



Science, Grade 4 (SCI) 4B Syllabus

Course Name

SCI 4B

Science, Grade 4 – Semester B

Course Information

SCI 4B is the second semester of this two-semester course.

Welcome to SCI 4B! In this second semester, students will be exploring Earth, space, and life science concepts. The topics included in this semester are:

- scientific problem-solving;
- the water cycle;
- weather;
- shadows and seasons;
- patterns of the moon;
- producers and consumers;
- impacts on ecosystems;
- lifecycles;
- inherited traits and learned behaviors; and
- plant and animal structures and functions.

Course Delivery Method

Online

Contacting Your Instructor

You may contact your instructor through the Blackboard messaging system. Technical support is available 24/7 at www.k12.ttu.edu.

Course Objectives

After completing this course, you should be able to:

1. identify the Sun as the major source of energy for the water cycle;
2. explain that water continuously moves above and on the Earth's surface through the water cycle;
3. make predictions about future weather by using tools to measure and record weather conditions and recognizing patterns in the data;
4. describe patterns of change in shadows due to the position of the Sun in the sky;
5. describe patterns of change in seasons because of the tilted Earth and its revolution around the Sun;
6. explain patterns of change in the appearance of the Moon due to the relative positions of the Sun, Earth, and Moon when a portion of the Moon reflects the Sun's light;
7. use observations and data to predict patterns of change among the Sun, Earth, and Moon system;
8. recognize that energy originating from the Sun flows through food webs as organisms are consumed;
9. describe how producers make their own food from resources in their environment;
10. recognize that consumers are dependent on other organisms for food;
11. understand the relationships in food webs, which helps us predict the effects on a food web due to changes in the ecosystem;
12. explain that organisms undergo a series of predictable changes in their life, which repeats as a cycle with their offspring;
13. recognize that some characteristics of offspring are inherited from their parents, while learned behaviors are acquired by an organism's interaction with its environment and/or parent; and
14. identify structures and functions of organisms that enable them to survive in their environment.

SCI 4 addresses the required Texas Essential Knowledge and Skills (TEKS). These can be found at the [Texas Education Agency](http://www.tea.state.tx.us) website.

Textbook and Materials

Textbook(s)

You are required to purchase the digital textbook in order to access all lesson materials. Purchase of the print textbook is strongly suggested, as well.

- Digital: *Science Fusion Texas, Grade 4*. (2015). Orlando, FL: Houghton Mifflin Harcourt Publishers. ISBN: 0-544-06777-0, 978-0-544-06777-6

- Print: *Science Fusion Texas, Grade 4*. (2015). Orlando, FL: Houghton Mifflin Harcourt Publishers. ISBN: 0-544-02550-4, 978-0-544-02550-9

This digital textbook can only be purchased through the TTU K-12 partner bookstore. You can find the link to the bookstore on the [TTU K-12 website](#). Once you have purchased the digital textbook, you will receive a username and password via email. You will log in at the [ThinkCentral website](#) to access your textbook.

In addition to your username and password, you will need the following information to login:

- State: Texas
- District: College
- School: Texas Tech University, Lubbock 79409

Please note that you will not be able to access any of the digital resources if you purchase only the printed textbook.

Materials

Required materials:

- A scanner and software to create PDFs (see **Requirements for Creating PDFs** in the Syllabus section of your course for information on PDF-creation options).
- Other course materials needed for 4th Grade Science are listed in each experiment. They are typical items that can be found in most households.

PDF Assignments

You will submit all lessons for this course electronically. Your work for each lesson will need to be saved as a PDF in order to submit the lesson for grading. See **Requirements for Creating PDFs** in the Syllabus section of your course for information on PDF-creation options. The options include the choice of scanning your notebook pages or taking pictures of each page, so you can decide what works best for you.

Be sure your pencil marks, handwriting, and answers are clear for your instructor.

Technical Requirements

- Internet access – preferably high speed (for accessing Blackboard)
- Email
- Word processing software such as Microsoft Word
- Adobe Reader (download from [Adobe.com](#))
- Audio and video capabilities (for watching/listening to course content)
- PDF app (to scan hand-written documentation for graded assignments)

Technical Skill Requirements

Be comfortable with the following:

- using a word processor
- Internet search engines and browsers
- creating PDFs (see **Requirements for Creating PDFs** in the Syllabus section of your course)

Course Organization

This course consists of nine lessons and a final examination. Each lesson contains the following:

- Introduction and Instructions
- Learning Objectives and Curriculum Standards
- Learning Activities
- Assignments

Each lesson includes several activities that present content knowledge. Each lesson also includes multiple graded assignments to ensure that you learn the content that has been presented in the activities. Some of the assignments are automatically-graded quizzes, and some are written assignments or activities that your instructor will grade. Be sure you read all instructions carefully and ask your instructor for help if something is not clear.

Course Outline

Please note that some assignments will be hidden from you when you start the course. As you move through the lessons and complete assignments, more will unlock for you.

Lesson	Topic	Approximate Time for Completion
Lesson 1	The Water Cycle	One week
Lesson 2	Weather	One week
Lesson 3	Shadows and Seasons	Two weeks
Lesson 4	Moon Phases	Two weeks
Lesson 5	Producers and Consumers	Two weeks
Lesson 6	Impacts on an Ecosystem	Two weeks
Lesson 7	Lifecycles	Two weeks
Lesson 8	Inherited Traits and Learned Behaviors	Two weeks

Lesson	Topic	Approximate Time for Completion
Lesson 9	Plant and Animal Structures and Functions	Two weeks
Final Exam		

Assignment Schedule

Each of the following must be completed to complete the course. Items with an asterisk (*) indicate that these are summative assessments for the course.

Lesson	Weeks	Assignments
1	1	Checkpoint 1 (Non-graded) Lesson 1 Topic 1: Investigating Water Assignment Lesson 1 Topic 1: Notebook Assignment Lesson 1 Topic 2: Investigating Water Assignment Lesson 1 Topic 2: Notebook Assignment Lesson 1 Topic 3: Water Cycle Assignment Lesson 1 Topic 4: Model of the Water Cycle Assignment Lesson 1 Topic 4: Water Cycle Assessment
2	2	Lesson 2 Topic 1: Notebook Assignment Lesson 2 Topic 1: A Year of Weather Assignment Lesson 2 Topic 2: Weather Tools Assignment Lesson 2 Topic 3: Notebook Assignment Lesson 2 Topic 3: Weather Fronts Venn Diagram Lesson 2 Topic 4: Weather Maps Assignment Lesson 2 Topic 4: Weather Assessment
3	3-4	Lesson 3 Topic 1: Anticipation Guide Before Reading Assignment Lesson 3 Topic 2: Investigation Questions Assignment Lesson 3 Topic 3: Cause & Effect Assignment Lesson 3 Topic 4: Anticipation Guide Assignment Lesson 3 Topic 4: Shadows and Seasons Assessment Checkpoint 2 (Non-graded)
4	5-6	Lesson 4 Topic 1: Phases of the Moon Assignment Lesson 4 Topic 2: Moons Phases Assignment Lesson 4 Topic 3: Notebook Assignment Lesson 4 Topic 3: Moon Phases Box It Questions Assignment Lesson 4 Topic 4: Anchor Chart Lesson 4 Topic 4: Moon Phase Assessment *Science 4B Midterm

Lesson	Weeks	Assignments
5	7-8	Lesson 5 Topic 1: Anticipation Guide Before Reading Assignment Lesson 5 Topic 2: Fact or Fib Assignment Lesson 5 Topic 3: Notebook Assignment Lesson 5 Topic 3: Categorize It & Food Chain Example Assignment Lesson 5 Topic 4: Food Web Lesson 5 Topic 4: Producers and Consumers Assessment
6	9-10	Lesson 6 Topic 1: Notebook Assignment Lesson 6 Topic 1: Humans and the Ecosystem Assignment Lesson 6 Topic 2: Changes in an Ecosystem Assignment Part 1 Lesson 6 Topic 3: Changes in an Ecosystem Assignment Part 2 Lesson 6 Topic 4: Changes in an Ecosystem Assignment Part 3 Lesson 6 Topic 4: Notebook Assignment Lesson 6 Topic 4: Changes in Ecosystems Assessment
7	11-12	Lesson 7 Topic 1: Life Cycles Assignment Lesson 7 Topic 2: Notebook Assignment Lesson 7 Topic 3: Notebook Assignment Lesson 7 Topic 3: Plant Life Cycles Lesson 7 Topic 4: Notebook Assignment Lesson 7 Topic 4: Insect Life Cycles Lesson 7 Topic 4: Life Cycles Assessment
8	13-14	Lesson 8 Topic 1: Anticipation Guide Lesson 8 Topic 2: Notebook Assignment Lesson 8 Topic 3: Notebook Assignment Lesson 8 Topic 3: Traits Assignment Lesson 8 Topic 4: Animal Behaviorist Assignment Lesson 8 Topic 4: Margaret Morse Nice Assignment Lesson 8 Topic 4: Traits Assessment
9	15-16	Lesson 9 Topic 1: Concept Maps Lesson 9 Topic 1: Categorizing Structures and Functions Lesson 9 Topic 2: Structures and Functions in Environments Lesson 9 Topic 3: Structure and Function Cards Lesson 9 Topic 4: Research Poster Lesson 9 Topic 4: Structures and Functions Assessment Checkpoint 3 (Non-graded)
		Final Exam

continued →

Course Credit

The course grade will be calculated as follows:

- 50% coursework average;
- 50% summative assessment average, including the final exam;
- A passing course grade is 70 or higher.

Students must attempt all assignments in the course. The final exam will not be available until all assignments have been accepted and graded by the teacher.

Students who score below 70% on the final exam will be eligible for one re-exam opportunity.

Coursework

The graded assignments within each lesson are formative in nature. This means that they are designed to assist you in applying and demonstrating the lesson concepts, as well as identifying areas in which you need additional review. You may use all the lesson's learning activities to assist you as you complete the graded assignments.

Summative Assessments

Summative assessments are those that allow you to demonstrate mastery of the course objectives. For summative assessments, you will NOT be allowed to use the learning materials. These are opportunities for you to show what you have learned by that point in the course. Summative assessments may be proctored using the online proctoring system Proctorio. Information about Proctorio is provided in **Remote Proctoring** in the Syllabus section of your course. The summative assessments for this course are as follows:

- Summative Midterm Exam (**20% of Course Grade**)
- Summative Final Exam (**30% of Course Grade**)

Course Completion

- Students may not complete the course in less than 30 days.
- All courses expire six months after the enrollment date.

Academic Integrity

It is the aim of the faculty of Texas Tech University to foster a spirit of complete honesty and high standard of integrity. The attempt of students to present as their own any work not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offenders liable to serious consequences, possibly suspension.

“Scholastic dishonesty” includes, but is not limited to, cheating, plagiarism, collusion, falsifying academic records, misrepresenting facts, and any act designed to give unfair academic advantage to the student (such as, but not limited to, submission of essentially the same written assignment for two courses without the prior permission of the instructor) or the attempt to commit such an act.

Student Expectations

You will be expected to log into the Blackboard course regularly to be aware of possible announcements/reminders and to pace your progress in the course.

Students are expected to maintain an online environment conducive to learning, which includes “netiquette” (Internet etiquette). Please review the basic rules for [Online Discussion Netiquette](#). Ensure that your email messages, discussion board postings, and other electronic communications are thoughtful and respectful. Diverse opinions are welcome in this course, and you are expected to demonstrate an open mind and courtesy when responding to the thoughts and ideas of others.

The following are prohibited:

- making offensive remarks in email or the discussion board;
- using inappropriate language or discussing inappropriate topics online;
- spamming;
- hacking;
- using TTU or Blackboard email or discussion boards for commercial purposes;
- using all caps (considered shouting in online communications); and
- cyber-bullying or online harassment of any type.

Inappropriate behavior shall result in consequences ranging from a request to correct the problem, to removal from the course or even the university, depending on the severity of the behavior. Disciplinary actions will be taken according to the [TTU Code of Student Conduct](#).

Communication

- You can expect a reply from your instructor within 2 business days.
- Use the Blackboard Course Messages tool for sending messages to your instructor.

Submitting Assignments

You will submit all assignments through the Blackboard Assignment Tool, rather than by mail or email.

Technical Difficulties

Getting Help

For student assistance with Blackboard, visit [TTU K-12 Support](#).

Computer Problems

A working computer is necessary for online coursework. Computer problems will not be accepted as a valid reason for failure to complete course activities within the allotted time frame. Identify a second computer, before the course begins, that you can use if you experience computer problems.

Server Problems

When the Blackboard server needs to be taken down for maintenance, the Blackboard administrator will post an announcement in your course informing you of the time and date. If the server experiences unforeseen problems, your course instructor will notify you.

Lost or Corrupted Files

You must keep/save a copy of every project/assignment on an external disk or personal computer. In the event of any kind of technology failure (e.g., Blackboard server crash or virus infection, students' own computer problems, loss of files in cyberspace, etc.) or any disputes, the instructor may request or require you to resubmit the files. In some instances, the instructor may need to open another attempt within Blackboard, so communication with your instructor is critical in these circumstances.