



TEXAS TECH UNIVERSITY

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SCI 6B
Science 6, Second Semester
(v.2.0)

To the Student:

After your registration is complete and your proctor has been approved, you may take the Credit by Examination for Science 6B.

ABOUT THE EXAM

The exam will consist of 41-42 true/false, multiple choice, completion, matching, and short answer questions. You will have three hours to complete the exam.

The examination is based on the Essential Knowledge and Skills for this subject. Since questions are not taken from any one source, you can prepare by reviewing any of the state-adopted textbooks that are used at your school. If you do not have a textbook or any other study material available locally, you may contact the Outreach & Distance Education Bookstore. The bookstore carries the textbook used with our Science 6B Distance Education course. The textbook is *Texas Science, Grade 6*, published by Glencoe/McGraw-Hill (2002).

There is also a sample examination included with this letter. The sample exam will give you a model of the types of questions that will be asked on your examination. It is not a duplicate of the actual examination. It is provided to illustrate the format of the exam, not to serve as a review sheet.

For more information about CBE policies, visit <http://www.ode.ttu.edu/takeacbe/> or see your course Policies & Forms Guide.

Good luck on your examination!

Overview

The Science 6B Credit by Examination reviews the following concepts found in the textbook, *Texas Science, Grade 6*, published by Glencoe/McGraw-Hill (2002).

1. TEKS 6.1: Scientific Processes
 - conduct scientific investigations
 - acquire data through discovery
2. TEKS 6.2: Scientific Processes
 - predict outcomes based on experimental data
 - communicate valid conclusions
 - construct graphs and charts
3. TEKS 6.3: Scientific Processes
 - design and construct scale models
 - draw inferences from promotional materials
 - form hypotheses based on data
 - connect contributions of scientists
 - evaluate the impact of research
4. TEKS 6.4: Scientific Processes
 - collect, analyze, and record information using tools
 - identify patterns in information
5. TEKS 6.5: Scientific Concepts
 - identify a system that results from two or more systems
 - identify how properties of a system are different from its parts
6. TEKS 6.6: Science Concepts
 - understand the relationship between force and motion
8. TEKS 6.8: Science Concepts
 - know that complex interactions occur between matter and energy
9. TEKS 6.9: Science Concepts
 - know that obtaining, transforming, and distributing energy affects the environment

9. TEKS 6.10: Science Concepts
 - use statistical representations to analyze data
10. TEKS 6.11: Science Concepts
 - know that traits of species can change through generations and that the instructions for traits are contained in the genetic material of the organisms
11. TEKS 6.12: Science Concepts
 - know that the responses of organisms are caused by internal or external stimuli
12. TEKS 6.13: Science Concepts
 - know the components of the solar system
10. TEKS 6.14: Science Concepts
 - know the structure and function of Earth systems

Sample Exam Questions

Here are some sample questions similar to those you will find on the CBE to help you review. Answer the questions on your own paper, then check your answers with the answer key provided.

1. What scientific advancement allowed cells to be discovered in the mid-1660s?
2. What is the organization of your own cells, starting with the smallest unit and going to the level of the organism?
3. Why are mitochondria important to life?
4. Examples of _____ pollution include runoff from roadways, agricultural areas, and industrial sites.
5. When large populations overpump aquifers, some wells can _____.
6. The ISS will draw on the resources of _____ nations.
7. _____ are dripstone formations that hang down from the ceilings of caves.
8. Asexual reproduction is common in
 - A. mammals.
 - B. frogs.
 - C. fertilization.
 - D. bacteria.
9. _____ can be beneficial, harmful, or neutral.
 - A. Meiosis
 - B. Mitosis
 - C. Regeneration
 - D. Mutations
10. True or false? Environmental factors in an ecosystem include abiotic factors.

Answers to Sample Exam Questions

1. C
2. A. solid, slowly, wood (examples may vary)
B. liquid, moderate, water
C. gas, very fast, air
3. A model gives a person an idea of what a real object is like. The model is a different size, but represents the object as closely as possible.
4. A
5. For an experiment to have reliable results, the experiment must be repeated to confirm like results.
6. D
7. D
8. D
9. A
10. D