as a guide. Use a graduated cylinder to measure 100 mL of water. Add the water to a beaker. Place the sinker in the water. Heat the water and the sinker until the water boils. Read the thermometer and record the temperature. Do not let the thermometer touch the sides or bottom of the beaker.
2. While the sinker and water are heating, measure two 50 mL portions of tap water into the plastic foam cups. Label the cups 1 and 2. Using the other thermometers, observe the temperature of the water in the cups.
3. When the sinker and water reach 100°C , transfer the hot sinker to cup 1, holding the cool ends of the glass rod. Immediately record the temperature. Continue recording the temperature every 15 seconds until the water reaches a maximum and then starts to drop.
4. Graph the data that you collect on a grid.



1. Which of these statements would be the most appropriate hypothesis for this experiment?
 - A. Styrofoam cups hold heat for a longer period of time than plastic cups.
 - B. A rise in the water temperature and a lowering of the sinker's temperature will occur when the hot sinker is placed in the cup of water.
 - C. The weight of the sinker would drastically affect the temperature of the water in both cups.
 - D. The level of water in the cups would decrease when the hot sinker is added to the cup of water.