

*SKILLS LIST and SAMPLE ITEMS FOR*

**PRACTICE TEST, SCIENCE, GRADE 10**

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

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*Skills*

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|-----|--|-----|--|
| 1.0 | Fundamental Concepts   | 5.0 | Science and Technology                                     |
| 1.1 | Understanding of the<br>Fundamental Concepts of<br>Science Inquiry   | 5.1 | Understanding of How<br>Technology and Science<br>Interact |
| 2.0 | Physical Science   | 6.0 | Personal and Social Perspec-<br>tives in Science           |
| 2.1 | Fundamental Concepts and<br>Principles of Physical<br>Science        | 6.1 | Personal and Social Issues                                 |
| 2.2 | Application  | 7.0 | History and Nature of Science                              |
| 3.0 | Life Science   | 7.1 | Science as a Human Endeavor                                |
| 3.1 | Fundamental Concepts and<br>Principles                               | 8.0 | Thinking Skills  |
| 3.2 | Application of Principles  | 8.1 | Generate Ideas   |
| 4.0 | Earth and Space Science  | 8.2 | Gather Information   |
| 4.1 | Fundamental Concepts and<br>Principles of Earth and<br>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: 14

Approximate testing time: 40 minutes

CTBS and CAT are parallel tests

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(over)

# TERRA NOVA PRACTICE TEST IN SCIENCE - GRADE 10

*Directions: The illustrations below show the effect of ultraviolet light on the growth and reproduction of a bacteria. The black dots represent bacteria. Study the pictures to answer questions 1 through 3.*

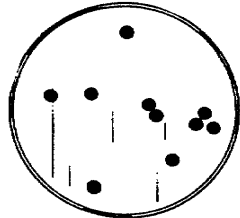


Figure A  
Control - no radiation

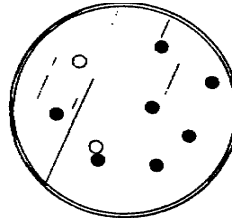


Figure B  
Radiation - 15 second exposure

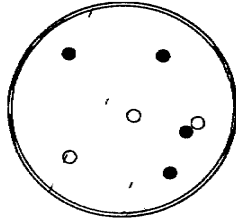


Figure C  
Radiation - 30 second exposure

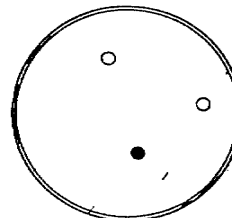


Figure D  
Radiation - 2 minute exposure

1. Which of the following conclusions can be drawn from the information given in the pictures?
  - A. Longer exposure to radiation does not necessarily produce only colorless colonies.
  - B. 15 second exposure to ultraviolet light will change the color of all the bacteria in a colony.
  - C. Exposure to ultraviolet light has no affect on bacterial colonies.
  - D. Bacterial colonies produce faster with exposure to ultraviolet light.

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2. What was the purpose of the control dish in this experiment?
  - A. The control dish showed the effect of ultraviolet radiation on bacterial colonies after an extended period of time.
  - B. The control dish showed the normal appearance of bacteria that had not been exposed to ultraviolet light.
  - C. The control dish showed the effect of ultraviolet light on bacterial colonies after a 10 second exposure.
  - D. The control dish served no purpose to this experiment.

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