



TEXAS TECH UNIVERSITY

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SCI 6A
Science 6, First 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 6A.

ABOUT THE EXAM

The exam will consist of 35-36 multiple choice, true/false, short answer, and discussion 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 6A 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 6A 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
7. TEKS 6.7: Science Concepts
 - know that substances have physical and chemical properties
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

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. Which of the following is NOT an example of a scientific hypothesis?
 - A. Earthquakes happen because of stresses along continental plates.
 - B. Some animals can detect ultrasound frequencies caused by earthquakes.
 - C. Paintings are prettier than sculptures.
 - D. Lava takes different forms depending on how it cools.

2. Fill in the boxes in the chart. Name the three states of matter, describe how the atoms move in each state, and give an example of each.

States of Matter

Type	How the atoms move	Example
A.		
B.		
C.		

3. Describe how a model is like the real object and the limitations of a model.
4. Which is used to organize data?
 - A. table
 - B. rate
 - C. precision
 - D. meterstick

5. Why is it a good idea to repeat an experiment a few times and compare results?
Explain.
6. Which layer of Earth is thought to be solid and composed mostly of iron?
 - A. crust
 - B. mantle
 - C. outer core
 - D. inner core
7. Which of the following does NOT require a generator to generate electricity?
 - A. solar
 - B. wind
 - C. hydroelectric
 - D. nuclear
8. What is the SI unit of mass?
 - A. kilometer
 - B. meter
 - C. liter
 - D. kilogram
9. Solar energy, wind, and geothermal energy are _____ resources.
 - A. renewable
 - B. inexpensive
 - C. nonrenewable
 - D. alternative
10. Which of the following is an example of chemical weathering?
 - A. Plant roots grow in cracks in rock and break the rock apart.
 - B. Freezing and thawing of water widens cracks in rocks.
 - C. Wind blows sand into rock, scratching the rock.
 - D. Oxygen causes iron-bearing minerals in rock to break down.

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