



7th Grade Science

Cynthia Rill

Instructor Planning Period for Appointments

Thursdays, 9:00-9:30 am

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7th Grade Science

Course Description: Seventh grade science is a two-semester core course that integrates physical, life, and earth science through active scientific investigation. A major emphasis will be on developing skills necessary for scientific inquiry and problem solving.

Text(s) and online resources: OpenSciEd and HMH Science Dimension Module Workbooks

Methods of Instruction: Direct instruction, group work, research, projects, lecture, cooperative learning, guided practice, pair work, question generation, error analysis, instructional videos, and manipulative demonstration.

Course Objectives: Students will actively engage in learning activities and projects to gain understanding of the following objectives, which are unpacked from the Missouri Learning Standards (MLS) and the Next Generation Science Standards (NGSS).

Students will be able to:

Quarter 1 and 2 (Chemistry)

- Engage in argument to describe the atom as being the smallest unit of matter
- Use and develop a model to describe the structure of the simple molecule
- Use and develop a model to demonstrate that extended structures of pure substances are made up of simpler components in bulk quantities
- Use data to determine whether substances are the same based upon characteristic properties and indicators
- Analyze and interpret data to argue whether a chemical change has occurred
- Use and develop a model to describe how the motion and arrangement of particles of solids, liquids, and gases would change when thermal energy is added or removed without and during a change of state
- Use and develop a model to describe how the average kinetic energy and the temperature of a substance change when thermal energy is transferred to or from an object
- Use and develop a model to explain how atoms and/or molecules rearrange during a chemical reaction
- Conduct an investigation to generate data to explain how mass is conserved inside a chemical reaction
- Use and develop a model to explain how the mass in a chemical reaction is conserved

Quarter 3 (Cells, Body Systems, and Metabolic Reaction)

- Use and develop a model that demonstrates the three parts of cell theory.
- Explain scale of cells and the technology that helps us observe them.
- Relate the following structures within a cell to their function: nucleus, chloroplast, mitochondria, cell membrane, cell wall.
- Explain how using 3D models of cells can help scientists gain a better understanding of cell structures and functions.
- Explain how having multiple levels of organization benefits a multicellular organism.
- Explain how cells carry out all the functions necessary for an organism's growth and health and identify ways cells contribute to the function of living organisms.

- Describe the functions of animal body systems and explain how body systems work together to perform all functions necessary for the survival of an organism
- Use specific evidence to explain how the interactions of two or more body systems work together to perform function.
- Explain how scientists would redesign the human body for greatest efficiency.

Quarter 4

- Describe different types of physical and chemical weathering, explain how wind and water can contribute to weathering, erosion and deposition, and how weathering, erosion, and deposition operate on both small and large time and spatial scales.
- Identify what all rocks have in common (commonalities) and explain how formation of the three rock types are similar/different, including how sedimentary rock and fossils form and the process of a sedimentary rock becoming a metamorphic rock.
- Explain how patterns in fossil locations provide evidence that Earth's continents have moved.
- Identify examples of a geological surface feature found at plate boundaries, draw a model of how convection currents drive plate motion in Earth's interior and explain the different processes that occur in mid-ocean ridges and deep-ocean trenches.
- Explain how the time scales of slow geologic processes affect human perception of landforms on Earth. Provide details to support your answer.
- Explain how different models relate to relative dating.
- Describe how it is possible to look at geologic processes that shape Earth today to learn about the past.

Assignments: Assignments will take a variety of forms including DO-NOWs, in-class assignments (which must be completed during class time), periodic homework, and weekly assessments in the form of quizzes or tests. There will also be a project at the end of each quarter as a culminating review of concepts.

It is recommended that **all assignments be turned in on the due date**. The last day to turn in any late assignment is the **Friday of the assigning week**. If the assignment is assigned over the weekend, students will have until the following Friday to turn in the assignment. **Classwork is due at the end of the class period it is assigned**. If an in-class assignment is not completed in class, students will receive partial credit for the portion that's completed.

Exams/Tests/ Quizzes: Students will be assessed frequently on the material covered in class. Students will complete a study guide using class notes. All questions on tests and quizzes will resemble examples from class notes. Students will be informed on what section of their notes they should study for tests. Students should expect quizzes weekly and tests every 2-3 weeks. Students will not always receive notice before quizzes but will receive 3–5-day notice before tests. Students will not be allowed to use notes on tests and quizzes unless expressly permitted to do so.

Grading Criteria: Grades will be weighted in the following way:

Classwork (Do Now, Exit Slip; Daily work)	35%
Participation (Independent & Group work, class discussion)	20%
Homework (Independent practice)	15%
Tests (Mid/End of Unit, benchmarks, quizzes)	15%
Projects (the culminating activity for each quarter)	15%

Grading Scale: Most assignments are valued at 10 points, with no work valued at 50%.

These are then converted to points in Tyler SIS: 100%--90%=A; 89%--80%=B; 79%—70%=C; 69%--60%=D; 59% and below=F

Course Requirements:

- Students are expected to attend class daily and participate.
- Students are expected to come to class prepared each day.
- Student supplies for class are school-issued iPad, a hanging folder in class in which students store a 3-hole folder for returned work, sharpened pencils, and a spiral notebook **for science notes only**. The HMH Science Dimensions Modules Workbooks may be used in class or at home for reference and homework. The OpenSciEd materials are supplied.

Attendance Policy: All students are expected to attend school daily and to be on time for school and classes as outlined in the Compton-Drew Student and Parent Handbook. If an emergency occurs, please call the school to let us know that the student will not be present. It is the students' responsibility to get the work they've missed.

Homework Policy: Students should expect to complete homework when given. Homework will be collected and checked on the required day.

Make-Up Work Policy:

Students who have excused or verified absences will be allowed to make up any work assigned during their absence. For each day of **excused absence**, a student will be given one (1) full school day to make up the work he/she has missed. After the due date, work will be considered late (refer to the late policy). If classes are missed due to a schedule change, field trips, suspension, etc., the student is expected to get his/her assignments and complete them for the next class period.

Classroom Routines & Procedures

Entering the Classroom

1. Enter the classroom quietly and in uniform. Get your classroom materials and needed supplies in the specified areas of the classroom.
2. Take your **assigned** seat.
3. Complete the Do Now.
4. Review notes from the previous day or read a book quietly until class begins.

Leaving your seat

If you need to leave your seat (tissue, pencil exchange, etc.) use the posted hand communications for the classroom. Mrs. Rill will give you permission to leave your seat.

Tardiness

You are late to class if you are not in line with the class when the class walks into the room. Students who arrive late will be marked tardy. **Excessive tardiness will result in a referral to the Student Support (SST) Team.**

Absences

It is your responsibility to make up any assignments or tests in a timely manner when you return from an absence. Follow this procedure:

1. During lunch, you may ask your teacher questions regarding the work you've missed and/or schedule time for assistance with the work.
2. If you need to make-up or redo a test, you must make arrangements to take it **during lunchtime** no more than three school days after the test was given.

Turning in Assignments

Assignments will be collected in class, submitted via email to Cynthia.Rill@slps.org or in Teams. Do not place assignments on the teacher's desk. **You must identify your paper with your name.** Papers without names go to Boneyard. If you have not received your work, check the Boneyard.

Class Dismissal

Remain in your seat until dismissed by your teacher. Once the instruction for the class stops, I will ask for you or your group to begin preparing for transition. Once the classroom is in order and everyone is sitting quietly in their assigned seat, your teacher will dismiss the class. I may ask you to line up along the workbenches. If this is the case, the same classroom rules apply.

When You Finish Early

If you finish all your assigned work early, you may **a)** read independently **b)** work on an assignment for another class or **c)** Review vocabulary on Quizlet.

Restroom Policy

Restrooms breaks are at breakfast, during Related Arts, and during lunch. Students may not leave the room for the first and last 10 minutes of **any** class period.

Cell Phones/ Electronic Devices:

Cell phones, ear listening devices, and all other electronics are not permitted in the academic settings per district policy. In the event that a cell phone is seen or heard, the cell phone will be given to administration and will only be returned to the student on the Friday after it is confiscated after 1:30pm per the student handbook.

Classroom Rules

Classroom Rules are posted in the classroom and are expected to be followed on a daily basis.

1. I enter on time, and I sit in my seat.
2. I follow school policies.
3. I listen to instructions.
4. I speak when it is my turn.
5. I keep all body parts to myself.
6. I use classroom equipment safely.
7. I use appropriate language.
8. I do my own work.

Consequences include the following and depend upon severity and repeat incidents: Warning, Student conference/Reflection/Phone call home, Team conference with student, Conference with administration, Referral to office

Written Assignments and Academic Misconduct: All work submitted must be the student's original work and conform to the guidelines provided by the teacher. This means that any substantive ideas, phrases, sentences, and/or any published ideas must be properly referenced to avoid even the appearance of plagiarism/cheating. It is the student's responsibility to know all relevant school policies concerning plagiarism and/or cheating. Any documented cases of plagiarism can and will result in parent contact, disciplinary log, and/or a failing grade for the assignment.

(A Syllabus is a working document and may change over the course of the year.)