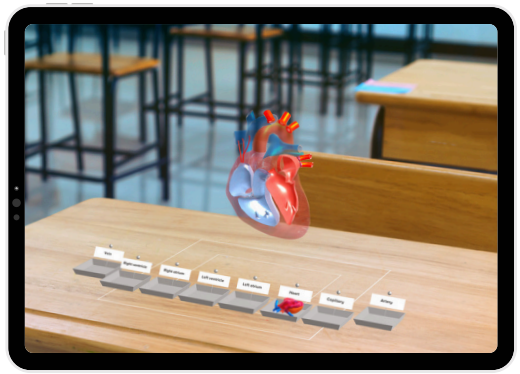
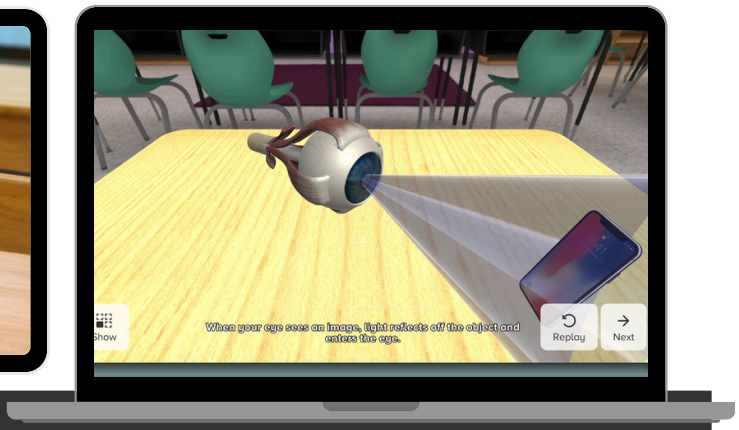
Mc Graw Hill AR

MCGRAW HILL AR ALIGNMENT TO FLORIDA B.E.S.T. STANDARDS FOR SCIENCE





ACTIVITY	FLORIDA B.E.S.T. SCIENCE
Simple Machines	SC.3.P.10.2: Recognize that energy has the ability to cause motion or create change. SC.3.N.3.3: Recognize that all models are approximations of natural phenomena; as such, they do not perfectly account for all observations. SC.5.P.13.4: Investigate and explain that when a force is applied to an object but it does not move, it is because another opposing force is being applied by something in the environment so that the forces are balanced. SC.5.N.1.1: Define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types such as: systematic observations, experiments requiring the identification of variables, collecting and organizing data, interpreting data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions. SC.5.N.1.3: Recognize and explain the need for repeated experimental trials.
Human Eye	SC.3.P.10.3 Demonstrate that light travels in a straight line until it strikes an object or travels from one medium to another. SC.5.P.10.1 Investigate and describe some basic forms of energy, including light, heat, sound, electrical, chemical, and mechanical. SC.5.L.14.1 Identify the organs in the human body and describe their functions, including the skin, brain, heart, lungs, stomach, liver, intestines, pancreas, muscles and skeleton, reproductive organs, kidneys, bladder, and sensory organs. SC.6.L.14.5 Identify and investigate the general functions of the major systems of the human body (digestive, respiratory, circulatory, reproductive, excretory, immune, nervous, and musculoskeletal) and describe ways these systems interact with each other to maintain homeostasis. SC.7.P.10.2 Observe and explain that light can be reflected, refracted, and/or absorbed. SC.912.P.10.22 Construct ray diagrams and use thin lens and mirror equations to locate the images formed by lenses and mirrors. SC.912.L.14.40 Describe the histology of the major arteries and veins of systemic, pulmonary, hepatic portal, and coronary circulation.
Photosynthesis	SC.3.L.14.1 Describe structures in plants and their roles in food production, support, water and nutrient transport, and reproduction. SC.5.L.14.2 Compare and contrast the function of organs and other physical structures of plants and animals, including humans, for example: some animals have skeletons for support -- some with internal skeletons others with exoskeletons -- while some plants have stems for support. SC.6.L.14.3 Recognize and explore how cells of all organisms undergo similar processes to maintain homeostasis, including extracting energy from food, getting rid of waste, and reproducing. SC912.L.18.7 Identify the reactants, products, and basic functions of photosynthesis.
Law of Reflection	SC.3.P.10.3 Demonstrate that light travels in a straight line until it strikes an object or travels from one medium to another. SC.5.P.10.1 Investigate and describe some basic forms of energy, including light, heat, sound, electrical, chemical, and mechanical. SC.6.P.11.1 Explore the Law of Conservation of Energy by differentiating between potential and kinetic energy. Identify situations where kinetic energy is transformed into potential energy and vice versa. SC.7.P.10.2 Observe and explain that light can be reflected, refracted, and/or absorbed. SC.912.P.10.2 Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.

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Glacier	SC.4.E.6.4 Describe the basic differences between physical weathering (breaking down of rock by wind, water, ice, temperature change, and plants) and erosion (movement of rock by gravity, wind, water, and ice). SC.6.E.6.1 Describe and give examples of ways in which Earth's surface is built up and torn down by physical and chemical weathering, erosion, and deposition. SC.6.E.6.2 Recognize that there are a variety of different landforms on Earth's surface such as coastlines, dunes, rivers, mountains, glaciers, deltas, and lakes and relate these landforms as they apply to Florida.
Bird Beak Bonanza	SC.5.L.15.1: Describe how, when the environment changes, differences between individuals allow some plants and animals to survive and reproduce while others die or move to new locations. SC.5.L.17.1: Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.
Respiratory System	SC.5.L.14.1 Identify the organs in the human body and describe their functions, including the skin, brain, heart, lungs, stomach, liver, intestines, pancreas, muscles and skeleton, reproductive organs, kidneys, bladder, and sensory organs. SC.6.L.14.5 Identify and investigate the general functions of the major systems of the human body (digestive, respiratory, circulatory, reproductive, excretory, immune, nervous, and musculoskeletal) and describe ways these systems interact with each other to maintain homeostasis. SC.912.L.14.40 Describe the histology of the major arteries and veins of systemic, pulmonary, hepatic portal, and coronary circulation.
Circulatory System	SC.5.L.14.1 Identify the organs in the human body and describe their functions, including the skin, brain, heart, lungs, stomach, liver, intestines, pancreas, muscles and skeleton, reproductive organs, kidneys, bladder, and sensory organs. SC.6.L.14.5 Identify and investigate the general functions of the major systems of the human body (digestive, respiratory, circulatory, reproductive, excretory, immune, nervous, and musculoskeletal) and describe ways these systems interact with each other to maintain homeostasis. SC.912.L.14.40 Describe the histology of the major arteries and veins of systemic, pulmonary, hepatic portal, and coronary circulation.
v8 Engine	SC.5.P.10.1 Investigate and describe some basic forms of energy, including light, heat, sound, electrical, chemical, and mechanical. SC.7.P.11.2 Investigate and describe the transformation of energy from one form to another. SC.912.P.10.2 Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.
Tornado Factory	SC.6.E.7.5: Explain how energy provided by the Sun influences global patterns of atmospheric movement and the temperature differences between air, water, and land. SC.6.E.7.8: Describe ways human beings protect themselves from hazardous weather and sun exposure. SC.912.E.7.5: Predict future weather conditions based on present observations and conceptual models and recognize limitations and uncertainties of such predictions. SC.912.E.7.6: Relate the formation of severe weather to the various physical factors.
Animal Cell Lab	SC.6.L.14.4: Compare and contrast the structure and function of major organelles of plant and animal cells, including cell wall, cell membrane, nucleus, cytoplasm, chloroplasts, mitochondria, and vacuoles. SC.6.L.14.3: Recognize and explore how cells of all organisms undergo similar processes to maintain homeostasis, including extracting energy from food, getting rid of waste, and reproducing.
Big Dig	SC.7.E.6.4: Explain and give examples of how physical evidence supports scientific theories that Earth has evolved over geologic time due to natural processes.

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Sonic Shapes	SC.7.P.10.3: Recognize that light waves, sound waves, and other waves move at different speeds in different materials. SC.912.P.10.20: Describe the measurable properties of waves and explain the relationships among them and how these properties change when the wave moves from one medium to another.
Seismic Shake	SC.7.E.6.5: Explore the scientific theory of plate tectonics by describing how the movement of Earth's crustal plates causes both slow and rapid changes in Earth's surface, including volcanic eruptions, earthquakes, and mountain building. SC.7.E.6.7: Recognize that heat flow and movement of material within Earth causes earthquakes and volcanic eruptions, and creates mountains and ocean basins. SC.912.PE.3.3: Design and implement a simple simulation that is representative of a natural phenomenon. SC.5.PE.3.1: Identify the concepts illustrated by a simulation that offers problems and solutions.
Periodic Table	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. SC.8.P.8.6: Recognize that elements are grouped in the periodic table according to similarities of their properties. SC.912.P.8.5: Relate properties of atoms and their position in the periodic table to the arrangement of their electrons SC.912.N.2.4: Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.
Fibonacci Forest Quest	SC.912.L.15.13: Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success. SC.912.L.15.14: Discuss mechanisms of evolutionary change other than natural selection such as genetic drift and gene flow. Math: MA.K12.MTR.5.1: Use patterns and structure to help understand and connect mathematical concepts. MA.912.LT.5.5: Explore relationships and patterns and make arguments about relationships between sets using Venn Diagrams.
Fireworks Factory	SC.912.P.8.5: Relate properties of atoms and their position in the periodic table to the arrangement of their electrons. SC.912.P.10.7: Distinguish between endothermic and exothermic chemical processes. SC.912.P.10.18: Explore the theory of electromagnetism by comparing and contrasting the different parts of the electromagnetic spectrum in terms of wavelength, frequency, and energy, and relate them to phenomena and applications. SC.912.N.1.1: Define a problem based on a specific body of knowledge and conduct systematic observations.
Electric Escape	SC.912.P.10.1: Differentiate among the various forms of energy and recognize that they can be transformed from one form to others. SC.912.P.10.2: Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.