**7th Grade**

**At-a-Glance**

**2015-2016 \*\*\***

***Please note: It is very important to follow the order of this pacing guide. As students move from one school to another within the district, students’ transitional periods will be made seamless.***

**Unit I--Inquiry and Human Body**

**8/20-10/30**

**Benchmark Window 10/23-11/6**

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| **Inquiry Indicators:** | 7-1.1 Use appropriate tools and instruments (including a microscope) safely and accurately when conducting a controlled scientific investigation. 7-1.2 Generate questions that can be answered through scientific investigation. \*\*\*7-1.3 Explain the reasons for testing one independent variable at a time in a controlled scientific investigation. \*\*\*7-1.4 Explain the importance that repeated trials and a well-chosen sample size have with regard to the validity of a controlled investigation. 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. 7-1.6 Critique a conclusion drawn from a scientific investigation. 7-1.7 Use appropriate safety procedures when conducting when conducting investigations.  **\*\*\* THESE INDICATORS WILL BE TESTED IN THIS UNIT'S BENCHMARK** |
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| **Content Indicators:** | LIFE SCIENCE CONTENT STANDARDS 7-3.1 Summarize the levels of structural organization within the human body (including cells, tissues, organs, and systems). 7-3.2 Recall the major organs of the human body and their function within their particular body system. 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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| **Dates** | **Learning Tasks and Activities** |
| 8/20-9/4 | Class Intro, Safety, and Notebook Setup safety video  SEPUP 1 Save Fred!  SEPUP 2 The Pellagra Story w/video  SEPUP 3 Testing Medicines submit data  Teacher Choice-Variables  Growing Plants Gizmo |
| 9/8-9/18 | SEPUP 5 Can you feel the Difference  SEPUP 7 Studying People  SEPUP 8 Data Toss  SEPUP 10 Evaluating Clinical Trials  Teacher Choice Technological Design  Teacher Choice Inquiry |
| 9/21-10/2 | SEPUP 12 What’s Happening Inside  Build a Body app  SEPUP 14 Breakdown  SEPUP 15 Digestion-An Absorbing Tale |
| 10/5-10/16 | Teacher choice Digestive System  Digestive System Gizmo  I love My Pancreas-You Tube  SEPUP 17 Gas Exchange  Teacher Choice-Respiratory /Excretory  Breathing/Respiration-Smart-Board Activity |
| 10/19-10/30 | Teacher Choice-Circulatory System  Teacher Choice Nervous System  SEPUP 6 Finding the Nerve  Teachers Choice Integumentary  Circulatory System Gizmo  The Blood Mobile You Tube  School House Rock ---The??  Nervous System/Circulatory System YouTube  SEPUP 16 Support System: Bones, Joints, and Muscles  SEPUP 18 The Circulation Game  Teachers Choice Body Systems  Review/Benchmark |

**UNIT 2 – CELLS AND HEREDITY 10/30-1/8**

**Benchmark Window 12/17-1/14**

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| **Inquiry Indicators:** | \*\*\*7-1.1 Use appropriate tools and instruments (including a microscope) safely and accurately when conducting a controlled scientific investigation. 7-1.2 Generate questions that can be answered through scientific investigation. 7-1.3 Explain the reasons for testing one independent variable at a time in a controlled scientific investigation. 7-1.4 Explain the importance that repeated trials and a well-chosen sample size have with regard to the validity of a controlled investigation. \*\*\*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. 7-1.6 Critique a conclusion drawn from a scientific investigation. 7-1.7 Use appropriate safety procedures when conducting when conducting investigations.  **\*\*\* THESE INDICATORS WILL BE TESTED IN THIS UNIT'S BENCHMARK** |
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| **Content Indicators:** | LIFE SCIENCE CONTENT STANDARDS 7-3.4Explain 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).  7-2.1Summarize 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).  7-2.2 Compare the major components of plant and animal cells.  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.  7-2.4 Explain how cellular processes (including respiration, photosynthesis in plants, mitosis, and waste elimination) are essential to the survival of the organism  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.  7-2.6 Use Punnett squares to predict inherited monohybrid traits  7-2.7 Distinguish between inherited traits and those acquired from environmental factors |
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| **Dates** | **Learning Tasks and Activities** |
| 11/2-11/13 | SEPUP 30 It's Catching CDC Solve the Outbreak  Teacher Choice Disease Disease Spread Gizmo  SEPUP 35 A License to Learn Interactive Microscope  SEPUP 36 Looking for Signs of Microlife  SEPUP 38 Microbes, Plants, and You iCell app  SEPUP 39 Cells Alive |
| 11/16-12/4 | SEPUP 40 A Cell Model They Might Be Giants song  SEPUP 42 A Closer Look  Teacher Choice Cell Parts/Processes  SEPUP 43 Microbes Under View cellsalive.com  SEPUP 45 The World of Microbes Brainpop Protist  Teacher Choice Bacteria/Protist/Disease  SEPUP 54 Investigating Human Traits Brainpop Heredity |
| 12/7-12/18 | SEPUP 55 Plants Have Genes Too  SEPUP 58 Creature Feature Disc Ed Genes Make Rabbits  SEPUP 59 Gene Combo  SEPUP 60 Mendel, First Geneticist  Teacher Choice Genetics Inheritance Gizmo  SEPUP 61 Gene Squares  Teacher Choice Punnett Squares  SEPUP 62 Analyzing Genetic Data submitt data |
| 1/5-1/8 | SEPUP 63 Show Me The Genes  SEPUP 65 Breeding Critters Gene Screen app  Review/Benchmark |

**UNIT 3 – ECOLOGY 1/8-3/1**

**Benchmark Window 2/23-3/8**

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| **Inquiry Indicators:** | 7-1.1 Use appropriate tools and instruments (including a microscope) safely and accurately when conducting a controlled scientific investigation. \*\*\*7-1.2 Generate questions that can be answered through scientific investigation. 7-1.3 Explain the reasons for testing one independent variable at a time in a controlled scientific investigation. 7-1.4 Explain the importance that repeated trials and a well-chosen sample size have with regard to the validity of a controlled investigation. 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. \*\*\*7-1.6 Critique a conclusion drawn from a scientific investigation. 7-1.7 Use appropriate safety procedures when conducting when conducting investigations.  **\*\*\* THESE INDICATORS WILL BE TESTED IN THIS UNIT'S BENCHMARK** |
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| **Content Indicators:** | LIFE SCIENCE CONTENT STANDARDS 7-4.1 Summarize the characteristics of the levels of organization within ecosystems (including populations, communities, habitats, niches, and biomes).  7-4.2 Illustrate energy flow in food chains, food webs, and energy pyramids.  7-4.3 Explain the interaction among changes in the environment due to natural hazards (including landslides, wildfires, and floods), changes in populations, and limiting factors (including climate and the availability of food and water, space, and shelter  7-4.4 Explain the effects of soil quality on the characteristics of an ecosystem  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  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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| **Dates** | **Learning Tasks and Activities** |
| 1/19-2/12 | SEPUP 72 Miracle Fish  SEPUP 74 Observing Organisms  SEPUP 83 A Suitable Habitat  SEPUP 77 Ups and Downs Zach the Zebra Mussel video  Teacher Choice/Levels of Organization BrainpopEcosyste  SEPUP 78 Coughing Up Clues Virtual Dissection  SEPUP 70 Eating for Energy food web virtual lab  Teacher Choice Energy Flow in Ecosystems |
| 2/16-3/1 | SEPUP 81 A Producer's Source of Energy gizmo photosys  SEPUP 82 The Cells of Producers  SEPUP 84 Clam Catch  SEPUP 85 Is There Room for One More?  Teacher Choice/Limiting Factors/Natural Disasters  Gizmo rabbit population Videos  Teacher Choice/Effects of Soil Quality on Ecosystems  Gizmo porosity Discovery Ed Digging Up Dirt  Teacher Choice/Location and Movement of Water on Earth's Surface Ground Water Song  Soil and Water Essay District Website resources  Teacher Choice/Conserving Resources  Review/Benchmark |

**UNIT 4 – PROPERTIES OF MATTER 3/2-4/21**

**Benchmark Window 4/13-4/27**

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| **Inquiry Indicators:** | 7-1.1 Use appropriate tools and instruments (including a microscope) safely and accurately when conducting a controlled scientific investigation. 7-1.2 Generate questions that can be answered through scientific investigation. 7-1.3 Explain the reasons for testing one independent variable at a time in a controlled scientific investigation. 7-1.4 Explain the importance that repeated trials and a well-chosen sample size have with regard to the validity of a controlled investigation. 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. 7-1.6 Critique a conclusion drawn from a scientific investigation. \*\*\*7-1.7 Use appropriate safety procedures when conducting when conducting investigations.  **\*\*\* THESE INDICATORS WILL BE TESTED IN THIS UNIT'S BENCHMARK** |
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| **Content Indicators:** | PHYSICAL SCIENCE CONTENT STANDARDS 7-5.1 Recognize that matter is composed of extremely small particles called atoms  7-5.2 Classify matter as element, compound, or mixture on the basis of its composition  7-5.3. Compare the physical properties of metals and nonmetals  7-5.4 Use the periodic table to identify the basic organization of elements and groups of elements (including metals, nonmetals, and families  7-5.5 Translate chemical symbols and the chemical formulas of common substances to show the component parts of the substances (including NaCl [salt], H2O [water], C6H12O6 [simple sugar], O2 [oxygen gas], CO2 [carbon dioxide], and N2 [nitrogen gas]).  7-5.6 Distinguish between acids and bases and use indicators (including litmus paper, pH paper, and phenolphthalein) to determine their relative pH.  7-5.7 Identify the reactants and products in chemical equations.  7-5.8 Explain how a balanced chemical equation supports the law of conservation of matter.  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).  7-5.10 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). |
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| **Dates** | **Learning Tasks and Activities** |
| 3/3-3/20 | POM 1 Our Ideas About Matter  POM 2.1, 2.2 Determining Density  POM 3 Density Predictions Gizmo Density  POM 6 Applying Heat  POM 7 Just a Phase  Teacher Choice/Physical & Chemical Properties/Changes  Physical and Chemical Changes Virtual Lab |
| 3/23-4/10 | POM 8 Changing Matter and Mass  POM 25 Mass and Chemical Reactions  Teacher Choice/Conservation of Matter, Chemical Symbols, Formulas, and Equations Gizmo Chem. Equat.  Teacher Choice/Classifying Matter and Atoms Atoms Fam.  POM 20 Breaking Down a Compound  POM 21 Examining and Grouping Elements |
| 4/11-4/20 | Teacher Choice/Periodic Table app Periodic Table  Teacher Choice/ Metals vs. Nonmetals app goREACT  Teacher Choice/Acids and Bases Discovery Ed, Gizmo pH Analysis, Acids and Bases Virtual Lab  Review/Benchmark |
| 4/21-5/4 | PASS Test Prep |