GRADE 8

SSA – STATEWIDE SCIENCE ASSESSMENT PREPARATION USING GIZMOS

Click Here for the State of Florida Middle School Science – Grade 8 SSA Preparation Shared Gizmos List

Topic	Benchmark	Suggested Gizmos
The Practice of Science	**SC.8.N.1.1:** Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.	Pendulum Clock Real-Time Histogram Sight vs. Sound Reactions Time Estimation
	SC.8.N.1.2: Design and conduct a study using repeated trials and replication.	Diffusion Effect of Temperature on Gender Real-Time Histogram Seed Germination Time Estimation
	SC.8.N.1.3: Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim.	Effect of Environment on New Life Form Hearing: Frequency and Volume Pendulum Clock

	SC.8.N.1.4: Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.	Effect of Environment on New Life Form Effect of Temperature on Gender Pendulum Clock Seed Germination
	SC.8.N.1.6: Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence.	Diffusion Pendulum Clock
Earth in Space and Time	**SC.8.E.5.1:** Recognize that there are enormous distances between objects in space and apply our knowledge of light and space travel to understand this distance.	Solar System Explorer
	SC.8.E.5.3: Distinguish the hierarchical relationships between planets and other astronomical bodies relative to solar system, galaxy, and universe, including distance, size, and composition.	Solar System Explorer
	SC.8.E.5.4: Explore the Law of Universal Gravitation by explaining the role that gravity plays in the formation of planets, stars, and solar systems and in determining their motions.	Orbital Motion – Kepler's Laws
	SC.8.E.5.5: Describe and classify specific physical properties of stars: apparent magnitude (brightness), temperature (color), size, and luminosity (absolute brightness).	H–R Diagram Star Spectra

	SC.8.E.5.7: Compare and contrast the properties of objects in the Solar System including the Sun, planets, and moons to those of Earth, such as gravitational force, distance from the Sun, speed, movement, temperature, and atmospheric conditions.	Comparing Earth and Venus Phases of the Moon Solar System Explorer Tides
	SC.8.E.5.9: Explain the impact of objects in space on each other including: 1. the Sun on the Earth including seasons and gravitational attraction 2. the Moon on the Earth, including phases, tides, and eclipses, and the relative position of each body.	Seasons Around the World Seasons in 3D Seasons: Why do we have them? 2D Eclipse 3D Eclipse Moonrise, Moonset, and Phases Phases of the Moon Tides
Properties of Matter	**SC.8.P.8.1:** Explore the scientific theory of atoms (also known as atomic theory) by using models to explain the motion of particles in solids, liquids, and gases.	Element Builder
	SC.8.P.8.2: Differentiate between weight and mass recognizing that weight is the amount of gravitational pull on an object and is distinct from, though proportional to, mass.	Weight and Mass Beam to Moon (Ratios and Proportions)
	SC.8.P.8.3: Explore and describe the densities of various materials through measurement of their masses and volumes.	Density Experiment: Slice and Dice Density Laboratory Determining Density via Water Displacement

	SC.8.P.8.4: Classify and compare substances on the basis of characteristic physical properties that can be demonstrated or measured; for example, density, thermal or electrical conductivity, solubility, magnetic properties, melting and boiling points, and know that these properties are independent of the amount of the sample.	Circuit Builder Conduction and Convection Density Experiment: Slice and Dice Density Laboratory Magnetism Mineral Identification
	SC.8.P.8.5: Recognize that there are a finite number of elements and that their atoms combine in a multitude of ways to produce compounds that make up all of the living and nonliving things that we encounter.	Element Builder
	SC.8.P.8.6: Recognize that elements are grouped in the periodic table according to similarities of their properties.	Electron Configuration
	SC.8.P.8.7: Explore the scientific theory of atoms (also known as atomic theory) by recognizing that atoms are the smallest unit of an element and are composed of sub-atomic particles (electrons surrounding a nucleus containing protons and neutrons).	Element Builder
Changes in Matter	**SC.8.P.9. 1:** Explore the Law of Conservation of Mass by demonstrating and concluding that mass is conserved when substances undergo physical and chemical changes.	Chemical Equations
	SC.8.P.9.2: Differentiate between physical changes and chemical changes.	Density Experiment: Slice and Dice

	SC.8.P.9.3: Investigate and describe how temperature influences chemical changes.	Cell Energy Cycle Photosynthesis Lab Plants and Snails
Matter and Energy Transformations	**SC.8.L.18.1:** Describe and investigate the process of photosynthesis, such as the roles of light, carbon dioxide, water and chlorophyll; production of food; release of oxygen.	Photosynthesis Lab Cell Energy Cycle
	SC.8.L.18.2: Describe and investigate how cellular respiration breaks down food to provide energy and releases carbon dioxide.	Cell Energy Cycle
	SC.8.L.18.3: Construct a scientific model of the carbon cycle to show how matter and energy are continuously transferred within and between organisms and their physical environment.	Cell Energy Cycle