Sylvan Union School District

Kindergarten Expectations

Science and Social Science

Physical Sciences	*Life Sciences*	*Earth Sciences*	*Investigation and Experimentation*
Properties of materials can be observed, measured, and predicted.	**Different types of plants and animals inhabit the Earth.**	**The Earth is composed of land, air and water.**	**Scientific progress is made by asking meaningful questions and conducting careful investigations.**
❑ Objects can be described in terms of the materials they are made of (clay, cloth, paper, etc.) and their physical properties (color, size, shape, weight, texture, flexibility, attraction to magnets, floating and sinking, etc.). ❑ Water can be a liquid or a solid and can be made to change back and forth from one form to the other. ❑ Water left in an open container evaporates (goes into the air), but water in a closed container does not.	❑ Observe and describe similarities and differences in the appearance and behavior of plants and of animals (e.g., seed-bearing plants, birds, fish, insects). ❑ Stories sometimes give plants and animals attributes they do not really have. ❑ Identify major structures of common plants and animals (e.g., stems, leaves, roots, arms, wings, legs).	❑ Characteristics of mountains, rivers, oceans, valleys, deserts, and local landforms. ❑ Changes in weather occur from day to day and over seasons, affecting the Earth and its inhabitants. ❑ Identify resources from the Earth that are used in everyday life, and know that many resources can be conserved.	❑ Observe common objects using the five senses. ❑ Describe the properties of common objects. ❑ Describe the relative position of objects using one reference (e.g., above or below). ❑ Compare and sort common objects based on one physical attribute (including color, shape, texture, size, weight). ❑ Communicate observations orally and in drawings.

Social Science

Students are introduced to geographic and historical connections between the world today and the world long ago, including the stories of ordinary and extraordinary people.

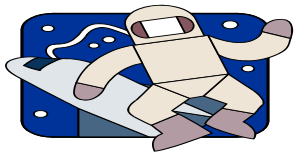
- ❑ citizenship
- ❑ national symbols
- ❑ the calendar
- ❑ traffic symbols
- ❑ basic map skills
- ❑ national holidays, i.e., Washington's and Lincoln's birthdays)

Sylvan Union School District
First Grade Expectations
Science and Social Science

Physical Sciences	*Life Sciences*	*Earth Sciences*	*Investigation and Experimentation*
Materials come in different forms (states) including solids, liquids, and gases.	**Plants and animals meet their needs in different ways.**	**Weather can be observed, measured and described.**	**Scientific progress is made by asking meaningful questions and conducting careful investigations.**
❑ Solids, liquids, and gases have different properties. ❑ The properties of substances can change when the substances are mixed, cooled, or heated.	❑ Different plants and animals inhabit different kinds of environments and have external features that help them thrive in different kinds of places. ❑ Plants and animals both need water; animals need food, and plants need light. ❑ Animals eat plants or other animals for food and may also use plants or even other animals for shelter and nesting. ❑ Infer what animals eat from the shapes of their teeth (e.g., sharp teeth: eats meat; flat teeth: eats plants). ❑ Roots are associated with the intake of water and soil nutrients, green leaves with making food from sunlight.	❑ Use simple tools (e.g., thermometer, wind vane) to measure weather conditions and record changes from day to day and over the seasons. ❑ The weather changes from day to day, but trends in temperature or of rain (or snow) tend to be predictable during a season. ❑ The sun warms the land, air, and water.	❑ Draw pictures that portray some features of the thing being described. ❑ Record observations and data with pictures, numbers, and/or written statements. ❑ Record observations on a bar graph. ❑ Describe the relative position of objects using two references (e.g., above and next to, below and left of). ❑ Make new observations when discrepancies exist between two descriptions of the same object or phenomena.

Social Science

Students continue to learn about rights and responsibilities in today's world. In the classroom, decisions are made with respect for individual responsibility, for other people and for the rules by which we all must live.
❑ sportsmanship ❑ map and globe skills ❑ community building ❑ common heritage ❑ traditions ❑ linking past and present ❑ basic economic principles



Sylvan Union School District

Second Grade Expectations for Science & Social Science

Physical Sciences	*Life Sciences*	*Earth Sciences*	*Investigation and Experimentation*
The motion of objects can be observed and measured.	**Plants and animals have predictable life cycles.**	**Earth is made of materials that have distinct properties and provide resources for human activities.**	**Scientific progress is made by asking meaningful questions and conducting careful investigations.**
❑ The position of an object can be described by locating it relative to another object or the background. ❑ An object's motion can be described by recording the change in its position over time. ❑ The way to change how something is moving is to give it a push or a pull. The size of the change is related to the strength, or the amount of "force," of the push or pull. ❑ Tools and machines are used to apply pushes and pulls (forces) to make things move. ❑ Objects near the Earth fall to the ground unless something holds them up. ❑ Magnets can be used to make some objects move without being touched. ❑ Sound is made by vibrating objects and can be described by its pitch and volume.	❑ Organisms reproduce offspring of their own kind. The offspring resemble their parents and each other. ❑ The sequential stages of life cycles are different for different animals, for example butterflies, frogs, and mice. ❑ Many characteristics of an organism are inherited from the parents. Some characteristics are caused by, or influenced by, the environment. ❑ There is variation among individuals of one kind within a population. ❑ The germination, growth, and development of plants can be affected by light, gravity, touch, or environmental stress. ❑ In plants, flowers and fruits are associated with reproduction.	❑ Compare the physical properties of different kinds of rocks and know that rock is composed of different combinations of minerals ❑ Smaller rocks come from the breakage and weathering of larger rocks. ❑ Soil is made partly from weathered rock and partly from organic materials, and soils differ in their color, texture, capacity to retain water, and ability to support the growth of many kinds of plants. ❑ Fossils provide evidence about the plants and animals that lived long ago, and scientists learn about the past history of Earth by studying fossils. ❑ Rock, water, plants and soil provide many resources including food, fuel, and building materials that humans use.	❑ Make predictions based on patterns of observation rather than random guessing ❑ Measure length, weight, temperature, and liquid volume with appropriate tools and express measurements in standard and non-standard units. ❑ Compare and sort common objects based on two or more physical attributes (including color, shape, texture, size, weight). ❑ Write or draw descriptions of a sequence of steps, events, and observations. ❑ Construct bar graphs to record data using appropriately labeled axes. ❑ Write or draw descriptions of a sequence of steps, events and observations, and include the use of magnifiers or microscopes to extend senses. ❑ Follow verbal instructions for a scientific investigation.

Social Science

Students explore the lives of real people who make a difference in their everyday lives as well as learn the stories of extraordinary people from history. The study of the people who supply goods and services aids in understanding our free market system.	
❑ timelines	❑ problem-solving
❑ maps and grids	❑ basic economic concepts
❑ law-making	❑ heroism

Sylvan Union School District

Third Grade Expectations for Science & Social Science

Physical Sciences	*Life Sciences*	*Earth Sciences*	*Investigation and Experimentation*
Energy and matter have multiple forms and can be changed from one form to another.	**Adaptations in physical structure or behavior may improve an organism's chance for survival.**	**Objects in the sky move in regular and predictable patterns.**	**Scientific progress is made by asking meaningful questions and conducting careful investigations.**
❑ Energy comes from the sun to the Earth in the form of light. ❑ Sources of stored energy take many forms, such as food, fuel, & batteries. ❑ Machines and living things convert stored energy to motion and heat. ❑ Energy can be carried from one place to another by waves, by electric current, and by moving objects. ❑ Matter has three forms: solid, liquid and gas. ❑ Evaporation and melting are changes that occur when the objects are heated. ❑ Combined substances can have properties that are different from those of the original materials. ❑ All matter is made of small particles called atoms. ❑ There are over 100 different types of atoms which are displayed on the Periodic Table of the elements. ❑ Light has a source and travels in a direction. ❑ Sunlight can be blocked to create shadows. ❑ Light is reflected from mirrors and other surfaces. ❑ The color of light striking an object affects how our eyes see it. ❑ We see objects when light traveling from an object enters our eye.	❑ Plants and animals have structures that serve different functions in growth, survival, and reproduction. ❑ Examples of diverse life forms in different environments, such as oceans, deserts, tundra, forests, grasslands, and wetlands. ❑ Living things cause changes in the environment where they live; some of these changes are detrimental to the organism or other organisms, whereas others are beneficial. ❑ When the environment changes, some plants and animals survive and reproduce, and others die or move to new locations. ❑ Some kinds of organisms that once lived on Earth have completely disappeared; some of these resembled others that are alive today.	❑ The patterns of stars stay the same, although they appear to move across the sky nightly, and different stars can be seen in different seasons. ❑ How the moon's appearance changes during the four-week lunar cycle. ❑ Telescopes magnify the appearance of some distant objects in the sky, including the moon and the planets. The number of stars that can be seen through telescopes is dramatically greater than can be seen by the unaided eye. ❑ The Earth is one of several planets that orbit the sun, and the moon orbits the Earth. ❑ The position of the sun in the sky changes during the course of the day and from season to season.	❑ Repeat observations to improve accuracy, and know that the results of similar scientific investigations seldom turn out exactly the same because of differences in the things being investigated, methods being used, or uncertainty in the observation. ❑ Differentiate evidence from opinion, and know that scientists do not rely on claims or conclusions unless they are backed by observations that can be confirmed. ❑ Use numerical data in describing and comparing objects, events and measurements. ❑ Predict the outcome of a simple investigation, and compare the result to the prediction. ❑ Collect data in an investigation and analyze them to develop a logical conclusion.

Social Science

Students learn more about our connections to the past at the local, regional and national levels. Emphasis is on the physical and cultural landscape of California, including the study of American Indians, the arrival of immigrants and the impact they have on our society.		
❑ **maps, tables, graphs, charts, photographs**	❑ **governmental structure**	❑ **cause and effect**
❑ **customs and traditions**	❑ **local economy**	❑ **historical and community resources**

Fourth Grade Expectations
Science and Social Science

Physical Sciences	*Life Sciences*	*Earth Sciences*	*Investigation and Experimentation*
Electricity and magnetism are related effects that have many useful applications in everyday life.	**All organisms need energy and matter to live and grow.**	**The properties of rocks and minerals reflect the processes that formed them.**	**Scientific progress is made by asking meaningful questions and conducting careful investigations.**
❑ Design and build simple series and parallel circuits using components such as wires, batteries, and bulbs. ❑ Build a simple compass and use it to detect magnetic effects, including Earth's magnetic field. ❑ Electric currents produce magnetic fields. Know how to build a simple electromagnet. ❑ Electromagnets' roll in the construction of electric motors, electric generators, and simple devices such as doorbells. ❑ Electrically charged objects attract or repel each other. ❑ Magnets have two poles, labeled north and south, and like poles repel each other while unlike poles attract each other. ❑ Electrical energy can be converted to heat, light and motion.	❑ Plants are the primary source of matter and energy. ❑ Producers and consumers (herbivores, carnivores, omnivores, and decomposers) are related in food chains and food webs, and may compete with each other in an ecosystem. ❑ Decomposers recycle matter from dead plants and animals. ❑ Living organisms depend on one another and on their environment for survival. ❑ Ecosystems can be characterized in terms of their living and non-living components. ❑ For any particular environment, some kinds of plants and animals survive well, some less well, and some cannot survive at all. ❑ Many plants depend on animals for pollination and seed dispersal, while animals depend on plants for food and shelter. ❑ Many microorganisms are beneficial.	❑ Differentiate among igneous, sedimentary, and metamorphic rocks by their properties and methods of formation (the rock cycle). ❑ Identify common rock-forming minerals and ore minerals using a table of diagnostic properties. ❑ Waves, wind, water, and ice shape and reshape the Earth's land surface. ❑ Some changes in the Earth are due to slow processes, such as erosion, and some changes are due to rapid processes. ❑ Freezing/thawing and growth of roots, cause rocks to break down into smaller pieces. ❑ Moving water erodes landforms, reshaping the land by taking it away from some places and depositing it other places.	❑ Differentiate observation from inference (interpretation), and know that scientists' explanations come partly from what they observe and partly from how they interpret their observations. ❑ Measure and estimate weight, length, or volume of objects. ❑ Formulate predictions and justify predictions based on cause and effect relationships. ❑ Conduct multiple trials to test a prediction and draw conclusions about the relationships between results and predictions. ❑ Construct and interpret graphs from measurements. ❑ Follow a set of written instructions for a scientific investigation.

Social Science

Students examine milestones in California history in the context of the rest of the nation, with an emphasis on the U.S. Constitution and the relationship between state and federal government.

- ❑ California geography
- ❑ Spanish mission periods
- ❑ political and cultural development
- ❑ statehood
- ❑ governmental structure and functions

Sylvan Union School District

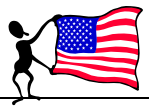
Fifth Grade Expectations for Science and Social Science

Physical Sciences	***Life Sciences***	***Earth Sciences***	***Investigation and experimentation***
Elements and their combinations account for all the varied types of matter in the world.	**Plants and animals have structures for respiration, digestion, waste disposal, and transport of materials.**	**Water on Earth moves between the oceans and land through the processes of evaporation and condensation.**	**Scientific progress is made by asking meaningful questions and conducting careful investigations**
❑ During chemical reactions, atoms in the reactants rearrange to form products with different properties. ❑ All matter is made of atoms, which may combine to form molecules. ❑ Metals have properties in common. Some metals are pure elements while others are composed of a combination of elemental metals. ❑ Each element is made of one kind of atom. These elements are organized in the Periodic Table by their chemical properties. ❑ Instruments can create images of atoms and molecules showing that they are discrete and often occur in well ordered arrays. ❑ Differences in chemical and physical properties of substances are used to separate mixtures and identify compounds. ❑ There are properties of solid, liquid, and gaseous substances. ❑ Living organisms and most materials are composed of a few elements. ❑ Salts, such as sodium chloride (NaCl) have common properties.	❑ Many multicellular organisms have specialized structures to support the transport of materials. ❑ Blood circulates through the heart chambers, lungs, and body, and carbon dioxide (CO2) and oxygen (O2) are exchanged in the lungs and tissues. ❑ The sequential steps of digestion, and the roles of teeth and mouth, esophagus, stomach, small intestine, large intestine, and colon in the function of the digestive system. ❑ The kidney removes cellular wastes from blood and converts them into urine, which is stored in the bladder. ❑ Sugar, water, and minerals are transported in a vascular plant. ❑ Plants use carbon dioxide and energy from sunlight to build molecules of sugar and release oxygen. ❑ Plant and animal cells break down sugar to obtain energy, forming carbon dioxide and water.	❑ Most of the Earth's water is present as salt water in the oceans. ❑ When liquid water evaporates, it turns into water vapor and can reappear as a liquid or as a solid. ❑ Water moves in the air from one place to another in the form of clouds or fog, and falls to the Earth as rain, hail, sleet, or snow. ❑ Fresh water is limited and its availability can be extended through recycling and use. ❑ Local communities have varied origins of water. ❑ Energy from the sun heats the Earth unevenly, causing air movements resulting in changing weather patterns. ❑ Uneven heating of the Earth causes air movements (convection currents). ❑ The ocean and water cycle influences weather. ❑ Weather maps and weather forecasts can predict local weather. ❑ The Earth's atmosphere exerts a pressure. ❑ The solar system consists of planets and other bodies that orbit the sun in predictable paths. ❑ The sun is the central and largest body in the solar system and is composed primarily of hydrogen and helium. ❑ The solar system includes the Earth, moon, sun, eight other planets and their satellites, and smaller objects such as asteroids and comets. ❑ The path of a planet around the sun is due to the gravitational attraction between the sun and the planet.	❑ Classify objects (e.g., rocks, plant, leaves) based on appropriate criteria. ❑ Develop a testable question. ❑ Plan and conduct a simple investigation based on a student-developed question, and write instructions others can follow to carry out the procedure. ❑ Identify the dependent and controlled variables in an investigation. ❑ Identify a single independent variable in a scientific investigation and explain what will be learned by collecting data on this variable. ❑ Select appropriate tools (e.g.; thermometers, balances, and graduated cylinders) and make quantitative observations.

SOCIAL SCIENCE

Students study the development of the nation through 1850 with an emphasis on the population: who was here, where they came from and why they came. Students recognize that our nation has a constitution, that it has gone through a revolution, that it once sanctioned slavery, that it experienced conflict with the original inhabitants and that it experienced a westward movement across the continent.

- ❑ customs and traditions of American Indians
- ❑ exploration routes
- ❑ political, religious, social, and economic conflicts
- ❑ colonization, immigration and settlement patterns
- ❑ American Revolution
- ❑ U.S. Constitution
- ❑ states and capitals
- ❑ transportation



Sylvan Union School District

Sixth Grade Expectations for Science and Social Science

Students will make scientific progress by asking meaningful questions and conducting careful investigations. All students will understand the scientific method by developing scientific skills such as defining a question, making a hypothesis, data collecting, data interpreting and drawing conclusions.

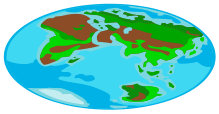
Students will understand the Earth's structure and will study geologic events.

- Plate tectonics affects Earth's surface and explains major geologic events on Earth.
- Weathering and erosion shape Earth's topography.
- Heat energy can be carried from one place to another by heat flow or waves.
- The sun is the major source of energy for phenomena on Earth's surface, powering winds, ocean currents and the water cycle.
- Differences in pressure, heat, air movement and humidity result in changes of weather.
- Organisms in ecosystems exchange energy and nutrients among themselves and with the environment.

Social Science

Students will expand their understanding of history by studying the people and events that ushered in the dawn of the major western and non-western ancient civilizations. Continued emphasis is placed on the everyday lives, problems and accomplishments of people, their roles in developing social, economic and political structures, as well as in establishing and spreading ideas that helped transform the world forever. Students analyze the interactions among the various cultures, emphasizing their enduring contributions and the link, despite time, between the contemporary and ancient worlds.

- People of the Stone Age
- Southwest Asia
- Ancient Egypt
- Ancient Nubia
- India and Persia
- China
- Ancient Greece
- Ancient Rome
- The Olmecs and the Mayas
- The Aztecs and the Incas
- People and Places of Today
- Historical, Governmental, and Economical events that shaped the world.



Sylvan Union School District

Seventh and Eighth Grade Expectations for Science & Social Science

Students will make scientific progress by asking meaningful questions and conducting careful investigations. All students will understand the scientific method by developing scientific skills such as defining a question, making a hypothesis, data collecting, data interpreting and drawing conclusions.

Grade 7 *Life Science*	*Grade 8* *Physical Science*
Students will understand the biological and biochemical principles in living systems.	**Students will understand physical science concepts and how they interrelate.**
❑ All organisms are made of cells. ❑ Genetics will show how traits are passed from one generation to the next. ❑ Biological evolution accounts for the diversity of species. ❑ Fossils provide evidence of how life and environmental conditions have changed on Earth. ❑ The anatomy and physiology of plants and animals show the complementary nature of structure and function. ❑ Physical principles underlie biological structures and functions. ❑ Human Growth & Development	❑ Motion is the change of an object's position over time. ❑ A force has both direction and magnitude. ❑ Matter is composed of elements that have distinct properties and atomic structure. ❑ The structure and composition of the universe can be learned from the study of stars and galaxies. ❑ Chemical reactions are processes in which atoms are rearranged into different combinations of molecules. ❑ Principles of chemistry underlie the functioning of biological systems. ❑ The organization of the Periodic Table is based on the properties of the elements and reflects the structure of atoms.

Social Science

Grade 7		*Grade 8*	
Students will focus on the development of a modern global society by examining the intellectual, religious, technological, and geographical influences of both western and non-western societies beginning in 150 C.E. and ending in 1789 C.E. Students become aware of the fact that our Constitution is the result of past multicultural experiences.		**Students will examine the social, political and economic development of the United States from its early discoveries through World War I. Students will study the expansion of our nation and the associated problems.**	
❑ Fall of the Roman Empire ❑ Islam ❑ African culture and religion ❑ Asian culture and religion ❑ Feudalism ❑ Development of Christianity ❑ Renaissance ❑ Reformation	❑ Scientific Revolution ❑ Age of Exploration ❑ Early American cultures ❑ European Rule and Expansion ❑ The Enlightenment ❑ Major Revolutions ❑ The Constitution	❑ Life in Colonial America ❑ American Revolution ❑ Development of the federal government ❑ National politics ❑ American expansion ❑ Slavery and abolition	❑ Civil War and Reconstruction ❑ Industrial America ❑ American foreign relations