



School District of Pickens County

Building success beyond the classroom

SC Standards: Science

Seventh Grade

Unit: Scientific Inquiry

- Science-7-1.1 Use appropriate tools and instruments (including a microscope) safely and accurately when conducting a controlled scientific investigation.
- Science-7-1.2 Generate questions that can be answered through scientific investigation.
- Science-7-1.3 Explain the reasons for testing one independent variable at a time in a controlled scientific investigation.
- Science-7-1.4 Explain the importance that repeated trials and a well-chosen sample size have with regard to the validity of a controlled scientific investigation.
- Science-7-1.5 Explain the relationships between independent and dependent variables in a controlled scientific investigation through the use of appropriate graphs, tables, and charts.
- Science-7-1.6 Critique a conclusion drawn from a scientific investigation.
- Science-7-1.7 Use appropriate safety procedures when conducting investigations.

Unit: Cells and Heredity

- Science-7-2.1 Summarize the structures and functions of the major components of plant and animal cells (including the cell wall, the cell membrane, the nucleus, chloroplasts, mitochondria, and vacuoles).
- Science-7-2.2 Compare the major components of plant and animal cells.
- Science-7-2.3 Compare the body shapes of bacteria (spiral, coccus, and bacillus) and the body structures that protists (euglena, paramecium, amoeba) use for food gathering and locomotion.
- Science-7-2.4 Explain how cellular processes (including respiration, photosynthesis in plants, mitosis, and waste elimination) are essential to the survival of the organism.
- Science-7-2.5 Summarize how genetic information is passed from parent to offspring by using the terms genes, chromosomes, inherited traits, genotype, phenotype, dominant traits, and recessive traits.
- Science-7-2.6 Use Punnett squares to predict inherited monohybrid traits.
- Science-7-2.7 Distinguish between inherited traits and those acquired from environmental factors.

Unit: Human Body Systems: Cardiovascular

- Science-7-3.1 Summarize the levels of structural organization within the human body (including cells, tissues, organs, and systems).
- Science-7-3.2 Recall the major organs of the human body and their function within their particular body system.
- Science-7-3.3 Summarize the relationships of the major body systems (including the circulatory, respiratory, digestive, excretory, nervous, muscular, and skeletal systems).



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Science-7-3.4 Explain the effects of disease on the major organs and body systems (including infectious diseases such as colds and flu, AIDS, and athlete's foot and noninfectious diseases such as diabetes, Parkinson's, and skin cancer).

Unit: Chemistry

Science-7-5.1 Recognize that matter is composed of extremely small particles called atoms.

Science-7-5.2 Classify matter as element, compound, or mixture on the basis of its composition.

Science-7-5.3 Compare the physical properties of metals and nonmetals.

Science-7-5.4 Use the periodic table to identify the basic organization of elements and groups of elements (including metals, nonmetals, and families).

Unit: Ecology

Science-7-4.1 Summarize the characteristics of the levels of organization within ecosystems (including populations, communities, habitats, niches, and biomes).

Science-7-4.2 Illustrate energy flow in food chains, food webs, and energy pyramids

Science-7-4.3 Compare daily and seasonal changes in weather conditions (including wind speed and direction, precipitation, and temperature) and patterns.

Science-7-4.4 Explain the effects of soil quality on the characteristics of an ecosystem.

Science-7-4.5 Summarize how the location and movement of water on Earth's surface through groundwater zones and surface-water drainage basins, called watersheds, are important to ecosystems and to human activities.

Science-7-4.6 Classify resources as renewable or nonrenewable and explain the implications of their depletion and the importance of conservation.

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Science-7-4.6 Classify resources as renewable or nonrenewable and explain the implications of their depletion and the importance of conservation.

Unit: Disease

Science-7-5.1 Compare physical changes (including changes in size, shape, and state) to chemical changes that are the result of chemical reactions (including changes in color or temperature and formation of a precipitate or gas).

Science-7-5.5 Use a graph to illustrate the motion of an object.

Science-7-5.6 Distinguish between acids and bases and use indicators (including litmus paper, pH paper, and phenolphthalein) to determine their relative pH.

Science-7-5.7 Identify the reactants and products in chemical equations.

Science-7-5.8 Explain how a balanced chemical equation supports the law of conservation of matter.

Science-7-5.9 Compare physical properties of matter (including melting or boiling point, density, and color) to the chemical property of reactivity with a certain substance (including the ability to burn or to rust).