

MODULE OVERVIEW (GRADES K - 6)

PHYSICAL SCIENCE	EARTH SCIENCE	LIFE SCIENCE
<p>WOOD & PAPER Students observe, compare, and describe different kinds of wood and paper, and find out what happens when these materials interact with other materials. They also discover applications for the materials in the real world</p>	<p>NO KIT</p>	<p>ANIMALS TWO BY TWO Students observe, describe, and compare the structures and behavior of organisms such as goldfish & guppies, land and water snails, and earthworms.</p>
<p>SOLIDS AND LIQUIDS Students investigate and describe the properties of solids and liquids and observe and record changes that occur when solids and liquids interact, including mixing, dissolving, layering and evaporating.</p>	<p>AIR & WEATHER Students study the properties of air and find that it is matter and takes up space. They use basic weather tools to gather information about temperature, rainfall, wind, clouds and seasons.</p>	<p>NEW PLANTS Students experience the diversity of life in the plant kingdom. They observe the structures of flowering plants and discover ways to propagate new plants from seeds and vegetative organs. They describe changes as the plants grow and develop.</p>
<p>BALANCE & MOTION Students explore stable (balanced) and unstable systems. They explore 2 classes of motion – spinning and rolling- through trial and error and systematic investigations. They begin to develop a sense of variables, which they control to produce the desired outcomes.</p>	<p>PEBBLES, SAND, & SILT Students study the properties of rocks and different kinds of soil. They group and separate rocks and learn simple ways to sort rocks using tools like screens and techniques such as mixing with water. They explore natural resources used as building materials .</p>	<p>INSECTS Students observe and compare insect structures and behaviors in different stages of the life cycle of a variety of insects (darkling beetles, milkweed bugs, wax moths, painted lady butterflies)</p>
<p>PHYSICS OF SOUND Students investigate sound as a product of a vibrating object. They explore the variables that determine sound pitch and amplification and compare how sound travels through air, water and solids. They compare the many ways animals produce and receive sounds. They observe how electricity can produce sound.</p>	<p>EARTH MATERIALS Students gain firsthand experience with 12 of the most important rocks and minerals on Earth, discovering that rocks are made of combinations of minerals. Students use properties of minerals & rocks to identify and organize earth materials and explore them as natural resources.</p>	<p>STRUCTURES OF LIFE Students work with living organisms to explore different functions: growth, survival, and reproduction. Students compare properties of seeds and fruits, germinate seeds and grow plants hydroponically to observe plant life cycle. They maintain crayfish and land snails, and observe and compare their structures and behaviors.</p>
<p>MAGNETISM & ELECTRICITY Students explore permanent magnetism, electric circuits (series and parallel), and electromagnetism through free exploration and systematic investigations. They observe and compare electric and magnetic phenomena. They apply knowledge to design a telegraph.</p>	<p>WATER Students investigate the properties of water in its three common states –solid, liquid, and gas. They explore components of the water cycle. Treatment of drinking water and the use of water in waterwheels to do work are explored.</p>	<p>HUMAN BODY Students investigate the human skeleton with direct observation, photographs, diagrams, and models. They discover how different tissues (bone, muscle, ligament, tendon) work together to provide movement, protection, and structure. Students learn how the body coordinates responses to tactile and visual stimuli .</p>
<p>MODELS AND DESIGNS Students create scientific models to help them think productively about complex problems. They create models to explain the relationship of parts in systems that are not accessible (black boxes and humdingers). They design and build model carts that respond to a series of engineering challenges.</p>	<p>STORIES IN STONE (GEMS) By examining actual specimens of the Earth's crust, students learn about basic processes that have shaped and transformed the Earth over billions of years. Student experiences with rocks and minerals, combined with simulations of Earth processes lead to understanding of how rocks form, rock cycles and plate tectonics.</p>	<p>ENVIRONMENTS Students gain experience with living and nonliving environmental factors in terrestrial and aquatic system. They maintain organisms in the classroom to develop concepts of range of tolerance and optimum conditions for survival of populations</p>
<p>LEVERS & PULLEYS Students conduct investigations using two kinds of simple machines, levers and pulleys. They set up systems, measure outcomes, and record using conventional diagrams. They relate force needed to lift a load to the advantage resulting from the simple machines.</p>	<p>LANDFORMS Students use stream tables to investigate the variables that influence erosion and deposition of earth materials (amount of water, steepness of slope, time) and the creation of landforms. Students assemble models of mountains and create topographic maps.</p>	<p>FOOD & NUTRITION Students work with laboratory tools and techniques to test food using indicators to determine acid, vitamin C , fat and sugar content. They use knowledge and nutritional information from product labels to plan and evaluate menus. They explore relationships between the foods they eat and personal health.</p>