



| SIMULATION | GRADE LEVEL | | | | DESCRIPTION |
|------------------------------------|-------------|------|-----|-----|--|
| | Pri. | Int. | Jr. | Sr. | |
| MATH | | | | | |
| Composite Solids - Volume | | x | x | | Examining and breaking apart twelve complex shapes to find the volume of each shape. |
| Conic Sections | | | x | x | Creates an ellipse, parabola and hyperbola by slicing two cones tip-to-tip. |
| Estimation | x | x | | | Rounding and sampling using a referent. |
| Liquid Measurement | x | x | | | Compares cups, pints, quarts, and gallons. |
| Making Cubes | x | x | | | Uses cubes to develop strategies and to see spatial relationships. |
| Polyhedra (disassembled 3D shapes) | x | x | x | x | Shows ten nets and the shape each forms when folded edge on edge. |
| Shape Identification | x | x | x | | Identifying simple 2D and 3D shapes in a playground scene. |
| Shape Measurement | | x | x | x | Finding perimeter, circumference, and surface area of 2D shapes; volume and surface area of 3D shapes. |
| Slope | | | x | x | Reviews the slope equation. |
| Spatial Orientation | | x | x | | Identifying complex shapes when rotated in a specific direction. |
| Symmetry | x | x | | | Explores line, turn symmetry and hole punching. |
| US Currency | x | x | | | Recognizing, counting, comparing, and using money. |
| SOCIAL STUDIES | | | | | |
| <u>Geography</u> | | | | | |
| United States | x | x | x | x | Capitol, flag, nickname, motto, tree, bird, date of statehood for each state. |
| SCIENCE | | | | | |
| <u>Astronomy</u> | | | | | |
| Earth | x | x | x | x | Earth's layers, poles, historic glacial movement and more. |
| Lunar Landings | | x | x | x | Launch a Saturn V rocket and land on the moon with Apollo missions 11-17. |
| Meteoroid | x | x | x | x | Follow a meteor's path as it hurtles toward Earth. |
| Moon Phases | | x | x | x | Follow the moon's phases through a lunar month. |
| Solar System - Introduction | x | x | x | | Visit 8+ planets and a comet as they orbit the sun. |

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| SCIENCE Continued | | | | | |
| <u>Biology</u> | | | | | |
| Brain - Electrical | x | x | x | x | Levels of electrical activity on the brain's surface. |
| Brain - Sectional | x | x | x | x | Reviews the main sections of the brain. |
| Cells | | x | x | x | Cell unit covering both detailed views of the plant and animal cells. |
| Ear | | x | x | x | Demonstrates how sound moves through the ear and associated parts. |
| Earthworm Anatomy | | x | x | x | Detailed earthworm anatomy and systems. |
| Environmental Organization | | x | x | x | Biosphere, ecosystem, community, population, and organism levels of organization. |
| Eukaryotic Cell - Animal | | x | x | x | Detailed model of an animal cell. |
| Frog Anatomy | | x | x | x | Very detailed frog simulation with identification of all parts and systems. Has two animations. |
| Frog Dissection | | x | x | x | Separates frog parts as in a dissection |
| Jellyfish Anatomy | | x | x | x | Detailed jellyfish and life stages animation. |
| Protozoa - Complete | | x | x | x | Provides complete unit on protozoa. |
| Protozoa - Euglena | | x | x | x | Details the components of a euglena. |
| Protozoa - Paramecium | | x | x | x | Parts of a paramecium. |
| Phyla House | | | x | x | Highlights examples of organisms within certain phyla. |
| Scorpion Anatomy | | x | x | x | Detailed scorpion anatomy including animation. |
| Sea Star Anatomy | | x | x | x | Detailed sea star simulation. |
| Skeleton | x | x | x | x | Basic skeleton with labels. |
| Squid Anatomy | | x | x | x | Detailed squid simulation. |
| <u>Botany</u> | | | | | |
| Eukaryotic Cell - Plant | | x | x | x | Detailed plant cell with individual components. |
| Fall Leaves | x | x | x | x | Compares deciduous trees and evergreens. |
| Flower Anatomy | x | x | x | | Contains the basic flower anatomy in English and Spanish. |
| Green Plant Lifecycle | x | x | x | x | Growth progression of a lima bean from seed to reproductive mature plant. |
| Photosynthesis I | x | x | x | x | Identification of photosynthesizing organisms, process and components of photosynthesis, and energy storage. |
| Photosynthesis II | | | | x | Advanced photosynthesis process, includes Calvin Cycle and light-dependent reactions. |
| Pollination | x | x | x | x | Attractors, pollinators, angiosperm/gymnosperm. |
| Tree Layers | x | x | x | x | Reviews the layers of the tree. |

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| <u>Chemistry</u> | | | | | |
| Atomic Structure | | | x | x | The periodic table, bonding, and the basic atomic structure. |
| States of Matter | | x | x | x | Properties of gases, liquids, solids and plasma. |
| Sub-atomic Structure | | | x | x | Examines the detailed structure of the helium and silicon atoms. |
| <u>Genetics</u> | | | | | |
| DNA | | | | x | Complete unit on DNA, including exercises. |
| <u>Geology</u> | | | | | |
| Continental Drift | x | x | x | x | Land masses drift from Pangea to current locations. |
| Crystal Systems | | | | | Details and gives examples of crystal systems. |
| Geological Timeline | | x | x | x | Visit 18 different time periods and see examples of organisms within their environments. |
| Hotspots | x | x | x | x | A chain of extinct volcanoes follows plate movement. |
| Plate Tectonics | x | x | x | x | Displays three faults and their movements. |
| Rivers | | x | x | | Explore youthful, mature, and old rivers, a delta and an alluvial fan. |
| Subduction | x | x | x | x | An oceanic crust is drawn beneath a continental crust. |
| <u>Meteorology</u> | | | | | |
| Hurricane | x | x | x | x | Experience category 1-5 hurricanes. |
| <u>Physical Science</u> | | | | | |
| Simple Machines - Inclined Plane & Wedge | x | x | x | | Identifies, describes function and shows applications of an inclined plane and wedge. |
| Simple Machines - Lever | x | x | x | | Identifies, describes the function and shows applications of a lever. |
| Simple Machines - Pulley | x | x | x | | Identifies, describes the function, shows the advantage, and applications of a pulley. |
| Simple Machines - Screw | x | x | x | | Identifies, describes function and shows applications of a screw. |
| Simple Machines - Wheel & Axle | x | x | x | | Identifies, describes function and shows applications of a wheel and axle. |