TEXAS TECH UNIVERSITY
College *of* Outreach
& Distance Education
Box 42191, Lubbock, TX 79409
(806) 742-7200
FAX (806) 742-7222
www.ode.ttu.edu

To the Student and Parent(s):

After your registration is complete and your proctor has been approved, you may take the Credit by Examination to assess your mastery of the material included in the 2nd-grade science curriculum.

WHAT TO BRING

- several sharpened No. 2 pencils

ABOUT THE EXAM

The examination for 2nd grade Science consists of 48 questions and is based on the Texas Essential Knowledge and Skills (TEKS) for this subject. The full list of TEKS is included at the end of this document (it is also available online at the Texas Education Agency website, http://www.tea.state.tx.us/). The TEKS outline specific topics covered in the exam, as well as more general areas of knowledge and levels of critical thinking. Use the TEKS to focus your study in preparation for the exam. TEKS covered in this semester are indicated by a checkmark; the exam will focus on the checkmarked TEKS, but may touch on any of the full list.

The examination will take place under supervision, and the recommended time limit is three hours. You may not use any notes or books. You will need to bring several pencils. A percentage score from the examination will be reported to the official at your school.

In preparation for the examination, review the TEKS for this subject. It is important to prepare adequately. Any textbook from the Texas Adoption list can be used for a review. All TEKS are assessed except 2a-b,d, 3a-c, 4a-b, 6a-d, and 7a-d. These TEKS will be evaluated by the student's most recent teacher (or a teacher who is able to observe the student) using a Teacher Evaluation Form that will be sent to the proctor.

It is important to prepare adequately. Any textbook from the Texas Adoption list can be used for a review; however, the following textbook was used to create this CBE.

Harcourt Science, Harcourt School Publishers, 2000. ISBN 0-15-317497-8

For more information about CBE policies, visit http://www.ode.ttu.edu/takeacbe/.

Good luck on your examination!

Texas Essential Knowledge and Skills
SCI 2 – Science, Grade 2

TTU: Grade 2 - Science CBE	
TEKS: §112.4. Science, Elementary	
TEKS Covered	**TEKS Requirement (Grade 2)**
	§112.4. Science, Grade 2.
	(a) **Introduction.**
	(1) In Grade 2, the study of science includes planning and conducting simple classroom and field investigations to help students develop the skills of making measurements using standard and non-standard units, using common tools such as rulers and clocks to collect information, classifying and sequencing objects and events, and identifying patterns. Students also use computers and information technology tools to support their investigations.
	(2) As students learn science skills, they identify components and processes of the natural world including the water cycle and the use of resources. They observe melting and evaporation, weathering, and the pushing and pulling of objects as examples of change. In addition, students distinguish between characteristics of living organisms and nonliving objects, compare lifelong needs of plants and animals, understand how living organisms depend on their environments, and identify functions of parts of plants and animals.
	(3) Science is a way of learning about the natural world. Students should know how science has built a vast body of changing and increasing knowledge described by physical, mathematical, and conceptual models, and also should know that science may not answer all questions.
	(4) A system is a collection of cycles, structures, and processes that interact. Students should understand a whole in terms of its components and how these components relate to each other and to the whole. All systems have basic properties that can be described in terms of space, time, energy, and matter. Change and constancy occur in systems and can be observed and measured as patterns. These patterns help to predict what will happen next and can change over time.
	(5) Investigations are used to learn about the natural world. Students should understand that certain types of questions can be answered by investigations, and that methods, models, and conclusions built from these investigations change as new observations are made. Models of objects and events are tools for understanding the natural world and can show how systems work. They have limitations and based on new discoveries are constantly being modified to more closely reflect the natural world.
	(b) Knowledge and skills.
	(1) Scientific processes. The student conducts classroom and field investigations following home and school safety procedures. The student is expected to:
✓	(A) demonstrate safe practices during classroom and field investigations; and
✓	(B) learn how to use and conserve resources and dispose of materials.
	(2) Scientific processes. The student develops abilities necessary to do scientific inquiry in the field and the classroom. The student is expected to:
✓	(A) ask questions about organisms, objects, and events;
✓	(B) plan and conduct simple descriptive investigations;
✓	(C) compare results of investigations with what students and scientists know about the world;
✓	(D) gather information using simple equipment and tools to extend the senses;
✓	(E) construct reasonable explanations and draw conclusions using information and prior knowledge; and
✓	(F) communicate explanations about investigations.

	(3) Scientific processes. The student knows that information and critical thinking are used in making decisions. The student is expected to:
✓	(A) make decisions using information;
✓	(B) discuss and justify the merits of decisions; and
✓	(C) explain a problem in his/her own words and identify a task and solution related to the problem.
	(4) Scientific processes. The student uses age-appropriate tools and models to verify that organisms and objects and parts of organisms and objects can be observed, described, and measured. The student is expected to:
✓	(A) collect information using tools including rulers, meter sticks, measuring cups, clocks, hand lenses, computers, thermometers, and balances; and
✓	(B) measure and compare organisms and objects and parts of organisms and objects, using standard and non-standard units.
	(5) Science concepts. The student knows that organisms, objects, and events have properties and patterns. The student is expected to:
✓	(A) classify and sequence organisms, objects, and events based on properties and patterns; and
✓	(B) identify, predict, replicate, and create patterns including those seen in charts, graphs, and numbers.
	(6) Science concepts. The student knows that systems have parts and are composed of organisms and objects. The student is expected to:
✓	(A) manipulate, predict, and identify parts that, when separated from the whole, may result in the part or the whole not working, such as flashlights without batteries and plants without leaves;
✓	(B) manipulate, predict, and identify parts that, when put together, can do things they cannot do by themselves, such as a guitar and guitar strings;
✓	(C) observe and record the functions of plant parts; and
✓	(D) observe and record the functions of animal parts.
	(7) Science concepts. The student knows that many types of change occur. The student is expected to:
✓	(A) observe, measure, record, analyze, predict, and illustrate changes in size, mass, temperature, color, position, quantity, sound, and movement;
✓	(B) identify, predict, and test uses of heat to cause change such as melting and evaporation;
✓	(C) demonstrate a change in the motion of an object by giving the object a push or a pull; and
✓	(D) observe, measure, and record changes in weather, the night sky, and seasons.
	(8) Science concepts. The student distinguishes between living organisms and nonliving objects. The student is expected to:
✓	(A) identify characteristics of living organisms; and
✓	(B) identify characteristics of nonliving objects.
	(9) Science concepts. The student knows that living organisms have basic needs. The student is expected to:
✓	(A) identify the external characteristics of different kinds of plants and animals that allow their needs to be met; and
✓	(B) compare and give examples of the ways living organisms depend on each other and on their environments.
	(10) Science concepts. The student knows that the natural world includes rocks, soil, water, and gases of the atmosphere. The student is expected to:
✓	(A) describe and illustrate the water cycle; and

✓	(B) identify uses of natural resources.
	Source: The provisions of this §112.4 adopted to be effective September 1, 1998, 22 TexReg 7647.