Parrottsville Elementary School

8th Grade Science
Syllabus

Teacher and Course Information

Teacher: Mr. Blazer

Email: blazerd1@cocke.k12.tn.us

School Telephone: 423-623-1612

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 eighth 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 eighth 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 eighth 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. 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/

Student Learning Outcomes

Forces and Motion

1- Design and conduct investigations on the relationships between magnetism and electricity in electromagnets, generators, and electric motors.

2- Provide evidence of an object's change in motion depends on the sum of all forces exerted on the object and describe that change in motion.

3- Evaluate and interpret that for every force exerted on an object there is an equal force exerted in the opposite direction.

4- Provide evidence that fields exist between objects even when they are not in contact.

Waves and Applications

1- Develop and use models to represent the basic properties of waves.

2- Compare and contrast mechanical waves and electromagnetic waves.

3- Evaluate the role that waves play in different communication systems.

Biological Change

1- Analyze and interpret data for patterns in the fossil record.

2- Compare and contrast structures of extinct and extant organisms.

3- Analyze evidence about how phenotypes within a population can increase the probability of survival and leads to adaptation.

4- Explain how natural selection plays a role in the survival of organisms.

5- Examine technology and communicate information about artificial selection and the inheritance of desired traits.

Earth's Place in the Universe

1- Examine the theory of rapid expansion using evidence found in the universe.

2- Explain the role of gravity in the formation of the sun and planets in the solar system.

Earth's Systems

1- Analyze geographic changes that lead to population changes.

2- Evaluate data collected from seismographs to study the interior of Earth.

3- Describe the relationship among processes and forces within the rock cycle.

4- Gather and evaluate evidence that energy from the Earth's interior drives physical changes.

5- Construct a scientific explanation using data that explains plate tectonics and its relevance to physical features on Earth.

Earth and Human Activity

1- Interpret data to explain the location of Earth's natural resources.

2- Collect and use data to describe how plate boundaries relate to earthquake and volcano locations.

Engineering Design

1- Develop a model for testing and modification of an electromagnet, generator, or electric motor.

2- Research and communicate information on how data from technologies provide information about objects in our solar system and universe.

Course Outline

Below is an overview of topics, major assignments, and approximate timeframe for 8th grade Science.

Nine Weeks	Unit	*Approximate* Time*
1st 9 Weeks	**Scientific Inquiry** -Scientific method, scientific variables, engineering design, scientific instruments. **Forces and Motion** -magnetism, electricity, generators, electric motors. -Newton's Laws of Motion, balanced and unbalanced forces, describing motion.	**2 weeks** **7 weeks**

2nd 9 Weeks	**Earth and the Universe** -Rapid expansion theory, gravity and its role, planets, stars, space instruments and technologies. **Waves and Applications** -Mechanical and electromagnetic waves, parts of a wave, wave energy and behavior, electromagnetic spectrum, waves in communication systems.	**3-4 weeks** **4-5 weeks**
3rd 9 Weeks	**Earth's Natural Resources and Hazards** -mineral, fossil fuel, and groundwater resources, human use and impact with natural resources and the environment, locations of earthquakes and volcanoes **Earth's Systems** -plate tectonics, continental drift earthquakes, volcanoes, geographic formations, Earth's interior, rock cycle **Earth's History and Biological Change** **-**Fossils and the fossil record, extinct and extant organisms, fossilization methods -Adaptations, survival, inheritance and heredity, innate and learned behavior, natural and artificial selection	**3-4 weeks** **4-5 weeks**
4th 9 Weeks	**TCAP Review** **Standards Review and Remediation** **Testing**	**Varies**

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

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.
- 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.

Course policies are subject to change. Any changes will be posted on the website.