Science

Philosophy:

The philosophy for the teaching of science is to guide students to be able to apply the knowledge learned from the classroom and make connections to the real world, providing a place for science in the students' lives. We follow a research-based curriculum focused on hands on experimentation fostering a passion for science.

Curriculum is based on the Minnesota Science Academic Standards from the Minnesota Department of Education.

Depending on the grade level the science curriculum includes:

Earth

Space Science and Technology

Life Science

Physical Science

Directed Inquiry

Guided Inquiry

Full Inquiry

Textbook Publishers:

Pearson /Scott Foresman	grades K-6
Prentice Hall	grades 7-8

Science Standards and Modules

Standard 1. (B) Understands atmospheric processes and the water cycle

Standard 2. (B) Understands Earth's composition and structure

Standard 3. (D) Understands the composition and structure of the universe and the Earth's place in it

Standard 4. (A) Understands the principals of heredity and related concepts

Standard 5. (A) Understands the structure and function of cells and organisms

Standard 6. (A) Understands relationships among organisms and their physical environment

Standard 7. (A) Understands biological evolution and the diversity of life

Standard 8. (C)Understands the structure and properties of matter

Standard 9 (C) Understands the sources and properties of energy

Standard 10 (C) Understands forces and motion

Standard 11. (A-D) Understands the nature of scientific knowledge

Standard 12. (A-D) Understands the nature of scientific inquiry

Standard 13 (A-D) Understands the scientific enterprise

Science Curriculum
Grades K

Grade Level	Content	Standard	Benchmarks
K	**I. History and Nature of Science** **Scientific Inquiry**	**#12 The student will raise questions about the natural world.**	**The student will observe and describe common objects using simple tools.**
	III. Earth and Space Science **Water Cycle, Weather and Climate**	**#1 The student will observe weather changes.**	**The student will describe daily and seasonal changes in the weather.** **The student will recognize the steps in the water cycle.**
	IV. Life Science **Diversity of Organisms**	**#4 The student will understand that there are living and nonliving things.**	**The student will differentiate between living and non-living things.**
K	**Human Organism**	**#7 The student will understand that people have five senses that can be used to learn about the environment.**	**The student will observe and describe the use of the five senses as they relate to the environment.**

Science Curriculum
Grades 1

Grade Level	Content	Standard	Benchmarks
1	I. History and Nature of Science Scientific Inquiry	# 12 The student will raise questions about the natural world, make careful observations, and seek answers.	The student will observe, describe, measure, compare, and contrast common objects, using simple tools including but not limited to ruler, thermometer and balance.
	II. Physical Science Structure of Matter	# 8 The student will understand that objects have physical properties.	The student will describe objects in terms of color, size, shape, weight, texture, flexibility and attraction to magnets.
	Forces of Nature	#10 The student will understand that forces can act at a distance.	The student will know that magnets can be used to make some things move. The students will know that things near the Earth fall to the ground unless something holds them up.
	III. Earth and Space Science Water Cycle, weather and Climate	#1 The student will investigate weather cycles.	The student will observe, record and describe characteristics in daily weather and seasonal cycles.
	The Universe	#2, 3 The student will recognize the changes that occur in the sky in a 24-hour day.	The student will observe and describe the changes in the position of the sun and the moon.
	IV. Life Science Organisms	#5, 6, 7 The student will observe plant and animal life cycles.	The student will observe and describe how plants and animals grow and change.
	Heredity	#4 The student will understand that there is variation among individuals of one kind of	The student will describe ways in which many plants and animals closely

		population.	**resemble but are not identical to their parents.** **The student will match adult animals and plants to their offspring.**
	Flow of Matter and Energy	**# 5, 6 The student will understand that organisms have basic needs.**	**The student will know that animals need air, water, and food and that plants require air, water, nutrients and light.**
	Human Organism	**#5 The student will know that the human body is made up of parts.**	**The student will observe and describe major parts of the body including, but not limited to eyes, nose, heart, skin, arms, legs and muscles.**
	Human Organism	**The student will learn that some diseases are caused by germs.**	**The student will know that diseases caused by germs can be spread from person to person; the number of germs can be reduced by personal behavior.**

Science Curriculum
Grades 2

Grade Level	Content	Standard	Benchmarks
2	I. History and Nature of Science Scientific World View	#11 The student will understand that science is a human endeavor practiced throughout the world.	The student will recognize that repeating a scientific investigation will lead to very similar results. The student will recognize that scientific investigations generally work the same way in different places. The student will give examples of scientific advances throughout history. The student will recognize that everyone can do science and invent things and ideas.
	Scientific Inquiry	#12 The student will raise questions about the natural world, make careful observations and seek answers.	The student will use appropriate tools to gather and organize data. The student will recognize and describe patterns in data.
	II. Physical Science Structure of Matter	#1 The student will understand that objects can be sorted and classified based on their properties.	The student will sort and classify objects in terms of color, size, shape, weight, texture, flexibility and attraction to magnets. The student will classify a substance as a solid, liquid, or gas. The student will know that solids have a definite shape and that liquids take the shape of their container. The student will observe that water can be a solid or liquid and can change from one state to the other.
	Motion	#9, 10 The student will know that objects move in various ways.	The students will observe and describe how objects move in a variety

			of ways, including, but not limited to, a straight line, a curve, a circle, back and forth and at different speeds. **The student will observe that push and pull forces can make objects move.**
	III. Earth and Space Science **Earth Structure and Processes**	**#2 The student will recognize basic Earth materials.**	**The student will observe and describe rocks, soils, water and air.**
	IV. Life Science **Diversity of Organisms**	**#5 The student will recognize that plants and animals have life cycles.**	**The student will describe life cycles of plants and animals.**
	Interdependence of Life	**# 5, 6 The student will understand that organisms live in different environments.**	**The student will observe and describe some features of plants and animals that allow them to live in specific environments.**
	Biological Populations Change Over Time	**#7 The student will understand that biological populations change over time.**	**The student will know that some kinds of organisms that once lived on Earth are now extinct, including but not limited to, dinosaurs, trilobites, mammoths, giant tree ferns and horsetail trees.**
	Flow of Matter and Energy	**#6 The student will investigate feeding relationships among organisms.**	**The student will observe and describe predator and prey relationships.** **The student will compare and contrast plant eaters and meat eaters.**
	Human Organism	**#5 The student will recognize that people have basic needs.**	**The student will know that people need water, food, air, waste removal and a particular range of temperature in their environment, just like other animals.**

Science Curriculum
Grades 3

Grade Level	Content	Standard	Benchmarks
3	I. History and Nature of Science Scientific World View	#11 The student will understand the use of science as a tool to examine the natural world.	The student will explore the use of science as a tool that can help investigate and answer questions about the environment.
	Scientific Inquiry	#12 The student will understand the nature of scientific investigations.	The student will ask questions about the natural world that can be investigated scientifically. The student will participate in a scientific investigation using appropriate tools. The student will know that scientists use different kinds of investigations depending o the questions they are trying to answer.
	II. Physical Science Energy Transformation	#9 The student will explore the characteristics and properties of sound and light.	The student will investigate how sounds are made when objects vibrate. The student will know that light tends to maintain its direction of motion until it is absorbed, retracted, or reflected by an object.
	III. Earth and Space Science The Water Cycle, Weather and Climate	#1 The student will investigate the weather conditions.	The student will measure, record, and describe weather conditions using common instruments. The student will identify cumulus, cirrus and stratus clouds.
	The Universe	#1, 3 The student will understand the characteristics and relationships of objects in the solar system.	The student will recognize the difference between rotation and revolution and their connection to day, night, seasons and the year.

			The student will identify the planets in the solar system and their relative sizes, distances and basic characteristics. **The student will observe that the sun supplies heat and light to the Earth.** **The student will know that planets look like stars, but over time they move differently than stars.**
	IV. Life Science **Diversity of Organisms**	**#5 The student will recognize that plants and animals have different structures that serve various functions.**	**The student will describe the structures that serve different functions in growth, survival and reproduction for plants and animals.** **The student will know that plants have different structures from animals that serve the same necessary functions in growth, survival and reproduction.**
	Interdependence of Life	**#7 The student will understand that an organism's patterns of behavior are related to the nature of its environment.**	**The student will know that organisms interact with one another in various ways besides providing food.** **The student will know that changes in a habitat can be beneficial or harmful to an organism.**
	Heredity	**#4 the student will understand that many characteristics of an organism are inherited from its parents, but that other characteristics result from an individual's interactions with the environment.**	**The student will observe and differentiate between characteristics of organisms that are inherited and characteristics that are acquired.** **The student will identify similarities and differences between parent and offspring.**

Science Curriculum
Grade 4

Grade Level	Content	Standard	Benchmarks
4	I. History and Nature of Science Scientific World View	#11 The student will understand how science is used to investigate interactions between people and the natural world.	The student will explore the uses and effects of science in our interaction with the natural world. The student will discuss the responsible use of science. The student will recognize the impact of scientific and technological activities on the natural world.
	Scientific Inquiry	#12 The student will participate in a controlled scientific investigation.	The student will recognize when comparisons might not be fair because some conditions are not kept the same. The student will collect, organize, analyze and present data from a controlled experiment. The student will recognize that evidence and logic are necessary to support scientific understandings
	II. Physical Science Structure of Matter	#8 The student will know that heating and cooling may cause changes to the properties of a substance.	The student will observe that heating and cooling can cause changes in state. The student will describe the changes in the properties of a substance when it is heated or cooled. The student will compare and contrast the mass, shape and volume of solids, liquids and gases.
	Energy Transformations	#9 The student will understand basic electricity and its application in everyday life.	The student will explore simple electrical circuits using components such as wires, batteries and bulbs. The student will investigate static

			electricity. **The student will identify objects and materials that conduct electricity and those that are insulators.**
	Forces of Nature	**#10 The student will understand that a relationship exists between electricity and magnetism.**	**The student will demonstrate how a wire and magnet can be used to generate an electric current.** **The student will demonstrate how an electric current can make an iron object magnetic.**
	III. Earth and Space Science **Earth Structure and Processes**	**#6 The student will investigate the impact humans have on the environment.**	**The student will identify and investigate environmental issues and potential solutions.**
	The Water Cycle, Weather and Climate	**#1 the student will recognize that water on Earth cycles and exists in many forms.**	**The student will describe the water cycle involving the processes of evaporation, condensation, precipitation and collection.** **The student will identify where water exists on Earth.**
	The Universe	**#3 the student will identify the patterns and movements of celestial objects.**	**The student will recognize that stars in the sky appear to slowly move from east to west.** **The students will identify the sun as an average-sized star and that the other stars are so far away that they look like points of light.** **The student will know that telescopes magnify distant objects in the sky and dramatically increase the number of stars we can see.**
	IV. Life Science **Cells**	**#5 The student will know that all organisms are composed of cells, which are the fundamental units of life.**	**The student will recognize that cells are very small, and that all living things consist of one or more cells.** **The student will recognize that cells need: food, water and air, a way to**

			dispose of waste, and an environment in which they can live.
	Diversity of Organisms	**#7 The student will know that livings can be sorted into groups in many ways according to their varied characteristics, structures and behaviors.**	**The student will classify plants and animals according to their physical characteristics.** **The student will learn that the characteristics used for grouping depend on the purpose of the grouping.**
	Human Organism	**#6 The student will know the structures that serve various functions in the human body, including protection from disease**	**The student will understand that humans have structures that serve functions in growth, survival and reproduction.** **The student will know that germs entering the body can cause disease, and that the body has defenses against these germs.** **The student will know that there are many diseases that can be prevented by vaccination.**

Science Curriculum
Grade 5

Grade Level	Content	Standard	Benchmarks
5	I. History and Nature of Science Scientific World View	#11 The student will understand that communication is essential to science.	The student will know that current scientific knowledge and understanding guide scientific investigation. The student will recognize that clear communication of methods, findings and critical review is an essential part of doing science.
	Scientific Inquiry	#12 The student will understand the process of scientific investigations.	The student will perform a controlled experiment using a specific step-by-step procedure and present conclusions supported by the evidence. The student will observe that when a science investigation or experiment is repeated, a similar result is expected.
	Scientific Enterprise	#13 the student will recognize that science and technology involve different kinds of work and engages men and women of all backgrounds.	The student will describe different kinds of work done in science and technology The student will identify men and women of various backgrounds and ages who have been involved in science and technology, both past and present.
5	II. Physical Science Motion	#10 The student will investigate that changes in speed or direction of motion are caused by forces.	The student will investigate the use of a lever, inclined plane and wheel and axle to move objects. The student will demonstrate that the greater the force applied, the greater the change in motion.
	III. Earth and Space Science	#2 The student will explore the structures and	The student will recognize the natural

	Earth Structure and Processes	**functions of Earth systems.**	**processes that cause rocks to break down into smaller pieces and eventually into soil.** **The student will investigate the formation, composition and properties of soil.** **The student will describe how waves, wind, water and ice shapes and reshapes the Earth's surface.** **The student will describe the impact of floods, tornadoes, earthquakes and volcanoes on the Earth.** **The student will explore the interaction of the lithosphere, atmosphere, biosphere, hydrosphere and space.**
	IV. Life Science **Biological Populations Change over Time**	**#7 The student will know that biological populations change over time.**	**The student will recognize that individuals of the same species differ in their characteristics and that sometimes the differences give individuals an advantage in surviving and reproducing.** **The student will recognize that extinction of a species occurs when the environment changes and the adaptive characteristics of a species are insufficient to allow its survival.** **The student will compare the structure of fossils to one another and to living organisms.**
	Flow of Matter and Energy	**#6 The student will know that matter and energy flow into, out of, and within a biological system.**	**The student will recognize that organisms need energy to stay alive and grow, and that this energy originates from the sun.** **The student will use food webs to describe the relationships among producers, consumers, and**

			decomposers in an ecosystem in Minnesota. **The student will recognize that organisms are growing, dying, and that their matter is recycled.**

Science Curriculum
Grade 6

Grade Level	Content	Standard	Benchmarks
6	Nature of Science and Engineering Interactions among Sciences, Technology, Engineering, Mathematics and Society	Understand the current and emerging technologies have enabled humans to develop and use models to understand and communicate how natural and designed systems work and interact.	The student will determine and use appropriate safe procedures, tools, measurements, graphs and mathematical analyses to describe and investigate natural and designed systems in a physical science context. The student will demonstrate the conversion of units within the International System of Units and estimate the magnitude of common objects and quantities using metric units.
	Physical Science Matter	Understand pure substances can be identified by properties which are independent of the sample of the substance and the properties can be explained by a model of matter that is composed of small particles.	The student will explain density, dissolving compression, diffusion and thermal expansion using the particle model of matter.
		Understand that substances can undergo physical changes which do not change the composition or the total mass of the substance in a closed system.	Identify evidence of physical changes, including changing phase or shape, and dissolving in other materials. Describe how mass is conserved during a physical change in a closed system. Use the relationship between heat and motion and arrangement of particles in solids, liquid and gases to explain melting, freezing, condensation and evaporation.

	Physical Science **Motion**	**Understand the motion of an object can be described in terms of speed, direction and change of position.**	**The student will measure and calculate the speed of an object that is traveling in a straight line.** **For an object traveling in a straight line, graph the object's position as a function of time, and its speed as a function of time. Explain how these graphs describe the object's motion.**
			For an object traveling in a straight line, the student will graph the object's position as a function of time, and its speed as a function of time. Explain how these graphs describe the object's motion.
		Understand that forces have magnitude and direction and govern the motion of objects.	**The student will recognize that when the forces acting on an object are balanced, the object remains at rest or continues to move at a constant speed in a straight line, and that unbalanced forces cause a change in the speed or direction of the motion of an object.**
			The student will identify the forces acting on an object and describe how the sum of the forces affects the motion of the object.
			The student will recognize that some forces between objects act when the objects are in direct contact and others, such as magnetic, electrical, and gravitational forces can act from a distance.
			The student will distinguish between mass and weight.
	Physical Science **Energy**	**Waves involve the transfer of energy without the transfer of matter**	**The student will describe properties of waves, including sped, wavelength, frequency and amplitude.**

			The student will explain how the vibration of particles in air and other materials results in the transfer of energy through sound waves.
			The student will use wave properties of light to explain reflection, refraction and the color spectrum.
		Energy can be transformed within a system or transferred to other systems or the environment.	**The student will differentiate between kinetic and potential energy and analyze situations where kinetic energy is converted to potential energy and vice versa.**
			The student will trace the changes of energy forms, including thermal, electrical, chemical, mechanical or others as energy is used in devices.
			The student will describe how heat energy is transferred in conduction, convection and radiation.

Science Curriculum
Grade 7

Grade Level	Content	Standard	Benchmarks
7	History and Nature of Science Scientific World View	#11 The student will understand that science is a way of knowing about the world that is characterized by empirical criteria, logical argument and skeptical review.	The student will 1. recognize how scientific knowledge is subject to change as new evidence becomes available, or as new theories cause scientists to look at old observations differently. 2. explain natural phenomena by using appropriate physical, conceptual and mathematical models.
	Scientific Inquiry	#12 The student will design and conduct scientific investigations.	The student will 1. formulate a testable hypothesis based on prior knowledge. 2. recognize that a variable is a condition that may influence the outcome of an investigation. 3. know the importance of manipulating one variable at a time. 4. write a specific step-by-step procedure for a scientific investigation. 5. explain how classroom scientific investigations relate to established scientific principles.
7	Scientific Enterprise	#13 The student will know that science and technology are human efforts that both influence and are influenced by society.	The student will 1.give examples of the development of technology influencing scientific knowledge and investigation and scientific knowledge influencing the development of technology

	Historic Perspectives	**#13The student will understand how scientific discovery, culture, societal norms and technology have influenced one another in different time periods.**	**The student will** **1. cite examples of individuals throughout history who have made discoveries and contributions in science and technology.** **2. cite examples of how culture influences scientific and technological advances.**
7	**IV. Life Science** **Cells**	**#5 The student will understand that all organisms are composed of cells that carry on the many functions needed to sustain life.**	**The student will** **1. know that cells are the fundamental units of life.** **2. distinguish between single-cellular and multi-cellular organisms.** **3. distinguish between plant and animal cells.** **4. recognize that cells repeatedly divide for growth and repair.** **5. recognize that cells convert energy from food for the production of molecules necessary for life, and for life processes including cell growth and cell division.** **6. recognize that specialized cells in multi-cellular organisms perform specialized functions.**
	Diversity of Organisms	**#5 The student will understand that living systems, at every level of organization, demonstrate the complementary nature of structure and function.**	**The student will** **1. explain that individuals are composed of specialized cells, tissues, organs and organ systems that perform specialized functions.** **2. recognize that an organism's body plan and its ability to regulate its internal environment enable it to make or find food, grow and reproduce in a constantly changing environment.** **3. recognize that behavioral**

			responses of organisms may be determined by heredity and past experience. **4. use creative dichotomous keys.** **5. use the characteristics of an organism to identify the kingdom to which it belongs.**
	IV. Life Science **Interdependence of Life**	**#6 The student will understand that within ecosystems, complex interactions exist between organisms and the physical environment.**	**The student will** **1. provide examples of the potentially irreversible effects of human activity on ecosystems.** **2. define a population as all individuals of a species that exist together at a given place and time.** **3. define an ecosystem as all populations living together and the physical factors with which they interact.** **4. explain the factors that affect the number and types of organisms an ecosystem can support, including available resources, abiotic and biotic factors and disease.**
	Heredity	**#4 The student will understand that heredity information is contained in genes which are inherited through both sexual and asexual reproduction.**	**The student will1** **1. recognize that inherited traits result from information contained in genes, which are located on chromosomes of each cell.** **2. recognize that each gene caries a single unit of information and can influence more than one trait.** **3. explain how inherited traits can be determined by one or many genes.** **4. comprehend that interactions with the environment affect some inherited traits.** **5. comprehend that reproduction is**

			essential for the continuation of a species. **6. compare and contrast the advantages and disadvantages of sexual and asexual reproduction.**
	Biological Populations Change over Time	**#7 The student will understand how biological evolution provides a scientific explanation for the fossil record of ancient life forms, as well as for the striking similarities observed among the diverse species of living organisms.**	**The student will** **1. recognize extinction is a common event.** **2. describe how the fossil record documents the appearance and diversification of many fife forms.** **3. explain how biological adaptations in structure, function and behavior enhance the reproductive success and survival of a species in a particular environment.** **4. recognize that scientific evidence can be used to infer common ancestry among some organisms.** **5. explain how diversity of species develops through gradual processes over generations.**
	Flow of Matter and Energy	**#6 The student will understand how the flow of energy and the recycling of matter contribute to a stable ecosystem.**	**The student will** **1. know that plants use the energy in light to make sugars out of carbon dioxide and water.** **2. explain how energy is transferred through food chains and food webs in an ecosystem.** **3. explain how the amount of usable energy available to organisms decreases as it passes through a food chain and/or food web.** **4. know that the total amount of matter in a closed system remains the same as it is transferred between organisms and the physical**

			environment even though its location or form changes. **5. compare and contrast predator/prey, parasite/host and producer/consumer/decomposer relationships.**
	Human Organism	**#5 The student will understand human body systems and their relationship to disease.**	**The student will** **1. recognize that disease can be caused by genetics, infection by other organisms, exposure to environmental factors or a combination of these.** **2. identify risks associated with natural, chemical and biological hazards.** **3. describe the structure and function of systems for digestion, respiration, reproduction, circulation, excretion, movement control and coordination and for protection from disease, in the human organism.**

Science Curriculum
Grade 8

Grade Level	Content	Standard	Benchmarks
8	I. History and Nature of Science Scientific World View	#11 The student will understand that science is a way of knowing about the world that is characterized by empirical criteria, logical argument and skeptical review.	The student will 1) explain and give examples of how science can be used to make informed ethical decisions by identifying likely consequences of particular actions. 2) explain the development, usefulness and limitations of scientific models in the explanation and prediction of natural phenomena.
	Scientific Inquiry	#12 The student will understand that scientific inquiry is used by scientists to investigate the natural world in systematic ways.	The student will 1) know that scientific investigations involve the common elements of systematic observations, the careful collection of relevant evidence, logical reasoning and innovation in developing hypotheses and explanations. 2) describe how scientists can conduct investigations in a simple system and make generalizations to more complex systems.
	Scientific Inquiry	#12 The student will use multiple skills to design and conduct scientific investigations.	The student will 1) will specify variables to be changed, controlled and measured. 2) use sufficient trials and adequate sample size to ensure reliable data. 3) use appropriate technology and mathematics skills to access, gather, store, retrieve and organize data.

	Scientific Enterprise	**#13 The student will know that science and technology are human efforts that both influence and are influenced by civilizations and cultures worldwide.**	**The student will** **1) evaluate the credibility and validity of scientific and technological information from various sources.**
	Historic Perspective	**#13 The student will understand how scientific discovery, culture, social norms and technology have influenced one another in different time periods.**	**The student will** **1) relate personal experiences in scientific investigation to the experiences of scientists throughout history.** **2) cite examples of how science and technology contributed to changes in agriculture, manufacturing, sanitation, medicine, warfare, transportation, information processing or communication.**
	Earth and Space Science	**#1,2 The student will identify Earth's composition, structure and processes.**	**The student will** **1) explain how earthquakes, volcanoes, sea-floor spreading and mountain building are evidence of the movement of crustal plates.** **2) describe how features on the Earth's surface are created and constantly changing through a combination of slow and rapid processes of weathering, erosion, sediment deposition, landslides, volcanic eruptions and earthquakes.** **3) describe the various processes and interactions of the rock cycle.** **4) interpret successive layers of sedimentary rocks and their fossils to document the age and history of the Earth.** **5) recognize that constructive and destructive Earth processes can affect the evidence of Earth's history.** **6) classify and identify rocks and**

			minerals using characteristics including but not limited to density, hardness and streak.
	Earth Structure and Processes	**#6 The student will investigate the impact humans have on the environment.**	**The student will** **1) identify and research an environmental issue and evaluate its impact.**
	The Water Cycle, Weather and Climate	**#1 The student will investigate how the atmosphere interacts with the Earth system.**	**The student will** **1) define radiation, conduction and convection and explain their effects on weather and climate.** **2) identify the forces that create currents and layers in the Earth's atmosphere and water systems.** **3) describe the effect of Earth's rotation on the winds and ocean currents.** **4) collect and use data to predict weather.** **5) identify the composition and structures of the atmosphere.** **6) describe climate changes that have occurred over time.**
	The Universe	**#1 The student will compare objects in the solar system and explain their interactions with the Earth.**	**The student will** **1) recognize that the sun is the principal energy source for the solar system and that this energy is transferred in the form of radiation.** **2) explain how the combination of the Earth's tilted axis and revolution around the sun causes the progression of seasons and weather patterns.** **3) compare and contrast the planets, taking into account their composition, mass and distance from the sun and recognize the conditions that have allowed life to flourish on Earth.**

			4) use the predictability of the motions on Earth, and the sun to explain the length of day, length of year, phases of the moon, eclipses, tides and shadows.
	The Universe	**#2 The student will describe the composition of the universe.**	**The student will** **1)recognize that the universe consists of many billions of galaxies, each containing many billions of stars and that there are vast distances that separate these galaxies and stars from one another.** **2) recognize that the sun is a medium-sized star and is the closet star to the Earth. It is the central and largest body in the solar system and is one of billions of stars in the Milky Way Galaxy.**