

Science, Grade 7 (SCI) 7A Syllabus

Course Name

SCI 7A

Science, Grade 7 - Semester A

Course Information

SCI 7A is the first semester of this two-semester course.

Welcome to Semester A of 7th grade science. This course spans a variety of scientific topics, including matter, chemistry, force, and waves. You will work through 5 units. There are tools and activities to help you along the way.

Course Delivery Method

Online

Contacting Your Instructor

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

Course Objectives

After completing this course, you should be able to:

- 1. use appropriate tools and units to take measurements;
- 2. use appropriate methods for collecting, recording, and organizing data;
- 3. analyze data to draw conclusions;
- 4. plan an investigation;
- 5. use the engineering process to create a product;
- 6. analyze investigations to make predictions and solve real-word problems;
- 7. explain different elements and compounds using appropriate vocabulary terms;
- 8. read chemical formulas;
- 9. create and use models of atoms and common compounds;

- 10. use a periodic table;
- 11. explain the properties of aqueous solutions using appropriate vocabulary terms;
- 12. explain the factors that increase the rate of dissolution for a solution;
- 13. make calculations for speed and velocity;
- 14. explain types of motion using appropriate vocabulary terms;
- 15. interpret distance-time graphs;
- 16. explain various forces using appropriate vocabulary terms;
- 17. explain Newton's first law of motion using appropriate vocabulary terms;
- 18. explain how energy transfers in collisions;
- 19. explain how thermal energy flows;
- 20. explain thermal energy using appropriate vocabulary terms;
- 21. describe how thermal energy works in everyday life; and
- 22. identify states of matter as well as the processes for changes in states of matter.

SCI 7 addresses the required Texas Essential Knowledge and Skills (TEKS). These can be found at the <u>Texas Education Agency</u> website.

Textbook and Materials

Textbook(s)

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

• Dispezio, et al. (2025). *HMH Into Science Texas: Grade 7*, TX student edition, 1 year. Houghton Mifflin Harcourt Publishers. ISBN: 978-0-358-90292-8

This digital textbook can only be purchased through the TTU K-12 partner bookstore. You can find the link to the bookstore on the <u>TTU K-12 website</u>. Once you have purchased the digital textbook, you will receive a username and password via email from MBS Direct after they have set up your account. This may take a few days.

If you would like a printed book, you can purchase the optional printed text:

• Dispezio, et al. (2025). *HMH Into Science Texas: Grade* 7, TX student edition (print). Houghton Mifflin Harcourt Publishers. ISBN: 978-0-358-57725-6.

Materials

You will need Course Lab Materials. Refer to the **Resources** section of the course for a full list by unit.

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)

Technical Skill Requirements

Be comfortable with the following:

- using a word processor
- Internet search engines and browsers

Course Organization

This course consists of five units and a final exam. Each unit contains the following:

- Introduction with objectives, lab materials, and vocabulary terms
- Learning activities (indicated by the lightbulb icon) reading, writing, and completing interactive self-checks
- Labs that can be done at home in your kitchen
- Lesson quizzes to help check yourself
- Discussion boards
- Unit assessments (2)

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.

The **Resources** section contains a list of Course Lab Materials, as well as a sample paragraph for "In Your Own Words" assignments.

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.

Unit	# of Lessons	Торіс	Approximate Time for Completion
Unit 1	4	Investigating Elements and Compounds	Three weeks
Unit 2	2	Investigating Changes in Matter and Solutions	Two weeks

Unit	# of Lessons	Торіс	Approximate Time for Completion
Unit 3	4	Investigating Motion	Four weeks
Unit 4	3	Investigating Balanced and Unbalanced Forces	Three weeks
Unit 5	3	Investigating Thermal Energy	Three weeks
Final Exam			One week

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	1-3	Checkpoint 1 (Non-graded) 1.1 Basics of Substances: Atoms and Elements 1.2 The Periodic Table 1.2 Discussion Board – The Periodic Table 1.3 Exploring Molecules and Compounds 1.4 Lab Safety Unit 1 In Your Own Words Unit 1 Lab: Marshmallow Molecules	
2	4-5	 2.1 Physical and Chemical Changes 2.1 Check Yourself – Physical and Chemical Changes 2.1 Discussion Board – The Plastic Problem 2.2 Aqueous Solutions 2.2 Check Yourself – Aqueous Solutions Unit 2 Discussion – Conduct Research and Share Unit 2 Plan an Investigation – Science Notebook Unit 2 Lab – Aqueous Solutions – One in a Million Unit 2 In Your Own Words 	
Unit Exam		*Exam for Units 1 and 2 Checkpoint 2 (Non-graded)	
3	6-9	 3.1 Average Speed 3.2 Comparing Distance and Displacement 3.3 Comparing Speed and Velocity 3.4 Motion and Distance-Time Graphs Unit 3 Discussion Board – Choose One Topic 	

Unit	Weeks	Assignments
		Unit 3 Lab – Speed Challenge
		Unit 3 In Your Own Words
4	10-12	4.1 Introduction to Forces
		4.2 Newton's First Law of Motion
		4.3 Engineering Design and Newton's First Law of Motion
		4.3 Check Yourself – Newton's First Law of Motion
		Unit 4 Discussion Board – Inertia Activities
		Unit 4 Lab: Engineering Challenge
		Unit 4: In Your Own Words
Unit		*Exam for Units 3 and 4
Exam		
5	13-15	5.1 Kinetic Energy and Temperature
		5.2 Check Yourself – Temperature
		5.2 Methods of Thermal Energy Transfer
		5.2 Check Yourself – Methods of Thermal Energy Transfer
		5.2 Identify and Explain Methods of Thermal Energy
		5.3 States of Matter and Expansion
		5.3 Check Yourself – Thermal Energy Transfer in Systems
		Unit 5 Can You Explain It?
		Unit 5 Lab – Build a Solar Cooker
		Unit 5 In Your Own Words
		Checkpoint 3 (Non-graded)
	16	Unit 5 will be tested on the final exam.
		*Final Exam

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 Assessments (20% of Course Grade)

 Unit Assessments (2 total)
- 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 <u>Online</u> <u>Discussion Netiquette</u>. 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.