**Pacing Guide for 7th Grade Science**

**2017-18 School Year (State Based)**

**Text:** Holt, Science and Technology 7

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| **Quarter** | **Topic** | **SPI**  (State Performance Indicator) | **Chapter, Section** | Check |
| 1st  Quarter | **Introduction to Science** | **All Inquiry and Technology/Engineering SPI’s are embedded.** | Chapter 1, Sections 2,4 |  |
| **Classifying Minerals** | **SPI 0707.7.1** Use a table of physical properties to classify minerals. | Chapter 13, Sections 1,2 |  |
| **3 Types of Rocks/ Rock Cycle** | **SPI 0707.7.2** Label a diagram that depicts the three different rock types.  **SPI 0707.7.3** Identify the major processes that drive the rock cycle. | Chapter 14, Sections 1, 2, 3, and 4 |  |
| **Earth’s 3 Layers** | **SPI 0707.7.4** Differentiate among the characteristics of the earth’s three layers. | Chapter 15, Section 1 |  |
| **Continental Drift/ Tectonic Plates** | **SPI 0707.7.5** Recognize that lithospheric plates on the scale of continents and oceans continually move at rates of centimeters per year. | Chapter 15, Sections 2, 3 |  |
| **Earthquakes/ Mountain Building/ Volcanoes/ Sea Floor Spreading** | **SPI 0707.7.6** Describe the relationship between plate movements and earthquakes, mountain building, volcanoes, and sea floor spreading. | Chapter 15, Sections 2-4; Chapter 16.1; Chapter 17.1 |  |
| **Renewable and Non-Renewable Resources** | **SPI 0707.7.7** Analyze and evaluate the impact of man’s use of earth’s land, water, and atmospheric resources. | Chapter 18, Sections 1-3 |  |
| 2nd Quarter | **Distance, Time, Speed, Velocity** | **SPI 0707.11.3** Apply proper equations to solve basic problems pertaining to distance, time, speed, and velocity. | Chapter 19, Section 1, 2 |  |
| **Newton’s Laws** | **SPI 0707.11.4** Identify and explain how Newton’s laws of motion relate to the movement of objects. | Chapter 20, Section 2 |  |
| **Simple Machines** | **SPI 0707.11.1** Differentiate between the six simple machines. | Chapter 21, Section 2, 3 |  |
| **Force/Work** | **SPI 0707.11.2** Determine the amount of force needed to do work using different simple machines. | Chapter 19, Section 2; Chapter 21, Section 1 |  |
| **Waves** | **SPI 0707.11.5** Compare and contrast the different parts of a wave.  **SPI 0707.11.6** Differentiate between transverse and longitudinal waves in terms of how they are produced and transmitted. | Chapter 22, Sections 1-3 |  |
| **Quarter** | **Topic** | **SPI** | **Chapter, Section** |  |
| 3rd Quarter | **Cells/ Organelles** | **SPI 0707.1.1** Identify and describe the function of the major plant and animal cell organelles. | Chapter 2, Section 3. |  |
| **Diffusion** | **SPI 0707.1.5** Explain how materials move through simple diffusion. | Chapter 3, Section 1 |  |
| **Mitosis** | **SPI 0707.1.4** Sequence a series of diagrams that depict chromosome movement during plant cell division. | Chapter 3, Section 3 |  |
| **Photosynthesis** | **SPI 0707.3.1** Compare the chemical compounds that make up the reactants and the products of photosynthesis and respiration. | Chapter 3,  Section 2 |  |
| **Oxygen/Carbon Dioxide Cycle** | **SPI 0707.3.2** Interpret a diagram to explain how oxygen and carbon dioxide are exchanged between living things and their environment. | Chapter 3,  Section 2;  Chapter 7.1 |  |
| 4th Quarter | **Organ Systems** | **SPI 0707.1.2** Interpret a chart to explain the integrated relationships that exist among cells, tissues, organs, and organ systems.  **SPI 0707.1.3** Explain the basic functions of a major organ system. | Chapter 8, Section 1; Chapter 8 to 11, Various Sections |  |
| **Reproduction** | **SPI 0707.4.1** Classify methods of reproduction as sexual or asexual. | Chapter 4.3; Chapter 12.1 |  |
| **Flowers** | **SPI 0707.4.2** Match flower parts with their reproductive functions. | Chapter 7, Section 2 |  |
| **Genetics** | **SPI 0707.4.3** Describe the relationship among genes, chromosomes and inherited traits. | Chapter 4, Section 1 |  |
| **Heredity** | **SPI 0707.4.4** Interpret a Punnett square to predict possible genetic combinations passed from parents to offspring during sexual reproduction. | Chapter 4, Section 2 |  |
| Post  T-Cap | **Classification** | **0807.5.1** Use a simple classification key to identify an unknown organism. | 8th Grade Standard |  |
| **Adaptations of Populations** | **0807.5.2** Analyze structural, behavioral, and physiological adaptations to predict which populations are likely to survive in a particular environment. | 8th Grade Standard |  |
| **Variations in Populations** | **0807.5.3** Analyze data on levels of variation within a population to make predictions about survival under particular environmental conditions. | 8th Grade Standard |  |
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