**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 STANDARDS7-3.1 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 videoSEPUP 1 Save Fred!SEPUP 2 The Pellagra Story w/videoSEPUP 3 Testing Medicines submit dataTeacher Choice-VariablesGrowing Plants Gizmo |
| 9/8-9/18 | SEPUP 5 Can you feel the DifferenceSEPUP 7 Studying PeopleSEPUP 8 Data TossSEPUP 10 Evaluating Clinical Trials Teacher Choice Technological DesignTeacher Choice Inquiry |
| 9/21-10/2 | SEPUP 12 What’s Happening InsideBuild a Body appSEPUP 14 BreakdownSEPUP 15 Digestion-An Absorbing Tale |
| 10/5-10/16 | Teacher choice Digestive SystemDigestive System GizmoI love My Pancreas-You TubeSEPUP 17 Gas ExchangeTeacher Choice-Respiratory /ExcretoryBreathing/Respiration-Smart-Board Activity |
| 10/19-10/30 | Teacher Choice-Circulatory SystemTeacher Choice Nervous SystemSEPUP 6 Finding the NerveTeachers Choice IntegumentaryCirculatory System GizmoThe Blood Mobile You TubeSchool House Rock ---The??Nervous System/Circulatory System YouTubeSEPUP 16 Support System: Bones, Joints, and MusclesSEPUP 18 The Circulation GameTeachers Choice Body SystemsReview/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 STANDARDS7-3.4Explain 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 organism7-2.5 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 traits7-2.7 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 OutbreakTeacher Choice Disease Disease Spread GizmoSEPUP 35 A License to Learn Interactive MicroscopeSEPUP 36 Looking for Signs of MicrolifeSEPUP 38 Microbes, Plants, and You iCell appSEPUP 39 Cells Alive |
| 11/16-12/4 | SEPUP 40 A Cell Model They Might Be Giants songSEPUP 42 A Closer LookTeacher Choice Cell Parts/ProcessesSEPUP 43 Microbes Under View cellsalive.comSEPUP 45 The World of Microbes Brainpop ProtistTeacher Choice Bacteria/Protist/DiseaseSEPUP 54 Investigating Human Traits Brainpop Heredity |
| 12/7-12/18 | SEPUP 55 Plants Have Genes Too SEPUP 58 Creature Feature Disc Ed Genes Make RabbitsSEPUP 59 Gene ComboSEPUP 60 Mendel, First GeneticistTeacher Choice Genetics Inheritance GizmoSEPUP 61 Gene SquaresTeacher Choice Punnett SquaresSEPUP 62 Analyzing Genetic Data submitt data |
| 1/5-1/8 | SEPUP 63 Show Me The GenesSEPUP 65 Breeding Critters Gene Screen appReview/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 STANDARDS7-4.1 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 shelter7-4.4 Explain the effects of soil quality on the characteristics of an ecosystem7-4.5 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 activities7-4.6 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 FishSEPUP 74 Observing OrganismsSEPUP 83 A Suitable HabitatSEPUP 77 Ups and Downs Zach the Zebra Mussel videoTeacher Choice/Levels of Organization BrainpopEcosysteSEPUP 78 Coughing Up Clues Virtual DissectionSEPUP 70 Eating for Energy food web virtual labTeacher Choice Energy Flow in Ecosystems |
| 2/16-3/1 | SEPUP 81 A Producer's Source of Energy gizmo photosysSEPUP 82 The Cells of ProducersSEPUP 84 Clam CatchSEPUP 85 Is There Room for One More?Teacher Choice/Limiting Factors/Natural DisastersGizmo rabbit population VideosTeacher Choice/Effects of Soil Quality on EcosystemsGizmo porosity Discovery Ed Digging Up DirtTeacher Choice/Location and Movement of Water on Earth's Surface Ground Water SongSoil and Water Essay District Website resourcesTeacher Choice/Conserving ResourcesReview/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 STANDARDS7-5.1 Recognize that matter is composed of extremely small particles called atoms7-5.2 Classify matter as element, compound, or mixture on the basis of its composition7-5.3. Compare the physical properties of metals and nonmetals7-5.4 Use the periodic table to identify the basic organization of elements and groups of elements (including metals, nonmetals, and families7-5.5 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 MatterPOM 2.1, 2.2 Determining DensityPOM 3 Density Predictions Gizmo DensityPOM 6 Applying HeatPOM 7 Just a PhaseTeacher Choice/Physical & Chemical Properties/ChangesPhysical and Chemical Changes Virtual Lab |
| 3/23-4/10 | POM 8 Changing Matter and MassPOM 25 Mass and Chemical ReactionsTeacher 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 CompoundPOM 21 Examining and Grouping Elements |
| 4/11-4/20 | Teacher Choice/Periodic Table app Periodic TableTeacher Choice/ Metals vs. Nonmetals app goREACTTeacher Choice/Acids and Bases Discovery Ed, Gizmo pH Analysis, Acids and Bases Virtual LabReview/Benchmark |
| 4/21-5/4 | PASS Test Prep  |