

Parrottsville Elementary School

7th Grade Science Syllabus

Teacher and Course Information

Teacher: Mr. Blazer

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Aspen Information: Student grades are available through their own personal Aspen account. Students will be provided with this username and password at the beginning of the year.

Course Description: The academic standards for seventh grade establish the content knowledge and skills for Tennessee students necessary to prepare them for the rigorous levels of higher education and future job markets. The course provides students with a wealth of experiences for both science practices and content knowledge. The academic standards for science in seventh grade are research-based and supported by the National Research Council's Framework for K-12 Science Education. The academic standards herein establish the core content and practices of science and engineering, as well as what Tennessee students need to know by the end of seventh grade.

Course Texts and Resources: The teacher will supply any required texts or resources throughout the year. Textbooks will be assigned and it will be the student's responsibility to care for their text. When technology arrives this semester, students will receive a personal electronic device for their use.

Course Structure: Lecture, discussion, drill and practice, laboratory experiments, and group investigations. We will also utilize Google Classroom throughout the school year during traditional school as well as if we are forced to close schools due to health situations. Students will need to be familiar with Google Classroom and stay on-track with all classwork.



Online Resources:

Tennessee State Academic Standards for Science:

<https://www.tn.gov/education/instruction/academic-standards/science-standards.html>

Parrottsville School Website: <https://parrottsvilleelementary.weebly.com/>

Cocke County Schools Website: <http://www.cocke.k12.tn.us/>

Part 2: Student Learning Outcomes

Matter and Its Interactions

- 1- Develop and use models to illustrate the structure, subatomic particles, and charges of atoms.
- 2- Compare and contrast elements and compounds.
- 3- Classify matter as pure substance, compounds, or mixtures.
- 4- Analyze and interpret chemical changes to determine if the Law of Conservation of Mass upholds.
- 5- Use the periodic table to interpret and identify chemical and physical properties of matter.
- 6- Create and interpret models of substances whose atoms represent the states of matter.

Structure and Processes of Molecules to Organisms

- 1- Develop and interpret models that identify major cell organelles including their function and contribution to life cycles of the cell and organism.
- 2- Investigate how a cell maintains homeostasis through passive transport.
- 3- Evaluate evidence to compare and contrast differences across kingdom classifications.
- 4- Diagram the hierarchical organization from cell to organism.
- 5- Explain how the body is composed of many systems that maintain support and equilibrium through life processes.

6- Develop an argument based on evidence to explain how behavioral and structural adaptations impact survival and reproductive probability success rates.

7- Examine and evaluate the advantages and disadvantages of asexual and sexual reproduction.

8- Construct an explanation demonstrating the function of mitosis and meiosis.

9- Explain the cycle of matter and flow of energy in and out of an organism during photosynthesis, cellular respiration, and anaerobic respiration.

Ecosystems: Interactions, Energy, and Dynamics

1- Develop a model depicting the flow of energy in cycles within an ecosystem including the carbon and oxygen cycle.

Heredity: Inheritance and Variation of Traits

1- Hypothesize how mutations of a gene can have harmful, beneficial, or neutral effects on an organism.

2- Distinguish between mitosis and meiosis when examining daughter cells.

3- Predict the probability of dominant and recessive alleles transferred to offspring during sexual reproduction.

Earth and Human Activity

1- Graphically represent the atmosphere as a mixture of gases.

2- Engage in a scientific argument through graphing and translating data on the relationship between human activity and climate change.

Engineering, Technology, and Scientific Applications

1- Examine a problem from the medical field and design a solution considering all limitations and constraints that may limit possible solutions.

Part 3: Course Outline

Below is an overview of topics, major assignments, and approximate timeframe for 7th grade Science.

Nine Weeks	Unit	<i>Approximate Time*</i>
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<p>1st 9 Weeks</p>	<p>Scientific Inquiry</p> <p>-Scientific method, scientific variables, engineering design, scientific instruments.</p> <p>Matter and Its Interactions</p> <p>-Properties of matter, states of matter, atoms subatomic particles, changes.</p> <p>-elements, compounds, mixtures, physical and chemical changes, chemical reactions.</p> <p>Matter and its Interactions</p> <p>-periodic table, Law of Conservation of Mass.</p>	<p>2 weeks</p> <p>4 weeks</p> <p>3 weeks</p>
<p>2nd 9 Weeks</p>	<p>Structure and Processes of Molecules to Organisms</p> <p>-Cells, cell organelles, cells across kingdom classifications, cell organization</p> <p>-Cell processes, homeostasis, passive and active transport, photosynthesis, cellular respiration, anaerobic respiration</p> <p>-human body systems and processes</p>	<p>3 weeks</p> <p>3 weeks</p> <p>3 weeks</p>
<p>3rd 9 Weeks</p>	<p>Heredity: Inheritance and Variation of Traits</p> <p>-sexual reproduction, asexual reproduction, mitosis, meiosis, heredity, inheritance of traits, gene mutations</p> <p>Ecosystems: Interactions, Energy, and Dynamics</p> <p>Biomes, ecosystems, biotic and abiotic factors, carbon cycle, oxygen cycle.</p> <p>Earth and Human Activity</p> <p>-Atmospheric gases, human activity, natural resources, climate change</p>	<p>3 weeks</p> <p>3 weeks</p> <p>3 weeks</p>
<p>4th 9 Weeks</p>	<p>TCAP Review</p> <p>Standards Review and Remediation</p> <p>Testing</p>	<p>Varies</p>

**Approximate topics and times are subject to change at the teacher's discretion.*

Part 4: Grading Policy

Grading System:

- All formal **tests** will be recorded **twice** and all formal **quizzes** will be recorded **once** toward the final 9 weeks grade. Numerous homework assignments and class activities will also be graded. They will be recorded **once** toward the final 9 weeks grade.
- All students will receive a **zero** for all missed tests, quizzes, and assignments not made up or scheduled to be made up within two days of returning after an absence. It is the student's responsibility to discuss make-up work with the teacher.
- Late or incomplete assignments are subject to lose points or receive a zero at the teacher's discretion.
- All students are required to keep a Science notebook in a three-ring binder throughout the school year. We will construct a table of contents as we develop the notebook and place items in it. A class table of contents will be developed by the teacher.
- Final grades assigned for this course will be based on the percentage of total points earned and are assigned using the following grading scale:

A= 90-100

B= 80-89

C=70-79

D=60-69

F=0-59

-For more information about grading for Cocke County Schools, visit the academic policies and grading section of the school system website.

Part 5: Course Policies

Attendance: Students are encouraged to limit absences. Parrottsville Elementary and Cocke County Schools enforces a structured attendance policy. More information is available on the Cocke County Schools website.

Participation: Students are encouraged to participate in all group investigations, laboratory experiments, and class discussions as well as complete all individually assigned work.

Complete Assignments: As discussed above, all assignments are due on a specified date given by the teacher. Failure to complete all assignments on time may result in lost points or a zero at the teacher's discretion. In the event of an absence, it is the student's responsibility to obtain all materials and assignments from the teacher within two days upon returning. Failure to do so may result in lost points or a zero at the teacher's discretion.

Incomplete Policy: In special or emergency circumstances, an incomplete grade can be discussed with the teacher.

Academic Dishonesty: Students are expected to demonstrate their own knowledge and mastery of the course topics. Academic dishonesty of any sort will not be tolerated. This includes any attempt to demonstrate a level of knowledge that he/she does not possess including but not limited to cheating, plagiarism, inventing false information or citations, or helping another student commit an act of academic dishonesty. Any student caught committing an act of academic dishonesty will have their grade affected and be referred to the school principal.

Student Testing Code of Ethics and Security:

It is important for you as a student to know that the following guidelines are to be strictly followed. This year the TNReady test will count at least 10% of your final semester grade. Your work on this test is very important and it deserves your best effort.

I understand that during testing on the days of the assessment, I am responsible for:

- Not having any electronic devices on me or in my purse/backpack/pockets
 - Including but not limited to cell phones, smart phones, smart watches, etc. **during testing or during breaks.**
 - Best practice is for students to leave devices at home or in their lockers on the day of testing.
 - If I am caught with a device during testing or during breaks, my test may be nullified, resulting in a zero as at least 10% of my final semester grade, and any school level disciplinary action as deemed appropriate by the administration.

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- Trying my best on the test
 - If I do not attempt to test (I give **no answers or randomly answer** questions) my test score may be nullified, resulting in a zero as at least 10% of my final semester grade, and any school level disciplinary action as deemed appropriate by the administration.
 - The testing administrators and proctors in the testing environment will determine if no answers or random answering is taking place.
 - I will focus and put forth effort on the test.
- Being honest and not cheating
 - If I am caught cheating (taking pictures of the test, writing down and passing answers, talking to other students, looking on other computers, using software outside the testing platform), my test may be nullified, resulting in a zero as at least 10% of my final semester grade, and any school level disciplinary action as deemed appropriate by the administration.

Important Note: Any form of academic dishonesty, including cheating and plagiarism, may be reported to the office of student affairs.

Course policies are subject to change. It is the student's responsibility to check for corrections or updates to the syllabus. Any changes will be posted in the classroom.