

# Introduction

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## Curriculum Overview

Congratulations on choosing an outstanding second-grade curriculum! Using this curriculum, you and your student will experience the joy of learning about living things, rocks, fossils, gasses, light, and many other features of our Earth. One of the true advantages in selecting Texas Tech University K-12 is that you will have an all-encompassing curriculum similar to what you would find in some of the most outstanding teachers' classrooms in our nation.

This course is completed online in Blackboard using the PDF **Unit Lessons** and **Worksheets** documents.

Unit assessments in this course consist of two parts, the **Unit Test** and the **Unit Project**. For each Unit Test, the student will download and complete PDF test pages, then scan or take a digital photograph of the completed pages showing his or her work. Completed Unit Projects must also be scanned or photographed. Combine the images for each assignment into a single PDF (see **Requirements for Creating PDFs** on the course home page) and upload the file for grading as instructed in the assignment.

## 2nd Grade Science

The 2nd grade science program has been developed to help students learn to explore, ask questions, gather information or data, and apply scientific principals to their environment. During this course, the student will develop a science journal and will use the scientific skills of observation, comparing, sequencing, classifying, inferring, gathering data, making a plan or model, and drawing conclusions to learn about the world. The student will begin each unit by writing definitions and doing an investigation or experiment. Next, the student will complete the lessons and return to his or her science journal to evaluate and draw conclusions about the unit.

The first semester will include living things growing and changing, homes for living things, and exploring the earth's surface. At the end of each unit, the student will select a project, make a plan, and complete it. A novel study has also been included.

## Course Objectives

This curriculum meets all the [Texas Essential Knowledge and Skills](#) (TEKS) objectives. At the end of the first semester, the student should be able to:

- identify living and nonliving things;
- identify the parts of a plant;
- investigate the needs of a plant to make it grow;

- sequence the growth of a plant;
- gather different kinds of plants and observe them;
- complete the novel study of *Franklin Plants a Tree* ;
- observe and sort animals into mammals, reptiles, birds, amphibians, and insects;
- describe the life cycle of a mammal;
- make a book about the way a child grows;
- match body systems to the purpose of each (skeleton, muscles, heart, lungs, digestive tract);
- identify the things that form a habitat;
- identify the characteristics of the rain forest, desert, woodland forest, and the Arctic;
- complete the novel study of *The Umbrella* ;
- understand how animals help plants and plants help animals;
- discuss the changes that will happen if a drought or a flood occurs;
- understand the impact that pollution, littering, and waste can have on the natural resources of the earth;
- gather soil samples and observe differences;
- study rocks and minerals;
- observe and test different types of rocks;
- describe the natural resources that are found on Earth;
- discuss how conservation can play a vital part in caring for the planet;
- create a fossil out of clay and describe how scientists could have made conclusions about the past from their observations;
- complete the novel study of *The Magic Schoolbus in Dinosaur Times*.

## Handwriting

Handwriting is taught in the Language Arts course; however, good handwriting skills are necessary in all subjects including science. In Kindergarten, Grade 1, and Grade 2, manuscript is the preferred technique. When teaching your child handwriting, please consider the appropriate letter and number formation and spacing. Please refer to the manuscript chart included on the next page to assist you in appropriately teaching your child handwriting. Please reinforce the importance of good handwriting in all subject areas.

# Traditional Manuscript

Aa Bb Cc Dd Ee Ff Gg

Hh Ii Jj Kk Ll Mm Nn

Oo Pp Qq Rr Ss Tt Uu

Vv Ww Xx Yy Zz

0 1 2 3 4 5 6 7 8 9



# Books and Materials for SCI 2 This Semester

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## Textbooks

- Jones, Robert M., et al., *Harcourt Science* (Harcourt School Publishers, 2000), ISBN 0153112050
- *Harcourt Science Workbook* (Harcourt School Publishers, 2000), ISBN 0153131799

## Books for Novel Study

- Bourgeois, *Franklin Plants a Tree* (Scholastic, 2001), ISBN 0439203821
- Brett, *The Umbrella* (Penguin Putnam Books for Young Readers, 2004), ISBN #0399242155
- Cole, *The Magic School Bus in the Time of the Dinosaurs* (Scholastic, 1995), ISBN 0590446894

## Optional Books

### Unit 1—

- *Nature in Your Backyard* by Susan Lang
- *The Lotus Seed* by Sherry Garland
- *How Does a Plant Grow?* by Lawrence F Lowery
- *From Seed to Plant* by Gail Gibbons
- *Crinkleroot's Guide to Knowing the Trees* by Jim Arnosky
- *The Life and Times of the Apple* by Charles Micucci
- *Do You Know the Difference?* by Andrea Bischhoff-Miersch
- *Who is the Beast?* by Keith Baker
- *Amazing Animal Babies* by Christopher Maynard
- *Crinkleroot's Guide to Knowing the Birds* by Jim Arnosky
- *Cousin Ruth's Tooth* by Amy MacDonald
- *Little Bear Brushes His Teeth* by Jutta Langreuter
- *Bones (Step-Into-Reading, Step 2)* by Stephen Krensky
- *Bones: Our Skeletal System* by Seymour Simon
- *Blood and Guts: A Working Guide to Your Own Insides* by Linda Allison
- *Half a Moon and One Whole Star* by Crescent Dragonwagon
- *Good Enough to Eat: A Kid's Guide to Food and Nutrition* by Lizzy Rockwell
- *Eating* by Anna Sandeman

## Unit 2—

- *Nearer Nature* by Jim Arnosky
- *The Gift of the Tree* by Alvin Tresselt
- *Raven and River* by Nancy White Carlstrom
- *Life in the Rainforest: Plants, Animals, and People* by Melvin Berger
- *Around the Pond: Who's Been Here?* by Lindsay Barrett George
- *Animals of the Oceans* by Stephen Savage
- *Who Eats What? Food Chains and Food Webs (Let's-Read-and-Find-Out Science, Stage 2)* by Patricia Lauber
- *Crinkleroot's Guide to Knowing Animal Habitats* by Jim Arnosky
- *The Desert Is Theirs* by Byrd Baylor
- *The Summer Sands* by Sherry Garland
- *Come a Tide* by George Ella Lyon
- *Just a Dream* by Chris Van Allsburg
- *The Great Trash Bash* by Loreen Leedy
- *Recycle: A Handbook for Kids* by Gail Gibbons
- *Galimoto* by Karen Lynn Williams

## Unit 3—

- *Jack's Garden* by Henry Cole
- *Rocks and Soil (Our World Series)* by Neil Morris
- *I Am Water* by Jean Marzollo
- *Water, Water Everywhere* by Mark J. Rauzon
- *Super-Science Readers—Follow a Raindrop: The Water Cycle* by Elsie Ward
- *A Tree is Growing* by Arthur Dorros
- *Timber!* by William Jaspersohn
- *Discovering Dinosaurs With a Fossil Hunter (I Like Science)* by Judith Williams
- *I Met a Dinosaur* by Jan Wahl
- *Digging Up Dinosaurs* by Alike
- *If You Are a Hunter of Fossils* by Byrd Baylor
- *A Dinosaur Named After Me* by Bernard Most
- *The Littlest Dinosaurs* by Bernard Most

**Materials:**

- animal books (non-fiction)
- animal pictures
- balloon
- bean seeds, 1 package
- berries
- birdseed
- blender
- books about dinosaurs
- bottle cap
- bowls, 2
- brown sugar
- bucket
- cheese cloth
- chenille sticks
- clay, modeling
- coffee filters
- coloring books (optional)
- containers or bags, plastic, 3
- containers, clear, 2
- cotton balls
- cotton t-shirt or cloth, white
- cracker
- crayons
- dirt
- dishwashing soap
- encyclopedia
- fishing line
- fishing weight
- food coloring: red, green
- funnels
- glue
- gravel

- hand lens
- ice cube tray
- index cards, 3" × 5", 10
- jar, glass, 1-gallon
- labels or paper and tape
- lettuce leaves, 2
- magazines with pictures of food
- markers
- meal
- mealworms
- measuring cup
- milk carton
- mirror
- nature materials from outdoors such as grass clippings, leaves, sticks, string, pine needles, dead weeds, dirt, fur from the student's dog or cat, etc.
- old magazines
- old newspapers
- paint (optional)
- paint brushes
- paper cup
- paper dots
- paper plates, 3
- paper towel tubes, 2
- paper towels
- paper: construction, drawing, plain white, scrap, writing
- pencils
- pictures of dinosaurs, plants, and other animals that lived in dinosaur times
- plant parts
- plants, 2
- plastic animals
- plastic bags, resealable, 5 (2 quart-sized)
- plastic cups, clear, 6
- play dough



- poster boards, 2
- reference books, magazines, and/or Internet access
- rubber bands, 3
- salt
- sand
- scissors
- screen, window
- seeds
- shoe box or cereal box, empty
- shovel
- small objects
- soil samples, 3 (topsoil, clay soil, and sand)
- spiral notebook for Science Journal
- sponge
- spoon
- spray bottle
- stapler
- string
- syrup
- tape
- tissue paper, blue
- toothpicks
- used things (bottles, aluminum cans, cardboard, etc.)
- water
- wire screen or net squares about 6" square, 6 (wire screen can be found at a hardware store; net can be found at a fabric store)



# Grading Procedures and Unit Assignment Checklists

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Grades are calculated for Unit 1, Unit 2, and Unit 3. The semester grade is an average of the three unit grades. The unit grades will include a test and a project for each unit. The Unit 1 and Unit 2 Tests and Projects are located in their respective Unit folders in this online course; the Unit 3 Test and Project are the Final Exam folder.

The Unit Tests and Unit Projects will be submitted **separately** to Texas Tech University K-12 to be graded. After the student has finished the Unit Test, scan or take a digital photograph of the assigned pages, showing his or her work. Combine the images into a **single PDF** (see “Requirements for Creating PDFs” on the course home page).

Scan or photograph each Unit Project. (For audio or video projects, see “Audio Help” and “Video Help” on the course home page for information about saving these formats for upload.) Combine multiple images into a **single PDF**.

When you save your documents, use the naming convention given for each Unit Test or Unit Project as the name of your file. Upload the file according to the instructions given in the assignment.

## Schedule for tests and projects

### Unit 1:

- Day 24: Review for the Unit 1 Test;  
Complete the Unit 1 Project
- Day 25: Administer the Unit 1 Test;  
Submit the Unit 1 Project

### Unit 2:

- Day 49: Review for the Unit 2 Test;  
Complete the Unit 2 Project
- Day 50: Administer the Unit 2 Test;  
Submit the Unit 2 Project

### Unit 3:

- Day 74: Review for the Unit 3 Test;  
Complete the Unit 3 Project

- Day 75: Administer the Unit 3 Test;  
Submit the Unit 3 Project

## Unit Projects

Your student must complete a project for each unit. The student has the option of creating his or her own project or choosing one of those listed in **Suggested Projects** in this course. If the student chooses a topic, he or she must choose a topic based on the information presented in the unit, and it must be approved by Texas Tech University K-12. The student must also complete a **Unit Topic Planner**. Please submit these to Texas Tech University K-12 no later than one week after your student begins the unit.

The student's teacher will send feedback regarding whether or not your project has been approved. You will find it in the **My Grades** area of this course.