

7th Grade Science Pacing Guide

First Nine Weeks

Inquiry and Technology & Engineering

- 0707.Inq.1** Design a simple experimental procedure with an identified control and appropriate variables.
- 0707.Inq.2** Select tools and procedures needed to conduct a moderately complex experiment.
- 0707.Inq.3** Interpret and translate data in a table, graph, or diagram.
- 0707.Inq.4** Draw a conclusion that establishes a cause and effect relationship supported by evidence.
- 0707.Inq.5** Identify a faulty interpretation of data that is due to bias or experimental error.
- 0707.T/E.1** Identify the tools and procedures needed to test the design features of a prototype.
- 0707.T/E.2** Evaluate a protocol to determine if the engineering design process was successfully applied.
- 0707.T/E.3** Distinguish between the intended benefits and the unintended consequences of a new technology.
- 0707.T/E.4** Differentiate between adaptive and assistive engineered products (e.g., food, biofuels, medicines, integrated pest management).

Life Science: Cells, Flow of Matter & Energy, Heredity

- 0707.1.1** Identify and describe the function of the major plant and animal cell organelles.
- 0707.1.2** Interpret a chart to explain the integrated relationships that exist among cells, tissues, organs, and organ systems.
- 0707.1.3** Explain the basic functions of a major organ system.
- 0707.1.4** Sequence a series of diagrams that depict chromosome movement during plant cell division.

- 0707.1.5** Explain how materials move through simple diffusion.
- 0707.3.1** Compare the chemical compounds that make up the reactants and products of photosynthesis and respiration.
- 0707.3.2** Interpret a diagram to explain how oxygen and carbon dioxide are exchanged between living things and the environment.
- 0707.4.1** Classify methods of reproduction as sexual or asexual.
- 0707.4.2** Match flower parts with their reproductive functions.

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Second Nine Weeks

Inquiry and Technology & Engineering

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Life Science: Heredity

- 0707.4.3** Describe the relationship among genes, chromosomes, and inherited traits.
- 0707.4.4** Interpret a Punnett square to predict possible genetic combinations passed from parents to offspring during sexual reproduction.

Earth Science: The Earth

- 0707.7.1** Use a table of physical properties to classify minerals.
- 0707.7.2** Label a diagram that depicts the three different rock types.
- 0707.7.3** Identify the major processes that drive the rock cycle.
- 0707.7.4** Differentiate among the characteristics of the earth's three layers.

- 0707.7.5** Recognize that lithospheric plates on the scale of continents and oceans continually move at rates of centimeters per year.
- 0707.7.6** Describe the relationship between plate movements and earthquakes, mountain building, volcanoes, and sea floor spreading.
- 0707.7.7** Analyze and evaluate the impact of man's use of earth's land, water, and atmospheric resources.

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Third Nine Weeks

Inquiry and Technology & Engineering

- 0707.Inq.1** Design a simple experimental procedure with an identified control and appropriate variables.
- 0707.Inq.2** Select tools and procedures needed to conduct a moderately complex experiment.
- 0707.Inq.3** Interpret and translate data in a table, graph, or diagram.
- 0707.Inq.4** Draw a conclusion that establishes a cause and effect relationship supported by evidence.
- 0707.Inq.5** Identify a faulty interpretation of data that is due to bias or experimental error.
- 0707.T/E.1** Identify the tools and procedures needed to test the design features of a prototype.
- 0707.T/E.2** Evaluate a protocol to determine if the engineering design process was successfully applied.
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- 0707.T/E.4** Differentiate between adaptive and assistive engineered products (e.g., food, biofuels, medicines, integrated pest management).

Physical Science: Motion

- 0707.11.1** Differentiate between the six simple machines.
- 0707.11.2** Determine the amount of force needed to do work using different simple machines.
- 0707.11.3** Apply proper equations to solve basic problems pertaining to distance, time, speed, and velocity.
- 0707.11.4** Identify and explain how Newton's laws of motion relate to the movement of objects.
- 0707.11.5** Compare and contrast the different parts of a wave.
- 0707.11.6** Differentiate between transverse and longitudinal waves in terms of how they are produced and transmitted.