High School

Strand	Concept	Activity Object	Type
Physical Science	Physics	Flying Using Vector Addition	Concept Development
		Balanced and Unbalanced Forces	Experiment
		Identifying Forces	Concept Development
		Combining Perpendicular Forces	Procedure Utilization
		Combining Non-perpendicular Forces	Procedure Utilization
		Relative Motion	Dynamic Modeling
		Period of a Pendulum	Concept Development
		Projectile Motion	Concept Development
		Problem Solving on One Dimensional Motion with Constant Acceleration	Problem Solving
		Problem Solving on Newton's Second Law	Math in Science
		Metric System and Dimensional Analysis	Math in Science
		SI Units and Dimensional Analysis	Math in Science
		Projectiles Launched Vertically	Concept Development
		Projectiles Launched Horizontally	Concept Development
		The Physics of Rockets	Dynamic Modeling
		Concept of Inertia	Concept Development
		Analyzing Motion in a Medium	Concept Development
		Graphs of Projectile Motion	Concept Development
		Graphs of Accelerated Motion: Projectiles Launched Vertically	Concept Development
		Newton's Third Law of Motion	Experiment
		Free Fall	Experiment
		Space Objects: Gravity and Motion	Concept Development
		Space Objects Interaction Explorer	Concept Development
		Designing an Electric Motor	Concept Development
		Nuclear Energy: Fission	Concept Development
	Chemistry	Using Solubility to Identify Substances	Concept Development
		The Density of Marbles	Experiment
		Physical Properties	Concept Development
		Concentration and Temperature Effect on Conductivity	Experiment
		Electron Configuration	Math in Science
		Photoelectric Effect	Dynamic Modeling
		Calculating Atomic Mass	Concept Development
		Polarity	Concept Development
		Chemical Formulas and Naming Ionic Compounds	Concept Development
		Chemical Formulas and Naming Covalent Compounds	Concept Development
		Atomic Radius in the Periodic Table	Concept Development
		Electron Configuration and the Tendency to Gain or Lose Electrons	Concept Development
		Electronegativity on Periodic Table	Concept Development
		Ionization Energy on Periodic Table	Concept Development
		Lewis Dot Structure	Concept Development
		Electronegativity and Chemical Bonding	Concept Development
		Crystal Lattice	Concept Development
		Comparing Ionic and Covalent Compounds	Concept Development
		The Number of Moles - Volume Relationship of Gases: Avogadro's Law	Experiment
		The Pressure-Volume Relationship of Gases: Boyle's Law	Experiment
		Charles' Law of Gas	Experiment
		Partial Pressure	Experiment
		The Ideal Gas Law	Concept Development
		Graham's Law	Concept Development
		Vapor Pressure	Concept Development

Science Scope Grades 6-12

High School

Strand	Concept	Activity Object	Type
Physical Science	Chemistry	Heating Curves	Experiment
		Separation Methods: Density Difference	Concept Development
		Separation Methods: Distillation	Concept Development
		Molecular Interactions and Solubility	Concept Development
		The Concentration of Solutions: Molarity and Molality	Math in Science
		The Concentration of Solutions: Mass Fraction and Mass Percentage	Math in Science
		Factors Affecting the Solubility of Gases	Experiment
		Solubility	Experiment
		Introduction to Titration: Neutralization	Experiment
		Precipitation Reactions	Concept Development
		Writing and Balancing Chemical Equations	Concept Development
		The Concept of Moles	Concept Development
		Calculating Moles	Concept Development
		Law of Multiple Proportions	Concept Development
		Conservation of Mass in Chemical Reactions	Experiment
		Finding Molecular Formula by Using Mole and Molecular Mass	Concept Development
		Factors Affecting the Rate of Chemical Reactions	Experiment
		Batteries, Chemicals, and Potential Difference	Experiment
		Chemical Equilibrium - Le Chatelier's Principle	Experiment
Life Science	Biology	The Energy Flow from Producer to Consumer	Concept Development
		Diffusion	Experiment
		Cell Theory and Cell Types	Concept Development
		Comparing Plant and Animal Cells	Concept Development
		Surface Area to Volume Ratio in Organisms	Concept Development
		Structure and Function of Cell Membrane	Concept Development
		Osmosis	Experiment
		Homeostasis	Concept Development
		The Effect of Temperature on Enzyme Activity	Concept Development
		Substrate Specificity of Enzyme	Experiment
		Investigating Photosynthesis: The Van Helmont Experiment	Concept Development
		Investigating Photosynthesis with Priestley and Ingenhousz	Concept Development
		Chemosynthesis	Concept Development
		Plants' Needs for Photosynthesis	Experiment
		Factors Influencing Photosynthesis: Carbon Dioxide	Experiment
		Factors Influencing Photosynthesis: Intensity and the Color of Light	Experiment
		Factors Influencing Photosynthesis: Temperature	Experiment
		The Cell Cycle and Mitosis	Concept Development
		Making Sperm and Eggs: Meiosis	Concept Development
		Hammerling's Experiment with Cells	Experiment
		The Nucleus and Control of a Cell: Hammerling's Experiment with Algae	Experiment
		Protein Synthesis	Concept Development
		Domains and Kingdoms	Concept Development
		Classification of Animals	Concept Development
		Hidden Heroes: Bacteria	Concept Development
		Plant Survival: The Xeroscape Garden	Concept Development

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Science Scope

Grades 6-12

The Adaptive Curriculum digital solution helps every student succeed, by fostering the confidence and deep understanding that drive student improvement.

Middle School

Strand	Concept	Activity Object	Type
Physical Science	Nature of Matter	Energy and Matter: A Sci-Fi Adventure	Concept Development
		The Density of Marbles	Experiment
		Physical Properties of Substances	Concept Development
		The Thermal Expansion of Metals	Experiment
		A Musical Introduction to Chemical Formulas	Concept Development
		Atomic Model History: Early Ideas to Thomson	Concept Development
		Atomic Model History: From Rutherford to Bohr	Concept Development
		Electron Energy Levels	Concept Development
		Chemical Bonding: Covalent Compounds	Concept Development
		Chemical Compounds: Ionic Bonding	Concept Development
		Putting the Elements in the Periodic Table	Concept Development
		Physical Properties and the Periodic Table	Concept Development
	States of Matter	Properties of Solids, Liquids, and Gases	Concept Development
		Melting and Boiling Point: Different Materials, Different Amounts	Experiment
		Melting and Boiling Point: Heating Curves	Experiment
	Changes of Matter	Conservation of Mass in Chemical Reactions	Experiment
		Physical and Chemical Changes	Concept Development
		Endothermic and Exothermic Reactions	Experiment
	Energy	Renewable Energy Sources	Concept Development
		Nuclear Energy: Fission	Concept Development
		Rollercoaster Design: Potential and Kinetic Energy	Concept Development
		Heat Conduction of Different Materials	Concept Development
		Transformation of Energy	Concept Development
		Heat Transfer in a Truck Engine	Concept Development
		Heat Conduction and the Frying Pan	Experiment
		Light Intensity and Distance from the Source	Experiment
		Energy Conversions in a Power Plant	Concept Development
	Mixtures	Separation of Mixtures	Concept Development
		Solubility	Experiment
	Acids and Bases	The Properties of Acids	Experiment
		The Properties of Bases	Experiment
		Identifying pH of Substances	Experiment

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Middle School

Strand	Concept	Activity Object	Type
Physical Science	**Electricity**	Electric Force	Experiment
		Voltage, Current, and Resistance: Ohm's Law	Experiment
		Resistance in Different Wires	Experiment
		Building Circuits: Light Bulbs in Series	Concept Development
		Building Circuits: Light Bulbs in Parallel	Concept Development
		Electrical Energy Consumed by a Light Bulb	Experiment
		Electric Motor	Experiment
	Force and Motion	Newton's Second Law of Motion	Experiment
		Balanced and Unbalanced Forces	Experiment
		Newton's Third Law of Motion	Experiment
		Boom! How Far is the Lightning?	Concept Development
		Free Fall	Experiment
		Springs Stretch with Force: Hooke's Law	Experiment
		Truck On: Position and Velocity-Time Graphs	Concept Development
		Flight of the Arrow	Experiment
		Driving and Velocity Graphs	Concept Development
		Properties of Waves	Concept Development
		Effects of Different Surfaces on Motion	Concept Development
		The Advantages of Friction	Concept Development
		Magnetic Field of a Magnet	Experiment
		The Magnetic Field of a Coil	Experiment
		Escape Velocity: Launching Rockets	Concept Development
		Magnetic Force	Experiment
		Buoyant Force	Experiment
		Buoyancy and Archimedes' Principle	Experiment
	Work and Energy	Work	Experiment
		Gravitational Potential Energy: Seeing the Impact in Sand	Experiment
		Kinetic Energy: How It Changes with Mass and Speed	Experiment
		Simple Machines: Lever	Experiment
	Pressure	Pressure in Liquids	Experiment
	Light	Shadow Formation	Experiment
		Reflection of Light from Plane Mirrors	Experiment
		Color Absorption and Reflection: Light into Heat	Experiment
		Electromagnetic Spectrum	Concept Development
		Color Mixing: Paints and Light	Concept Development
		Refraction of Light	Concept Development
		Light Reflection Puzzles	Concept Development

Science Scope Grades 6-12

Middle School

Strand	Concept	Activity Object	Type
Earth and Space Science	**Earth Materials and Shaping the Earth Surface**	Plate Tectonics: The Hawaiian Islands	Concept Development
		Plate Tectonics: The Himalayas	Concept Development
		Plate Tectonics: The Atlantic Ocean	Concept Development
		Pangaea: Image of Earth 250 Million Years Ago	Concept Development
		Determining Planet Layers from Seismic Waves	Concept Development
		Earthquakes: Measuring Magnitude	Concept Development
		Earthquake! Where Was It?	Concept Development
		Finding the Global Location Using Latitudes and Longitudes	Concept Development
		The Rock Cycle	Concept Development
		Soil Erosion Investigations	Experiment
	Resources in the Earth System	Solar Energy: Design a Solar Car	Concept Development
		Water Conservation	Concept Development
		Nonrenewable Energy Sources	Concept Development
		Drilling into Groundwater	Concept Development
	Weather	Greenhouse Effect	Experiment
		Sea and Land Breezes	Concept Development
		Weather Prediction	Concept Development
		Hurricane Formation	Concept Development
	Earth and Universe	Formation of Seasons	Concept Development
		Solar and Lunar Eclipses	Concept Development
		Space Objects: Gravity and Motion	Concept Development
		Space Objects Interaction Explorer	Concept Development
		Comets	Concept Development
		Make a Telescope: See the Moon	Concept Development
		Black Holes	Concept Development
		Star Types: In Search of Habitability	Concept Development
Life Science	**Heredity and Genetics**	Mendel's Experiment	Experiment
		Find the Heir: Genetics Applied	Concept Development
		Genetic Inheritance in People	Concept Development
		DNA Structure	Concept Development
	Evolution, Diversity and Classification	Life from Nonliving Things? Redi's Experiment	Experiment
		Spontaneous Generation: Pasteur's Experiment	Experiment
		Functions of Roots	Concept Development
		Natural Selection	Concept Development
		Sorting and Identifying Animal Fossils	Concept Development
		Analysis of Fossil Evidence	Concept Development
		Biological Adaptation: Bird Beaks	Concept Development
		Classification of Animals	Concept Development

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Middle School

Strand	Concept	Activity Object	Type
Life Science	**Structure and Function in Living Systems**	Plants' Needs for Photosynthesis	Experiment
		Factors Influencing Photosynthesis: Light Intensity and Amount of Carbon Dioxide	Experiment
		Factors Influencing Photosynthesis: Temperature and the Color of Light	Experiment
		Aerobic Respiration: What Produces Carbon Dioxide?	Experiment
		The Nucleus and Control of a Cell: Hammerling's Experiment with Algae	Experiment
		Aerobic Respiration in Plants	Experiment
		Function of the Nucleus: Hammerling's Experiment with Algae	Experiment
		Exploring Cells with a Microscope	Concept Development
		Agent Organelles	Concept Development
		Comparing Plant and Animal Cells	Concept Development
		From One Cell to Two: Mitosis	Concept Development
		Bees, Flowers and Pollination	Concept Development
		Making Sperm and Eggs: Meiosis	Concept Development
		Breeding Zebra Danio Fish: An Introduction to Sexual Reproduction	Concept Development
		Identifying Cancerous Cells	Concept Development
		Cancer Treatment	Concept Development
		Muscles and Pinocchio's Arm	Concept Development
		Joints	Concept Development
		The Structure of Bones	Interactive 3D Model
		Blood Typing and Transfusions	Concept Development
		Digestive System	Concept Development
		Human Body Systems	Concept Development
		Dancing with the Bees: Animal Communication	Concept Development
		The Nervous System	Concept Development
		Eye Structures and Problems	Concept Development
		Hear with the Ear	Interactive 3D Model
		Vision and the Eye	Interactive 3D Model
	Ecosystems	Environmental Factors that Affect the Growth of Molds	Experiment
		Habitat Designer: Panda	Concept Development
		Habitat Designer: Sea Turtle	Concept Development
		Mutualism	Concept Development
		Commensalism	Concept Development
		Parasitism	Concept Development
		The Energy Flow from Producer to Consumer	Concept Development
		Graphical Visualization of Air Pollution	Concept Development