



Science, Grade 8 (SCI) 8A Syllabus

Course Name

SCI 8A

Science, Grade 8 – Semester A

Course Information

SCI 8A is the first semester of this two-semester course.

The first semester of eighth grade science includes reading assignments, web-based activities, hands-on labs, and other resources to help you understand aspects of change over time. This course is designed to help you see the world in a way that helps you understand it; you are encouraged to find answers to your questions and develop a better understanding of your surroundings.

Course Delivery Method

Online

Contacting Your Instructor

You may contact your instructor through the Blackboard messaging system. Technical support is available 24/7 at [TTU K-12](#).

Course Objectives

After completing this course, you should be able to:

1. conduct investigations following safety procedures and environmentally appropriate and ethical practices;
2. use scientific inquiry methods, along with a variety of tools and safety equipment, to conduct investigations;
3. use critical thinking, scientific reasoning, and problem solving to make informed decisions;
4. describe the contributions of relevant scientists;

5. describe the structure and components of atoms;
6. interpret the arrangement of the Periodic Table;
7. recognize that matter has chemical and physical properties; and
8. describe the relationships between force, motion, and energy.

SCI 8 addresses the required Texas Essential Knowledge and Skills (TEKS). These can be found at the [Texas Education Agency](#) website.

Textbook and Materials

Textbook(s)

The required **digital** textbook for this course is:

- *Texas ScienceFusion, Grade 8*, Interactive Student Edition, 1-year subscription. (2015). Houghton Mifflin Harcourt. ISBN 978-0-544-06781-3

This digital textbook can only be purchased through the TTU K-12 partner bookstore, MBS (see the [TTU K-12 website](#) for a link to MBS). Once you make your purchase, you will receive your credentials to the online textbook and resources via email, and it may take 1-2 business days.

The **print** textbook is optional:

- *Texas ScienceFusion, Grade 8*. (2015). Houghton Mifflin Harcourt. ISBN 978-0-544-02554-7

Materials

- small box or bag
- 8 mystery objects
- magnifying glass
- ruler
- calculator
- meter stick
- dried peas
- yarn, 70 m
- paper cup
- baking soda
- vinegar
- 1-3 compasses
- stopwatch
- roll of masking tape
- rolling chair or stool

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 (free options available)
- Digital camera or camera phone

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 is organized into four units with sixteen lessons and a final examination. Each lesson contains the following:

- Introduction and Instructions
- Learning Objectives
- Lesson presentations
- End of lesson quizzes
- End of unit tests

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.

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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
Unit 1	The Nature of Science	Four weeks
Unit 2	Measurement and Data	Two weeks
Unit 3	Introduction to Chemistry	Five weeks
Unit 4	Forces and Motion	Four 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.

Unit	Weeks	Assignments
1	1-4	Checkpoint 1 (Non-graded) Unit 1 Discussion Lesson 1: Quick Lab – What’s in the Box Lesson 1: Assignment – Making Observations Lesson 1: Quiz Lesson 2: Virtual Lab – Scientific Knowledge Lesson 2: Quick Lab – Bird Feeder Science Lesson 2: Quiz Lesson 3: Safety Quiz Lesson 3: Student Safety Contract Lesson 3: Scientific Investigations Lesson 3: Quiz Lesson 4: Ways Science and Society Affect You Lesson 4: Quiz *Unit 1 Quiz
2	5-6	Unit 2 Discussion Lesson 5: Virtual Lab – Exploring Models Lesson 5: Quiz Lesson 6: Quiz *Unit 2: Quiz

Unit	Weeks	Assignments
3	7-11	Unit 3 Discussion Lesson 7: Assignment – Timeline Lesson 8: Quick Lab - A Model Atom Lesson 8: Quick Lab – Investigating the Size of Atomic Particles Lesson 8: Quiz Lesson 9: Virtual Lab – Periodic Table Lesson 9: Quick Lab – Predicting Properties Lesson 9: Quiz Lesson 10: Assignment – Making Observations Lesson 10: Quiz Lesson 11: Virtual Lab – Chemical Reactions Lesson 11: Assignment – Observing Chemical Reactions Lesson 11: Quiz *Unit 3 Quiz
4	12-15	Unit 4 Discussion Lesson 12: Virtual Lab – Speed and Velocity Lesson 12: Quick Lab – Distance and Speed Lesson 12: Quiz Lesson 13: Assignment – Draw It Out Lesson 13: Quiz Lessons 14-16: Quick Lab – Newton’s Law of Action-Reaction Lesson 14: Quiz Lesson 15: Quiz Lesson 16: Quiz *Unit 4: Quiz
		Final Exam

Course Credit

The course grade will be calculated as follows:

- 50% coursework average;
- 50% summative assessment average (for Units 1-4), 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 Assessments **(20% of Course Grade)**
 - Unit 1 Quiz
 - Unit 2 Quiz
 - Unit 3 Quiz
 - Unit 4 Quiz
- 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 K-12 Student Handbook.

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.