

SKILLS LIST and SAMPLE ITEMS

FOR

PRACTICE TEST FOR SCIENCE, GRADE 10

(Test items developed for skills measured in ALABAMA*)

Skills

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|---|--|
| 1.0 Nature of Science | 5.0 Cells |
| 1.1 Analyze Methods of Science | 5.1 Cell Structures, Functions, Organization |
| 2.0 Matter | 5.2 Mitosis/Meiosis |
| 2.1 Trace Matter and Energy Transfer | 6.0 Ecology |
| 2.2 Relate Particle Motion to Matter States | 6.1 Components of Ecosystem |
| 2.3 Periodic Table | 7.0 Energy |
| 2.4 Physical/Chemical Changes | 7.1 Relate Conservation to Transformation |
| 3.0 Life Science | 7.2 Relate Waves to Energy Transfer |
| 3.1 Taxonomic Groups | 8.0 Force and Motion |
| 3.2 Plants | 8.1 Apply Newton's Laws of Motion |
| 3.3 Animals | 8.2 Relate Force to Pressure in Fluids |
| 4.0 Heredity | |
| 4.1 Genetic Characteristics | |
| 4.2 DNA | |
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Number of questions: 100

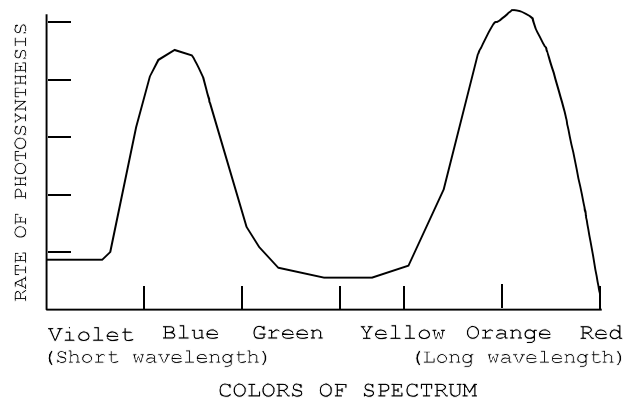
Number of pages: 25

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ALABAMA PRACTICE TEST IN SCIENCE - GRADE 10

1. Study the graph below.



The graph depicts the rate of photosynthesis at certain wavelengths of light. Which of the following is NOT an accurate interpretation of the graph?

- A. Photosynthesis is most rapid when energized by red-orange and blue violet light.
 - B. Photosynthesis does not occur in the presence of yellow light.
 - C. Photosynthesis is slow in the presence of green light.
 - D. An increase in the rate of photosynthesis is not directly related to a longer wavelength of light.
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2. A group of students participated in a paper airplane experiment. The purpose was to determine the design that causes a paper airplane to fly the greatest distance. Each student received the same weight and size of paper and was instructed to create an original design. Which of the following was the variable in the experiment?
- A. weight and size of paper
 - B. number of participating students
 - C. flying distances of the airplanes
 - D. designs of the airplanes
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3. Which of the following sequences of steps is the correct order for the scientific process?
- A. state problem, gather information, form hypothesis, perform experiment, record and analyze data, state conclusion
 - B. form hypothesis, gather information, state problem, perform experiment, record and analyze data, state conclusion
 - C. state problem, gather information, perform experiment, record and analyze data, form hypothesis, state conclusion
 - D. gather information, perform experiment, state problem, form hypothesis, record and analyze data, state conclusion
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