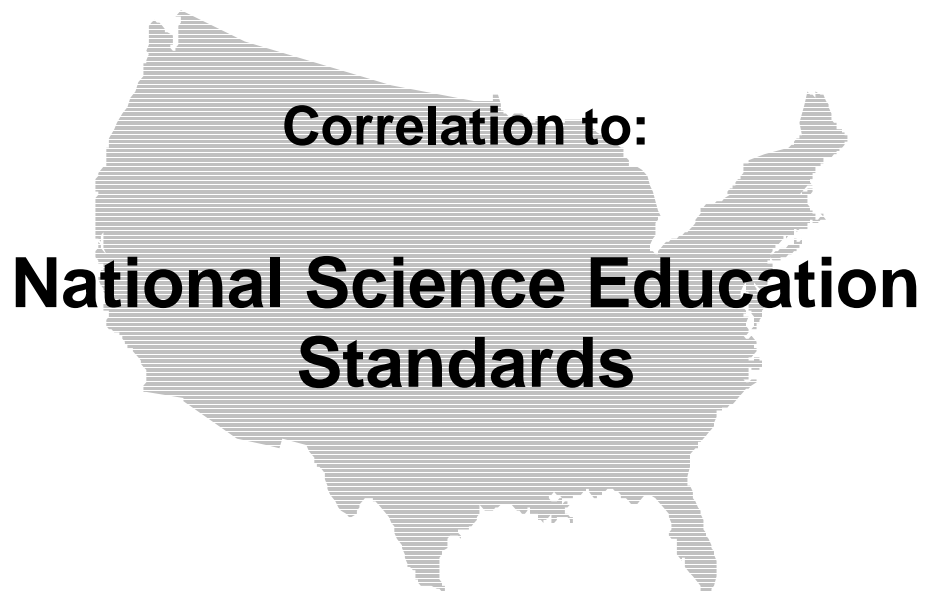


DSM II™

Delta Science Modules (DSM II)



CONTENT STANDARD: K-12

UNIFYING CONCEPTS AND PROCESSES

As a result of activities in grades K-12, all students should develop understanding and abilities aligned with the following concepts and processes

The unifying concepts and processes are interwoven throughout the activities and investigations in the FOSS and DSM II Modules. Some examples of modules that address the standard are listed below.

<i>UNIFYING CONCEPTS AND PROCESSES</i>	<i>DSM II</i>
Systems, order, and organization	Finding the Moon Soil Science Weather Watching Food Chains and Webs Rocks and Minerals Lenses and Mirrors Astronomy DNA—From Genes to Protein
Evidence, models, and explanation	Sunshine and Shadows Sink or Float Animal Behavior Dinosaur Classification Flight and Rocketry Color and Light Earth, Moon, and Sun Chemical Interactions
Change, constancy, and measurement	From Seed to Plant Amazing Air Plant and Animal Life Cycles Measuring Pollution Oceans Famous Scientists Plants in Our World

<p>Evolution and equilibrium</p>	<p>Observing an Aquarium Butterflies and Moths Dinosaur Classification Small Things and Microscopes Simple Machines Fungi—Small Wonders DNA—From Genes to Protein Earth Processes</p>
<p>Form and function</p>	<p>From Seed to Plant Plant and Animal Populations Animal Behavior Weather Instruments You and Your Body Simple Machines If Shipwrecks Could Talk DNA—From Genes to Protein</p>

CONTENT STANDARD A

SCIENCE AS INQUIRY

As a result of activities in grades K-4, all students should develop abilities to do scientific inquiry

NOTE: DSM II modules are inquiry-based. The fundamentals of scientific inquiry are imbedded in all modules. Examples of activities for each of the standard's guidelines are listed.

<i>GUIDELINE</i>	<i>DSM II</i>
Ask a question about objects, organisms, and events in the environment	Properties Activity 10 Classroom Plants Activity 10 Weather Instruments Activity 12 Sound Activity 12
Plan and conduct a simple investigation	Investigating Water Activity 8 Plant and Animal Populations Activity 9 Animal Behavior Activity 12 Earth Movements Activity 4
Employ simple equipment and tools to gather data and extend the senses	Observing an Aquarium Activity 6 Soils Science Activity 3 Small Things and Microscopes Activity 8 Electrical Circuits Activity 4
Use data to construct a reasonable explanation	Investigating Water Activity 10 Amazing Air Activity 7 Solar System Activity 5 Dinosaur Classification Activity 8
Communicate investigations and explanations	Finding the Moon Activity 3 Using Your Senses Activity 12 Looking at Liquids Activity 4 Measuring Activity 11

CONTENT STANDARD A

SCIENCE AS INQUIRY

As a result of activities in grades K-4, all students should develop understandings about scientific inquiry

NOTE: Understandings about scientific inquiry are implied in the previous guidelines on developing scientific inquiry. Some other specific examples for these guidelines are listed.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>Scientific investigations involve asking and answering a question and comparing the answer with what scientists already know about the world.</p>	<p>Investigating Water Activity 10 States of Matter Activity 8 Solar System Activity 10</p>
<p>Scientists use different kinds of investigations depending on the questions they are trying to answer. Types of investigations include describing objects, events, and organisms; classifying them; and doing a fair test.</p>	<p>Finding the Moon Activity 4 Insect Life Activity 2 Weather Watching Activity 6</p>
<p>Simple instruments, such as magnifiers, thermometers, and rulers, provide more information than scientists obtain using only their senses.</p>	<p>Weather Watching Activity 2 &3 Measuring Activity 5,6,8,11,12 Small Things and Microscopes Activity 2 Science and Math</p>
<p>Scientists develop explanations using observations (evidence) and what they already know about the world (scientific knowledge). Good explanations are based on evidence from investigations.</p>	<p>Insect Life Activity 11 Science and Social Studies Animal Behavior Activity 8 Science and Social Studies Small Things and Microscopes Activity 12 Science and Health</p>
<p>Scientists make the results of their investigations public; they describe the investigations in ways that enable others to repeat investigations.</p>	<p>Dinosaur Classification Activity 10 Science Extension Animal Behavior Activity 8 Science and Social Studies Small Things and Microscopes Activity 12 Science and Health</p>
<p>Scientists review and ask questions about the results of other scientists' work.</p>	<p>Small Things and Microscopes Activity 9 Science and Health Insect Life Activity 5 Science, Technology, and Society</p>

CONTENT STANDARD B

PHYSICAL SCIENCE

As a result of the activities in grades K-4, all students should develop an understanding of properties of objects and materials

Examples of activities for each of the standard's guidelines are listed

<i>GUIDELINE</i>	<i>DSM II</i>
<p>Objects have many observable properties, including size, weight, shape, color, temperature, and the ability to react with other substances. Those properties can be measured using tools such as rulers, balances, and thermometers.</p>	<p>Properties Activity 1-6 Investigating Water Activity 1-4 Sink or Float Activity 1-3 Powders and Crystals Activity 1-3 Measuring Activity 1-12</p>
<p>Objects are made of one or more materials, such as paper, wood, and metal. Objects can be described by the properties of the materials from which they are made, and those properties can be used to separate or sort a group of objects or materials.</p>	<p>Properties Activity 7-13 Magnets Activity 2, 3 Soils Science Activity 1-4, 7 Looking at Liquids Activity 1, 2 8, 9, 12 Powders and Crystals Activity 5-12</p>
<p>Materials can exist in different states—solids, liquid, and gas. Some common materials, such as water, can be changed from one state to another by heating or cooling</p>	<p>Investigating Water Activity 9-11 States of Matter Activity 4-12 Looking at Liquids Activity 11 Water Cycle Activity 4-6, 8, 9, 11-13</p>

CONTENT STANDARD B

PHYSICAL SCIENCE

As a result of activities in grades K-4, all students should develop an understanding of position and motions of objects

Examples of each of the standard's guidelines are listed

<i>GUIDELINE</i>	<i>DSM II</i>
The position of an object can be described by locating it relative to another object or the background.	Finding the Moon Activity 1-4, 9, 10 Sun and Shadows Activity 1-3, 8, 9, 11 Magnets Activity 1, 3, 5 Force and Motion Activity 1-12
An object's motion can be described by tracing and measuring its position over time.	Finding the Moon Activity 3-5, 9, 10 Sunshine and Shadows Activity 4-7 Force and Motion Activity 1-12 Weather Instruments Activity 1, 4, 6, 7
The position and motion of objects can be changed by pushing or pulling. The size of the change is related to the strength of the push or pull.	Sunshine and Shadows Activity 8-11 Amazing Air Activity 10-12 Force and Motion Activity 1-12 Sink or Float Activity 8-12
Sound is produced by vibrating objects. The pitch of the sound can be varied by changing the rate of vibration.	Sound Activity 1-11 Using Your Senses Activity 5, 6

CONTENT STANDARD B

PHYSICAL SCIENCE

As a result of the activities in grades K-4, all students should develop an understanding of light, heat, electricity, and magnetism.

Examples of each of the standard's guidelines are listed

<i>GUIDELINES</i>	<i>DSM II</i>
Light travels in a straight line until it strikes an object. Light can be reflected by a mirror, refracted by a lens, or absorbed by the object.	Sunshine and Shadows Activity 1-3
Heat can be produced in many ways, such as burning, rubbing, or mixing one substance with another. Heat can move from one object to another by conduction.	Amazing Air Activity 1 States of Matter Activity 4, 5, 7, 8 Powders and Crystals Activity 9 Earth Movements Activity 4, 10
Electricity in circuits can produce light, heat sound, and magnetic effects. Electrical circuits require a complete loop through which an electrical current can pass.	Electrical Circuits Activity 1-12 Magnets Activity 11
Magnets attract and repel each other and certain kinds of other materials.	Magnets Activity 1-12

CONTENT STANDARD C

LIFE SCIENCE

As a result of activities in grades K-4, all students should develop understanding of the characteristics of organisms

Examples of activities for each of the standard's guidelines are listed.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>Organisms have basic needs. For example, animals need air, water, and food; plants require air, water, nutrients, and light. Organisms can survive only in environments in which their needs are met. The world has many different environments, and distinct environments support the life of different types of organisms.</p>	<p>Observing an Aquarium Activity 2-7 From Seed to Plant Activity 2, 4, 6-12 Butterflies and Moths Activity 1 Classroom Plants Activity 5, 7 Food Chains and Webs Activity 2, 3, 8-12</p>
<p>Each plant or animal has different structures that serve different functions in growth, survival, and reproduction. For example, humans have distinct body structures for walking, holding, seeing, and talking.</p>	<p>From Seed to Plant Activity 1, 3-5, 9, 10, 12 Observing an Aquarium Activity 3-6, 10 Butterflies and Moths Activity 2, 7, 8 Plant and Animal Populations Activity 1, 2, 4-7, 10, 11 Insect Life Activity 1, 2, 5, 7, 9</p>
<p>The behavior of individual organisms is influenced by internal cues (such as hunger) and by external cues (such as change in the environment). Humans and other organisms have senses that help them detect internal and external cues.</p>	<p>Observing an Aquarium Activity 8, 9, 11 From Seed to Plant Activity 5, 6, 11 Using Your Senses Activity 1-12 Animal Behavior Activity 3-8, 10, 12 Insect Life Activity 9, 12</p>

CONTENT STANDARD C

LIFE SCIENCE

As a result of the activities in grades K-4, all students should develop understanding of life cycles of organisms

Examples of activities for each of the standard's guidelines are listed

<i>GUIDELINE</i>	<i>DSM II</i>
Plants and animals have life cycles that include being born, developing into adults, reproducing, and eventually dying. The details of this life cycle are different for different organisms.	<p>From Seed to Plant Activity 1, 2, 5, 13</p> <p>Observing an Aquarium Activity 10</p> <p>Butterflies and Moths Activities 1, 2, 5, 6, 9, 11</p> <p>Plant and Animal Life Cycles Activities 2-6,8-11</p> <p>Insect Life Activity 2, 7</p>
Plants and animals closely resemble their parents.	<p>From Seed to Plant Activity 3-5, 13</p> <p>Plant and Animal Populations Activity 5-7</p> <p>Butterflies and Moths Activity 1, 2, 5, 6, 9, 11</p> <p>Classroom Plants Activity 10</p> <p>Plant and Animal Life Cycles Activity 2-6, 8-11</p>
Many characteristics of an organism are inherited from the parents of the organism, but other characteristics result from an individual's interaction with the environment. Inherited characteristics include the color of flowers, and the number of limbs of an animal. Other features, such as the ability to ride a bicycle, are learned through interactions with the environment and cannot be passed on to the next generation.	<p>From Seed to Plant Activity 3, 13</p> <p>Observing an Aquarium Activity 10</p> <p>Classroom Plants Activity 10</p> <p>Plant and Animal Populations Activity 5-7</p> <p>Plant and Animal Life Cycles Activity 9, 10</p>

CONTENT STANDARD C

LIFE SCIENCE

As a result of the activities in grades K-4, all students should develop understanding of organisms and environments

Examples of activities for each of the standard's guidelines are listed

<i>GUIDELINE</i>	<i>DSM II</i>
<p>All animals depend on plants. Some animals eat plants for food. Other animals eat animals that eat plants.</p>	<p>Observing an Aquarium Activity 1, 6, 7 Plant and animal Populations Activity 4-7, 9-12 Butterflies and Moths Activity 1, 10 Insect Life Activity 10, 12 Food Chains and Webs Activity 3, 7-12</p>
<p>An organism's patterns of behavior are related to the nature of that organism's environment, including the kinds and numbers of other organisms present, the availability of food and resources, and the physical characteristics of the environment. When the environment changes, some plants and animals survive and reproduce, and others die or move to new locations.</p>	<p>Observing an Aquarium Activity 7-9 From Seed to Plant Activity 6, 8, 11 Plant and Animal Populations Activity 4-12 Animal Behavior Activity 3-10 Food Chains and Webs Activity 7-12</p>
<p>All organisms cause changes in the environment where they live. Some of these changes are detrimental to the organism or other organisms, whereas others are beneficial.</p>	<p>Observing an Aquarium Activity 3, 6, 7, 11 Plant and Animal Populations Activity 3-7, 9-12 Insect Life Activity 10, 13 Small Things and Microscopes Activity 12, 13 Food Chains and Webs Activity 7-12</p>
<p>Humans depend on their natural and constructed environments. Humans change environments in ways that can be either beneficial or detrimental for themselves and other organisms.</p>	<p>Observing an Aquarium Activity 11, 12 Classroom Plants Activity 1, 12 Insect Life Activity 13 Small Things and Microscopes Activity 13</p>

CONTENT STANDARD D

EARTH SCIENCE

As a result of the activities in grade K-4, all students should develop an understanding of properties of earth materials

Examples of activities for each of the standard's guidelines are listed.

<i>GUIDELINES</i>	<i>DSM II</i>
<p>Earth materials are solid rocks and soils, water, and the gases of the atmosphere. The varied materials have different physical and chemical properties, which make them useful in different ways, for example, as building materials, as sources of fuel, or for growing plants we use as food. Earth materials provide many of the resources that humans use.</p> <p>Soils have properties of color and texture, capacity to retain water, and ability to support the growth of many kinds of plants, including those in our food supply.</p> <p>Fossils provide evidence about the plants and animals that lived long ago and the nature of the environment at that time.</p>	<p>Investigating Water Activity 1-4, 9, 10 Amazing Air Activity 1-7 Soil Science Activity 1-4, 7, 8 Earth Movements Activity 2, 3 Water Cycle Activity 1-3</p> <p>Soils Science Activity 1-8</p> <p>Earth Movements Activity 3 Dinosaur Classification Activity 1-12</p>

CONTENT STANDARD D

EARTH SCIENCE

As a result of the activities in grades K-4, all students should develop an understanding of objects in the sky

Examples of activities for each of the standard's guidelines are listed

<i>GUIDELINE</i>	<i>DSM II</i>
The sun, moon, stars, clouds, birds, and airplanes all have properties, locations, and movements that can be observed and described.	Finding the Moon Activity 1-12 Sunshine and Shadows Activity 1-7 Weather Watching Activity 6, 9, 10 Solar System Activity 1, 2, 9-11 Weather Instruments Activity 10
The sun provides the light and heat necessary to maintain the temperature of the earth.	Weather Watching Activity 3 Solar System Activity 1 Weather Instruments Activity 6

CONTENT STANDARD D

EARTH SCIENCE

As a result of the activities in grades K-4, all students should develop an understanding of changes in the earth and sky

Examples of activities for each of the standard's guidelines are listed

<i>GUIDELINE</i>	<i>DSM II</i>
<p>The surface of the earth changes. Some of the changes are due to slow processes such as erosion and weathering, and some changes are due to rapid processes, such as landslides, volcanic eruptions, and earthquakes.</p>	<p>Soil Science Activity 5, 6, 12 Earth Movements Activity 5-7, 9-12</p>
<p>Weather changes from day to day and over the seasons. Weather can be described by measurable quantities, such as temperature, wind direction and speed, and precipitation.</p>	<p>Weather Watching Activity 1-12 Weather Instruments Activity 1-12</p>
<p>Objects in the sky have patterns of movement. The sun, for example, appears to move across the sky in the same way every day, but its path changes slowly over the seasons. The moon moves across the sky on a daily basis much like the sun. The observable shape of the moon changes from day to day in a cycle that lasts about a month.</p>	<p>Finding the Moon Activity 3-5, 9 10 Sunshine and Shadows Activity 4-6 Solar System Activity 2, 9</p>

CONTENT STANDARD E
SCIENCE AND TECHNOLOGY

As a result of activities in grades K-4, all students should develop abilities of technological design

Examples of activities for each of the guidelines are listed

<i>GUIDELINE</i>	<i>DSM II</i>
Identify a simple problem	Sunshine and Shadows Activity 12 Sink or Float Activity 12 Amazing Air Activity 12 and Reinforcement Sound Activity 12
Propose a solution	Sunshine and Shadows Activity 12 Sink or Float Activity 12 Amazing Air Activity 12 and Reinforcement Sound Activity 12
Implementing proposed solutions	Sunshine and Shadows Activity 12 Sink or Float Activity 12 Amazing Air Activity 12 and Reinforcement Sound Activity 12
Evaluate a product or design	Sunshine and Shadows Activity 12 Sink or Float Activity 12 Amazing Air Activity 12 and Reinforcement Sound Activity 12
Communicate a problem design and solution	Sunshine and Shadows Activity 12 Sink or Float Activity 12 Amazing Air Activity 12 and Reinforcement Sound Activity 12

CONTENT STANDARD E
SCIENCE AND TECHNOLOGY

As a result of activities in grades K-4, all students should develop understanding about science and technology

Examples of activities for each of the standard's guidelines are listed

<i>GUIDELINE</i>	<i>DSM II</i>
<p>People have always had questions about their world. Science is one way of answering questions and explaining the natural world.</p>	<p>Sound Activity 2 Science and Social Studies Powders and Crystals Activity 10 Science and Social Studies Looking at Liquids Activity 4 Science, Technology and Society</p>
<p>People have always had problems and invented tools and techniques (ways of doing something) to solve problems. Trying to determine the effects of solutions helps people avoid some new problems.</p>	<p>Investigating Water Activity 2 Science, Technology, and Society Magnets Activity 4 Science, Technology, and Society Sound Activity 5 Science, Technology, and Society</p>
<p>Scientists and engineers often work in teams with different individuals doing different things that contribute to the results.</p>	<p>Sound Activity 2 Science and Social Studies Electrical Circuits Activity 3 Science and Social Studies Powders and Crystals Activity 12 Science and Careers</p>
<p>Women and men of all ages, backgrounds, and groups engage in a variety of scientific and technological work.</p>	<p>Seed to Plant Activity 3 Small Things and Microscopes Activity 3 Looking at Liquids Activity 1 Science, Technology, and Society Electrical Circuits Activity 9 Science, Technology, and Society</p>
<p>Tools help scientists make better observations, measurements, equipment for investigations. They help scientists see, measure, and do things that they could not otherwise do.</p>	

CONTENT STANDARD E
SCIENCE AND TECHNOLOGY

As a result of activities in grades K-4, all students should develop abilities to distinguish between natural objects and objects made by humans

Examples of activities for each of the standard's guidelines are listed

<i>GUIDELINE</i>	<i>DSM II</i>
Some objects occur in nature; others have been designed and made by people to solve human problems and enhance the quality of life.	From Seed to Plant Activity 1 Properties Activity 12 Small Things and Microscopes Activity 6
Objects can be categorized into two groups, natural and designed.	From Seed to Plant Activity 1 Small Things and Microscopes Activity 6

CONTENT STANDARD F

SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES

As a result of activities in grades K-4, all students should develop understanding of personal health

Examples of activities for each of the standard's guidelines are listed

<i>GUIDELINE</i>	<i>DSM II</i>
<p>Safety and security are basic needs of humans. Safety involves freedom from danger, risk, or injury. Security involves feelings of confidence and lack of anxiety and fear.</p>	<p>Each module contains safety information in the activities when appropriate.</p> <p>Sunshine and Shadows Activity 1 Science and Health Investigating Water Activity 5 Science and Health Powders and Crystals p. 6 and Activity 8-10 Electric Circuits Activity 10</p>
<p>Individuals have some responsibility for their own health. Students should engage in personal care—dental hygiene, cleanliness, and exercise—that will maintain and improve health.</p>	<p>From Seed to Plant Activity 8 Science and Health Powders and Crystals Activity 2 Science and Health Water Cycle Activity 11 Science and Health Small Things and Microscopes Activity 13 Science and Health</p>
<p>Nutrition is essential to health. Students should understand how the body uses food and how various food contribute to health.</p>	<p>Observing an Aquarium Activity 7 Science and Health Classroom Plants Activity 5 Science and Health</p>
<p>Different substances can damage the body and how it functions. Such substances include tobacco, alcohol, over-the-counter medicines, and illicit drugs. Students should understand that some substances, such as prescription drugs, can be beneficial, but that any substance can be harmful if used inappropriately.</p>	

CONTENT STANDARD F

SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES

As a result of activities in grades K-4, all students should develop an understanding of characteristics and changes in populations

Examples of activities for each of the standard's guidelines are listed

<i>GUIDELINE</i>	<i>DSM II</i>
<p>Human populations include groups of individuals living in a particular location. One important characteristic of a human population is the population density—the number of individuals of a particular population that lives in a given amount of space.</p> <p>The size of a human population can increase or decrease. Populations will increase unless other factors such as disease or famine decrease the population.</p>	

CONTENT STANDARD F

SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES

As a result of activities in grades K-4, all students should develop understanding of types of resources

Examples of activities for each of the standard's guidelines are listed

<i>GUIDELINE</i>	<i>DSM II</i>
Resources are things that we get from the living and nonliving environment to meet the needs and wants of a population.	From Seed to Plant Activity 14 Soils Science Activity 8 Water Cycle Activity 11 Science and Health Food Chains and Webs Activity 1
Some resources are basic materials, such as air, water, and soil; some are produced from basic resources, such as food, fuel, and building materials; and some resources are nonmaterial, such as quiet places, beauty, security, and safety.	Observing an Aquarium Activity 1, Activity 8 Science and Health From Seed to Plant Activity 14 Soil Science Activity 8 Water Cycle Activity 11 Science and Health
The supply of many resources is limited. If used, resources can be extended through recycling and decreased use.	Observing an Aquarium Activity 11 Science, Technology, and Society Soil Science Activity 12 Science, Technology, and Society Water Cycle Activity 5 Science and Math

CONTENT STANDARD F

SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES

As a result of activities in grades K-4, all students should develop understanding of changes in environment

Examples of activities for each of the standard's guidelines are listed

<i>GUIDELINE</i>	<i>DSM II</i>
<p>Environments are the space, conditions, and factors that affect an individual's and a population's ability to survive and their quality of life.</p> <p>Changes in environments can be natural or influenced by humans. Some changes are good, some bad, and some are neither good nor bad. Pollution is a change in the environment that can influence the health, survival, or activities of organisms, including humans.</p> <p>Some environmental changes occur slowly, and others occur rapidly. Students should understand the different consequences of changing environments in small increments over long periods as compared with changing environments in large increments over short periods.</p>	<p>Observing an Aquarium Activity 2 Classroom Plants Activity 12 Plant and Animal Populations Activity 4-7 Food Chains and Webs Activity 5</p> <p>Observing an Aquarium Activity 11, 12 Butterflies and Moths Activity 8 Science, Technology, and Society Plant and Animal Populations Activity 4-7, 8, 10, 11 Insect Life Activity 13 Science and Social Studies</p> <p>Butterflies and Moths Activity 5 and 8 Science, Technology, and Society Water Cycle Activity 5 and 12 Science, Technology, and Society Dinosaur Classification Activity 1 Science Challenge Food Chains and Webs Activity 11, 12 Activity 12 Science, Technology, and Society</p>

CONTENT STANDARD F

SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES

As a result of activities in grades K-4, all students should develop understanding of science and technology in local challenges

Examples of activities for each of the standard's guidelines are listed

<i>GUIDELINE</i>	<i>DSM II</i>
<p>People continue inventing new ways of doing things, solving problems, and getting work done. New ideas and inventions often affect other people; sometimes the effects are good and sometimes they are bad. It is helpful to try to determine in advance how ideas and inventions will affect other people.</p>	<p>Finding the Moon Activity 10 Science, Technology, and Society Amazing Air Activity 8 Science, Technology, and Society Sink or Float Activity 8 Science, Technology, and Society Small Things and Microscopes Activity 4 Science, Technology, and Society</p>
<p>Science and technology have greatly improved food quality and quantity, transportation, health, sanitation, and communication. These benefits of science and technology are not available to all of the people in the world.</p>	<p>Observing an Aquarium Activity 11 Science, Technology, and Society Weather Watching Activity 6 Science, Technology, and Society Animal Behavior Activity 10 Science, Technology, and Society Small Things and Microscopes Activity 13 Science and Health Science, Technology, and Society</p>

CONTENT STANDARD G

HISTORY AND NATURE OF SCIENCE

As a result of activities in grades K-4, all students should develop understanding of science as a human endeavor

Examples of activities for each of the standard's guidelines are listed

<i>GUIDELINE</i>	<i>DSM II</i>
<p>Science and technology have been practiced by people for a long time.</p>	<p>Amazing Air Activity 12 Science, Technology, and Society Force and Motion Activity 11 Science and Social Studies Animal Behavior Activity 8 Science and Social Studies Dinosaur Classification Activity 3 Science and Social Studies</p>
<p>Men and women have made a variety of contributions throughout the history of science and technology.</p>	<p>Weather Watching Activity 8 Science and Social Studies Force and Motion Activity 1 Science and Social Studies Small Things and Microscopes Activity 9 Science and Social Studies Animal Behavior Activity 8 Science and Social Studies</p>
<p>Although men and women using scientific inquiry have learned much about the objects, events, and phenomena in nature, much more remains to be understood. Science will never be finished.</p>	<p>Small Things and Microscopes Activity 2 Science and Math</p>
<p>Many people choose science as a career and devote their entire lives to studying it. Many people derive great pleasure from doing science.</p>	<p>From Seed to Plant Activity 14 Science Careers Weather Watching Activity 12 Science Careers Plant and Animal Populations Activity 4 Science Careers Looking at Liquids Activity 6 Science Careers</p>

CONTENT STANDARD A

SCIENCE AS INQUIRY

As a result of activities in grades 5-8, all students should develop abilities necessary to do scientific inquiry

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
Identify questions that can be answered through scientific investigations.	Insect Life Activity 3 Science Challenge Solar Energy Activity 8 Reinforcement Weather Instruments Activity 1 Science Challenge Chemical Interactions Activity 3 Science at Home
Design and conduct a scientific investigation.	Erosion Activity 7-9 Insect Life Activity 8, 9 Reinforcement Fungi—Small Wonders Activity 11 If Shipwrecks Could Talk Activity 7, 8 Science Challenge
Use appropriate tools and techniques to gather, analyze, and interpret data.	Looking at Liquids Activity 5, 8, 11 Weather Forecasting Activity 3, 5 Famous Scientists Activity 1, 7 Electrical Connections Activity 2, 4, 8
Develop descriptions, explanations, predictions, and models using evidence.	Solar System Activity 5 Earth Movements Activity 4 Pollution Activity 7, 10 Newton's Toy Box Activity 8, 9 Plants in Our World Activity 3, 6, 7

<p>Think critically and logically to make the relationships between evidence and data.</p>	<p>Magnets Activity 3, 4, 11 Solar Energy Activity 7-11 Fungi—Small Wonders Activity 6, 7 Chemical Interactions Activity 6, 9, 11, 12</p>
<p>Recognize and analyze alternative explanations and predictions.</p>	<p>Animal Behavior Activity 11 Reinforcement Earth Movements Activity 3, 12 Science Extension Pond Life Activity 12 Newton’s Toy Box Activity 3</p>
<p>Communicate scientific procedures and explanations.</p>	<p>Looking at Liquids Activity 8, 9 Small Things and Microscopes Activity 11 Reinforcement, 13 Solar Energy Activity 9 Science Challenge, 11 Plants in Our World Activity 5-7</p>
<p>Use mathematics in all aspects of scientific inquiry.</p>	<p>Dinosaur Classification Activity 6 Simple Machines Activity 1-3, 6, 7 Earth, Moon, and Sun Activity 1-4, 9, 13 Chemical Interactions Activity 1, 2</p>

CONTENT STANDARD A

SCIENCE AS INQUIRY

As a result of activities in grades 5-8, all students should develop understandings about scientific inquiry

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>Different kinds of questions suggest different kinds of scientific investigations. Some investigations involve observing and describing objects, organisms, or events; some involve collecting specimens; some involve experiments; some involve seeking more information; some involve discovery of new objects and phenomena; and some involve making models.</p>	<p>Insect Life Activity 2 Powders and Crystals Activity 10 Science and Careers Astronomy Activity 5 Science Extension DNA—From Genes to Protein Activity 10 Science Challenge</p>
<p>Current scientific knowledge and understanding guide scientific investigations. Different scientific domains employ different methods, core theories, and standards to advance scientific knowledge and understanding.</p>	<p>Earth Movements Activity 7, 12 Solar Energy Activity 10, Science and Social Studies Electrical Connections Activity 7 Science, Technology, and Society Earth Processes Activity 7 Science, Technology, and Society</p>
<p>Mathematics is important in all aspects of scientific inquiry.</p>	<p>Dinosaur Classification Activity 7 Science and Math Weather Forecasting Activity 6 Science Extension Astronomy Activity 11 Science and Math Famous Scientists Activity 2, 3</p>

Technology used to gather data enhances accuracy and allows scientists to analyze and quantify results of investigations.

Scientific explanations emphasize evidence, have logically consistent arguments, and use scientific principles, models, and theories. The scientific community accepts and uses such explanations until displaced by better scientific ones. When such displacement occurs, science advances.

Science advances through legitimate skepticism. Asking questions and querying other scientists' explanations is part of scientific inquiry. Scientists evaluate the explanations proposed by other scientists by examining evidence, comparing evidence, identifying faulty reasoning, pointing out statements that go beyond evidence, and suggesting alternative explanations for the same observations.

Scientific investigations sometimes result in new ideas and phenomena for study, generate new methods or procedures for an investigation, or develop new techniques to improve the collection of data. All of these results can lead to new investigations.

Small Things and Microscopes
Activity 7

Science, Technology, and Society

Solar System Activity 11

Science, Technology, and Society

Weather Forecasting Activity 9

Science, Technology, and Society

DNA—From Genes to Protein

Activity 4 Science Challenge

Dinosaur Classification

Activity 10

Science, Technology, and Society

Oceans Activity 9

Earth Processes Activity 14

DNA—From Genes to Protein

Activity 4 Science Challenge

Plant and Animal Life Cycles

Activity 1 Science Challenge

Solar System Activity 3

Science and Social Studies

Famous Scientists Activity 3

DNA—From Genes to Protein

Activity 7

Science, Technology, and Society

Small Things and Microscopes

Activity 12 Science and Health

Fungi—Small Wonders

Activity 2 Science and Health

Earth Processes Activity 13

Science Extension

DNA—From Genes to Protein

Activity 5 Science Challenge

CONTENT STANDARD B

PHYSICAL SCIENCE

As a result of activities in grades 5-8, all students should develop an understanding of properties and changes of properties in matter

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>A substance has characteristic properties, such as density, a boiling point, and solubility, all of which are independent of the amount of the sample. A mixture of substances often can be separated into the original substances using one or more of the characteristic properties.</p>	<p>Powders and Crystals Activity 5-9 Looking at Liquids Activity 8, 9 Rocks and Minerals Activity 8 Chemical Interactions Activity 1-3, 6, 9, 10 Famous Scientists Activity 1</p>
<p>Substances react chemically in characteristic ways with other substances to form new substances (compounds) with different characteristic properties. In chemical reactions, the total mass is conserved. Substances often are placed in categories or groups if they react in similar ways; metals is an example of such a group.</p>	<p>Powders and Crystals Activity 6, 8 Rocks and Minerals Activity 6 Chemical Interactions Activity 3, 5, 7, 8, 10-12</p>
<p>Chemical elements do not breakdown during normal laboratory reactions involving such treatments as heating, exposure to electric current, or reaction with acids. There are more than 100 known elements that combine in a multitude of ways to produce compounds, which account for the living and nonliving substances we encounter.</p>	<p>Powders and Crystals Activity 9 Science Challenge Chemical Interactions Activity 4, 5, 7, 8, 10</p>

CONTENT STANDARD B

PHYSICAL SCIENCE

As a result of activities in grades 5-8, all students should develop an understanding of motion and forces

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>The motion of an object can be described by its position, direction of motion, and speed. That motion can be measured and represented on a graph.</p>	<p>Measuring Activity 9, 10 Flight and Rocketry Activity 1-5, 8-12 Simple Machines Activity 1-9 Newton's Toy Box Activity 1, 3, 5, 7-13 Famous Scientists Activity 2, 3</p>
<p>An object that is not being subjected to a force will continue to move at a constant speed and in a straight line.</p>	<p>Flight and Rocketry Activity 2, 5, 8, 9, 11, 12 Simple Machines Activity 5, 6, 9 Newton's Toy Box Activity 1, 3, 5, 7-10, 13 Famous Scientists Activity 3</p>
<p>If more than one force acts on an object along a straight line, then the forces will reinforce or cancel one another, depending on their direction and magnitude. Unbalanced forces will cause changes in the speed or direction of an object's motion.</p>	<p>Measuring Activity 9, 10 Flight and Rocketry Activity 1-5, 8-10 Simple Machines Activity 2, 5-9, 12 Newton's Toy Box Activity 1, 3, 7, 8, 10, 11, 13 Famous Scientists Activity 2</p>

CONTENT STANDARD B

PHYSICAL SCIENCE

As a result of activities in grades 5-8, all students should develop an understanding of transfer of energy

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
Energy is a property of many substances and is associated with heat, light, electricity, mechanical motion, sound, nuclei, and the nature of a chemical. Energy is transferred in many ways.	Color and Light Activity 1 Electric Circuits Activity 3-12 Electrical Connections Activity 1, 2, 4-13 Electromagnetism Activity 1-6 Solar Energy Activity 1, 2
Heat moves in predictable ways, flowing from warmer objects to cooler ones, until both reach the same temperature.	Measuring Activity 11, 12 Electric Circuits Activity 8-11 Weather Instruments Activity 1 Solar Energy Activity 2, 3, 5-8 Electrical Connections Activity 7
Light interacts with matter by transmission (including refraction), absorption, or scattering (including reflection). To see an object, light from that object—emitted by or scattered from it—must enter the eye.	Color and Light Activity 1, 4-7 Solar Energy Activity 1-13 Lenses and Mirrors Activity 1-10
Electrical circuits provide a means of transferring electrical energy when heat, light, sound, and chemical changes are produced.	Electrical Circuits Activity 1, 3-12 Electromagnetism Activity 5-20 Electrical Connections Activity 2, 4-13
In most chemical and nuclear reactions, energy is transferred into or out of a system. Heat, light, mechanical motion, or electricity might all be involved in such transfers.	Powders and Crystals Activity 6, 9 Chemical Interactions Activity 5, 6, 12, 13, 5 Science Challenge

The sun is a major source of energy for changes on the earth's surface. The sun loses energy by emitting light. A tiny fraction of that light reaches the earth, transferring energy from the sun to the earth. The sun's energy arrives as light with a range of wavelengths, consisting of visible light, infrared, and ultraviolet radiation.

Solar Energy Activity 1-13

Color and Light Activity 1

Earth, Moon, and Sun

Activity 9

Astronomy Activity 5

CONTENT STANDARD C

LIFE SCIENCE

As a result of activities in grades 5-8, all students should develop understanding of structure and function in living systems

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>Living systems at all levels of organization demonstrate the complimentary nature of structure and function. Important levels of organization for structure and function include cells, organs, tissues, organ systems, whole organisms, and ecosystems.</p>	<p>Plant and Animal Life Cycles Activity 3, 6, 8 Insect Life Activity 2, 9, 12 You and Your Body Activity 1, 2, 5-8, 13-14 Plants in Our World Activity 1, 4, 7, 8, 11</p>
<p>All organisms are composed of cells—the fundamental unit of life. Most organisms are single cells, other organisms, including humans, are multicellular.</p>	<p>Small Things and Microscopes Activity 7-12 Pond Life Activity 5-10 Plants in Our World Activity 1, 3, 4 DNA—From Genes to Protein Activity 1, 3, 4, 11</p>
<p>Cells carry on the many functions needed to sustain life. They grow and divide, thereby producing more cells, This requires that they take in nutrients, which they use to provide energy for the work that cells do and to make the materials that a cell or an organism needs.</p>	<p>Small Things and Microscopes Activity 7-12 Fungi—Small Wonders Activity 2-4, 7 Plants in Our World Activity 1, 10, 11 DNA—From Genes to Protein Activity 3-10</p>
<p>Specialized cells perform specialized functions in multicellular organisms. Groups of specialized cells cooperate to form a tissue, such as muscle. Different tissues are in turn grouped together to form larger functional units, called organs. Each type of cell, tissue, and organ has a distinct structure, and set of functions that serve the organism as a whole.</p>	<p>Small Things and Microscopes Activity 8, 9 You and Your Body Activity 2, 7 Plants in Our World Activity 1, 3, 4 DNA—From Genes to Protein Activity 3</p>

The human organism has systems for digestion, respiration, reproduction, circulation, excretion, movement, control, and coordination, and for protection from disease. These systems interact with one another.

Disease is a breakdown in structures or functions of an organism. Some diseases are the result of intrinsic failures of the system. Others are the result of damage by infection by other organisms.

You and Your Body

Activity 1, 2, 4-8, 13, 14

Small Things and Microscopes

Activity 13 Science and Health

You and Your Body

Activity 6 Science and Health

Pollution Activity 11

Science and Health

Fungi—Small Wonders

Activity 6 Science and Health

CONTENT STANDARD C

LIFE SCIENCE

As a result of activities in grades 5-8, all students should develop understanding of reproduction and heredity

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>Reproduction is a characteristic of all living systems; because no individual organism lives forever, reproduction is essential to the continuation of every species. Some organisms reproduce asexually. Other organisms reproduce sexually.</p>	<p>Plant and Animal Life Cycle Activity 2, 3, 9, 10 Small Things and Microscopes Activity 12, 13 Fungi—Small Wonders Activity 1-4 DNA—From Genes to Protein Activity 10, 11 Science and Math</p>
<p>In many species, including humans, females produce eggs and males produce sperm, Plants also reproduce sexually—the egg and sperm are produced in the flowers of flowering plants. An egg and sperm unite to begin development of a new individual. That new individual receives genetic information from its mother (via the egg) and its father (via the sperm). Sexually produced offspring never are identical to either of their parents.</p>	<p>Insect Life Activity 2, 7 Plant and Animal Life Cycles Activity 8-10 Fungi—Small Wonders Activity 1-4 DNA—From Genes to Protein Activity 10</p>
<p>Every organism requires a set of instructions for specifying its traits. Heredity is the passage of these instructions from one generation to another.</p>	<p>DNA—From Genes to Protein Activity 3, 6-10, 4 Science Challenge</p>
<p>Hereditary information is contained in the genes, located in the chromosomes of each cell. Each gene carries a single unit of information. An inherited trait of an individual can be determined by one or by many genes, and a single gene can influence more than one trait. A human cell contains many thousands of different genes.</p>	<p>DNA—From Genes to Protein Activity 3 Science Challenge, 5-10, 12</p>

The characteristics of an organism can be described in terms of a combination of traits. Some traits are inherited and others result from interactions with the environment.

DNA—From Genes to Protein
Activity 1, 2

CONTENT STANDARD C

LIFE SCIENCE

As a result of activities in grades 5-8, all students should develop understanding of regulation and behavior

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>All organisms must be able to obtain and use resources, grow, reproduce, and maintain stable internal conditions while living in a constantly changing external environment.</p>	<p>Food Chains and Webs Activity 2, 3 Plant and Animal Life Cycles Activity 2, 6, 9, 10 Fungi—Small Wonders Activity 6 Plants in Our World Activity 3</p>
<p>Regulation of an organism's internal environment involves sensing the internal environment and changing physiological activities to keep within the range required to survive.</p>	<p>Oceans Activity 10 Water Cycle Activity 4 Science and Health Plants in Our World Activity 10</p>
<p>Behavior is one kind of response an organism can make to an internal or environmental stimulus. A behavioral response requires coordination and communication at many levels, including cells, organs systems, and whole organisms. Behavioral response is a set of actions determined in part by heredity and in part from experience.</p>	<p>Animal Behavior Activities 3-12 Food Chains and Webs Activity 4-7 Pond Life Activity 10 Plants in Our World Activity 5, 6</p>
<p>An organism's behavior evolves through adaptation to its environment. How a species moves, obtains food, reproduces, and responds to danger are based in the species evolutionary behavior.</p>	<p>Animal Behavior Activity 6 Science and Language Arts, Science Challenge Food Chains and Webs Activity 2, 3, 7, 8, 11 Pond Life Activity 8 Plants in Our World Activity 5, 6, 8, 9</p>

CONTENT STANDARD C

LIFE SCIENCE

As a result of activities in grades 5-8, all students should develop understanding of populations and ecosystems

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>A population consists of all individuals of a species that occur together at a given place and time. All populations living together and the physical factors with which they interact compose an ecosystem.</p>	<p>Small Things and Microscopes Activity 10, 12, 13 Pond Life Activity 1, 3-7</p>
<p>Populations of organisms can be categorized by the function they serve in an ecosystem. Plants and some micro-organisms are producers—they make their own food. All animals, including humans, are consumers, which obtain food by eating other organisms. Decomposers, primarily bacteria and fungi, are consumers that use waste materials and dead organisms for food. Food webs identify relationships among producers, consumers, and decomposers in an ecosystem.</p>	<p>Small Things and Microscopes Activity 12 Science, Technology, and Society Food Chains and Webs Activity 3, 7-12 Pond Life Activity 11 Plants in Our World Activity 11</p>
<p>For ecosystems, the major source of energy is sunlight. Energy entering ecosystems as sunlight is transferred by producers into chemical energy through photosynthesis. That energy then passes from organism to organism in food webs.</p>	<p>Food Chains and Webs Activity 3 Plants in Our World Activity 3</p>
<p>The number of organisms an ecosystem can support depends on the resources available and abiotic factors, such as quantity of light and water, range of temperatures, and soil composition. Given adequate biotic and abiotic resources and no disease or predators, populations (including humans) increase at rapid rates. Lack of resources and other factors, such as predation and climate, limit the growth of populations in specific niches in the ecosystem.</p>	<p>Small Things and Microscopes Activity 12, 13, 10 Science and Social Studies Food Chains and Webs Activity 11 Fungi—Small Wonders Activity 7iv</p>

CONTENT STANDARD C

LIFE SCIENCE

As a result of activities in grades 5-8, all students should develop understanding of diversity and adaptations of organisms

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
Millions of species of animals, plants, and microorganisms are alive today. Although different species might look dissimilar, the unity among organisms becomes apparent from an analysis of internal structures, the similarity of their chemical processes, and the evidence of common ancestry.	Pond Life Activity 3, 5-7 Fungi—Small Wonders Activity 2, 4 Plants in Our World Activity 10 Science and Social Studies Famous Scientists Activity 9
Biological evolution accounts for the diversity of species developed through gradual processes over many generations. Species acquire many of their unique characteristics through biological adaptation, which involves the selection of naturally occurring variations in populations. Biological adaptations include changes in structures, behaviors, or physiology that enhance survival and reproductive success in a particular environment.	Pond Life Activity 8-10 Oceans Activity 10-12 Famous Scientists Activity 9 DNA—From Genes to Protein Activity 2 Science Challenge
Extinction of a species occurs when the environment changes and the adaptive characteristics of a species are insufficient to allow its survival. Fossils indicate that many organisms that lived long ago are extinct. Extinction of species is common; most of the species that have lived on the earth no longer exist.	Dinosaur Classification Activities 1-3, 7-10 Earth Processes Activity 4

CONTENT STANDARD D

EARTH SCIENCE

As a result of activities in grades 5-8, all students should develop an understanding of structure of the earth system

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>The solid earth is layered with a lithosphere; hot convecting mantle; and dense, metallic core.</p>	<p>Earth Movements Activity 1, 2 Erosion Activity 1 Science and the Arts Earth Processes Activity 2, 11, 12</p>
<p>Lithospheric plates on the scales of continents and oceans constantly move at rates of centimeters per year in response to movements in the mantle. Major geological events, such as earthquakes, volcanic eruptions, and mountain building, result from these plate movements.</p>	<p>Earth Movements Activity 2, 4-9 Earth Processes Activity 1, 12-14</p>
<p>Landforms are the result of a combination of constructive and destructive forces. Constructive forces include crustal deformation, volcanic eruption, and deposition of sediment, while destructive forces include weathering and erosion.</p>	<p>Earth Movements Activity 7-12 Oceans Activity 4 Erosion Activity 1, 2, 9-13 Earth Processes 3, 5, 7, 12 Science Extension</p>
<p>Some changes in the solid earth can be described as the "rock cycle." Old rocks at the earth's surface weather, forming sediments that are buried, then compacted, heated, and often recrystallized into new rock. Eventually, those new rocks may be brought to the surface by the forces that drive plate motions, and the rock cycle continues.</p>	<p>Rocks and Minerals Activity 2, 10, 12 Science Challenge Earth Processes Activity 4-6</p>
<p>Soil consists of weathered rocks and decomposed organic material from dead plants, animals, and bacteria. Soils are often found in layers, with each having a different chemical composition and texture.</p>	<p>Water Cycle Activity 2 Erosion Activity 7, 8 Earth Processes Activity 3</p>

Water, which covers the majority of the earth's surface, circulates through the crust, oceans, and atmosphere in what is known as the "water cycle." Water evaporates from the earth's surface, rises and cools as it moves to higher elevations, condenses as rain or snow, and falls to the surface where it collects in lakes, ocean, soil, and in rocks underground.

Water is a solvent. As it passes through the water cycle it dissolves minerals and gases and carries them to the oceans.

The atmosphere is a mixture of nitrogen, oxygen, and trace gases that include water vapor. The atmosphere has different properties at different elevations.

Clouds, formed by the condensation of water vapor, affect weather and climate.

Global patterns of atmospheric movement influence local weather. Oceans have a major effect on climate, because water in the oceans holds a large amount of heat.

Living organisms have played many roles in the earth system, including affecting the composition of the atmosphere, producing some types of rocks, and contributing to the weathering of rocks.

Water Cycle

Activity 1, 2-9, 11-13

Weather Instruments

Activity 11

Weather Instruments

Activity 9-11

Weather Forecasting

Activity 7, 9, 10

Oceans Activity 8

Science Challenge

Weather Forecasting

Activity 6 Science Challenge, 4

Science and Social Studies

Erosion Activity 2

Earth Processes Activity 4

Science, Technology, and Society

CONTENT STANDARD D

EARTH SCIENCE

As a result of activities in grades 5-8, all students should develop an understanding of earth history

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>The earth processes we see today, including erosion, movement of lithospheric plates, and changes in atmospheric composition, are similar to those that occurred in the past. Earth History is also influenced by occasional catastrophes, such as the impact of an asteroid or comet.</p> <p>Fossils provide important evidence of how life and environmental conditions have changed.</p>	<p>Earth Movements Activity 5-9 Rocks and Minerals Activity 2, 9 Erosion Activity 1, 2, 9-12 Earth Processes Activity 4, 13, 14</p> <p>Dinosaur Classification Activity 1-12 Earth Movement Activity 3 Rocks and Minerals Activity 10, 9 Science, Technology, and Society</p>

CONTENT STANDARD D

EARTH SCIENCE

As a result of activities in grades 5-8, all students should develop an understanding of earth in the solar system

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>The earth is the third planet from the sun in a system that includes the moon, the sun, eight other planets and their moons, and smaller objects, such as asteroids and comets. The sun, an average star, is the central and largest body in the solar system.</p>	<p>Earth, Moon, and Sun Activity 1-5</p>
<p>Most objects in the solar system are in regular and predictable motion. Those motions explain such phenomena as the day, the year, phases of the moon, and eclipses.</p>	<p>Earth, Moon, and Sun Activity 1, 6-8, 11, 12</p>
<p>Gravity is the force that keeps planets in orbit around the sun and governs the rest of the motion in the solar system. Gravity alone holds us to the earth's surface and explains the phenomena of the tides.</p>	<p>Oceans Activity 9 Famous Scientists Activity 3, 12 Science Extension Earth, Sun, and Moon Activity 12</p>
<p>The sun is the major source of energy for phenomena on the earth's surface, such as growth of plants, winds, ocean currents, and the water cycle. Seasons result from variations in the amount of the sun's energy hitting the surface, due to the tilt of the earth's rotation on its axis and the length of the day.</p>	<p>Weather Instruments Activity 11 Water Cycle Activity 11-13 Oceans Activity 5, 7, 8 Solar Energy Activity 1, 2 Earth, Moon, and Sun Activity 9</p>

CONTENT STANDARD E
SCIENCE AND TECHNOLOGY

As a result of activities in grades 5-8, all students should develop abilities of technological design

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
Identify appropriate problems for technological design.	Sound Activity 12 Solar Energy Activity 9, 11 Science Challenge Newton's Toy Box Activity 8 Science Challenge, 12 Reinforcement If Shipwrecks Could Talk Activity 4 Science Extension
Design a solution or product.	Sound Activity 12 Solar Energy Activity 9, 11 Science Challenge Newton's Toy Box Activity 8 Science Challenge, 12 Reinforcement If Shipwrecks Could Talk Activity 4 Science Extension
Implement a proposed design.	Sound Activity 12 Solar Energy Activity 9, 11 Science Challenge Newton's Toy Box Activity 8 Science Challenge, 12 Reinforcement If Shipwrecks Could Talk Activity 4 Science Extension
Evaluate completed technological designs or products.	Sound Activity 12 Solar Energy Activity 9, 11 Science Challenge Newton's Toy Box Activity 8 Science Challenge, 12 Reinforcement If Shipwrecks Could Talk Activity 4, Science Extension

Communicate the process of technological design.

Sound Activity 12
Solar Energy Activity 9, 11
Science Challenge
Newton's Toy Box Activity 8
Science Challenge, 12 Reinforcement
If Shipwrecks Could Talk
Activity 4 Science Extension

CONTENT STANDARD E
SCIENCE AND TECHNOLOGY

As a result of activities in grades 5-8, all students should develop understandings about science and technology

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>Scientific inquiry and technological design have similarities and differences. Scientists propose explanations for questions about the natural world, and engineers propose solutions relating to human problems, needs, and aspirations. Technological solutions are temporary; technologies exist within nature and so they cannot contravene physical or biological principles; technological solutions have side effects; and technologies cost, carry risks, and provide benefits.</p> <p>Many different people in different cultures have made and continue to make contributions to science and technology.</p> <p>Science and technology are reciprocal. Science helps drive technology, as it addresses questions that demand more sophisticated instruments and provides principles for better instrumentation and technique. Technology is essential to science, because it provides instruments and techniques that enable observations of objects and phenomena that are otherwise unobservable due to factors such as quantity, distance, location, size, and speed. Technology also provides tools for investigations, inquiry, and analysis.</p>	<p>Sound Activity 6 Science, Technology, and Society Small Things and Microscopes Activity 12 Science, Technology, and Society Famous Scientists Activity 8 Science, Technology, and Society</p> <p>Animal Behavior Activity 10 Science, Technology, and Society Flight and Rocketry Activity 12 Science and Social Studies Earth, Moon, and Sun Activity 7 Science, Technology, and Society Newton's Toy Box Activity 9 Science and Social Studies</p> <p>Magnets Activity 4 Science, Technology, and Society Insect Life Activity 5 Science, Technology, and Society Color and Light Activity 13 Science, Technology, and Society Famous Scientists Activity 4 Science, Technology, and Society</p>

Perfectly designed solutions do not exist. All technological solutions have tradeoffs, such as safety, cost, efficiency, and appearance. Engineers often build in back-up systems to provide safety. Risk is part of living in a highly technological world. Reducing risk often results in new technology.

Technological designs have constraints. Some constraints are unavoidable, for example, properties of materials, or effects of weather and friction; other constraints limit choices in the design, for example, environmental protection, human safety, and aesthetics.

Technological solutions have intended benefits and unintended consequences. Some consequences can be predicted, others cannot.

Looking at Liquids Activity 9
Science, Technology, and Society

Simple Machines Activity 12
Science, Technology, and Society

Earth, Moon, and Sun

Activity 13

Science, Technology, and Society

DNA—From Genes to Proteins

Activity 12

Science, Technology, and Society

Food Chains and Webs

Activity 12

Science, Technology, and Society

Pollution Activity 4

Science, Technology, and Society

Electrical Connections

Activity 11

Science, Technology, and Society

Earth Processes Activity 11

Science, Technology, and Society

Powders and Crystals Activity 4

Science, Technology, and Society

Pond Life Activity 11

Science, Technology, and Society

Plants in Our World

Activity 10

Science, Technology, and Society

CONTENT STANDARD F

SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES

As a result of activities in grades 5-8, all students should develop understanding of personal health

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>Regular exercise is important to the maintenance and improvement of health. The benefits of physical fitness include maintaining body weight, having energy and strength for routine activities, good muscle tone, bone strength, strong heart/lung systems, and improved mental health. Personal exercise, especially developing cardiovascular endurance, is the foundation of physical fitness.</p>	<p>You and Your Body Activity 2 Science and Health</p>
<p>The potential for accidents and the existence of hazards imposes the need for injury prevention. Safe living involves the development and use of safety precautions and the recognition of risk in personal decisions. Injury prevention has personal and social dimensions.</p>	<p>Each module contains safety information in the activities when appropriate.</p> <p>Powders and Crystals Activity 2 Science and Health You and Your Body Activity 14 Science and Health Earth Processes Activity 8 Science and Health</p>
<p>The use of tobacco increases the risk of illness. Students should understand the influence of short-term social and psychological factors that lead to tobacco use, and the possible long-term detrimental effects of smoking and chewing tobacco.</p>	<p>You and Your Body Activity 6 Science and Health Pollution Activity 4 Science and Health</p>
<p>Alcohol and other drugs are often abused substances. Such drugs change how the body functions and can lead to addiction.</p>	<p>You and Your Body Activity 3 Science and Health, Science and Social Studies DNA—From Genes to Protein Activity 1 Science and Health</p>

Food provides energy and nutrients for growth and development. Nutrition requirements vary with body weight, age, sex, activity, and body functioning.

Sex drive is a natural human function that requires understanding. Sex is also a prominent means of transmitting diseases. The diseases can be prevented through a variety of precautions.

Natural environments may contain substances (for example, radon and lead) that are harmful to human beings. Maintaining environmental health involves establishing or monitoring quality standards related to use of soil, water, and air.

Plant and Animal Life Cycles

Activity 12 Science and Health

You and Your Body Activity 12

Plants in Our World

Activity 10 Science and Health

Famous Scientists Activity 8

Science and Health

Water Cycle Activity 11

Science and Health

Animal Behavior

Activity 1 Science and Health

Chemical Interactions

Activity 4 Science and Health

CONTENT STANDARD F

SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES

As a result of activities in grades 5-8, all students should develop understanding of populations, resources, and environments

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>When an area becomes overpopulated, the environment will become degraded due to the increased use of resources.</p> <p>Causes of environmental degradation and resource depletion vary from region to region and from country to country.</p>	<p>Water Cycle Activity 9 Science, Technology, and Society</p>

CONTENT STANDARD F

SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES

As a result of activities in grades 5-8, all students should develop understanding of natural hazards

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>Internal and external processes of the earth system cause natural hazards, events that change or destroy human and wildlife habitats, damage property, and harm or kill humans. Natural hazards include earthquakes, landslides, wildfires, volcanic eruptions, floods, storms, and even possible impacts of asteroids.</p>	<p>Earth Movements Activity 11 Science and Social Studies Weather Instruments Activity 9 Science and Health Weather Forecasting Activity 12 Science and Social Studies Earth Processes Activity 8 Science, Technology, and Society</p>
<p>Human activities also can induce hazards through resource acquisition, urban growth, land-use decisions, and waste disposal. Such activities can accelerate many natural changes.</p>	<p>Food Chains and Webs Activity 10 Science, Technology, and Society Water Cycle Activity 12 Science, Technology, and Society Pollution Activity 10, 6 Science, Technology, and Society Pond Life Activity 11 Science, Technology, and Society</p>
<p>Natural hazards can present personal and societal challenges because misidentifying the change or incorrectly estimating the rate and scale of change may result in either too little attention and significant human costs or too much cost for unneeded preventive measures.</p>	<p>Erosion Activity 10 Science, Technology, and society Earth Movements Activity 11 Science and Health Oceans Activity 1 Science, Technology, and Society</p>

CONTENT STANDARD F

SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES

As a result of activities in grades 5-8, all students should develop understanding of risks and benefits

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>Risk analysis considers the type of hazard and estimates the number of people that might be exposed and the number likely to suffer consequences. The results are used to determine the options for reducing or eliminating risks.</p>	<p>Erosion Activity 10 Science and Social Studies Electrical Circuits Activity 2 Science and Health Pollution Activity 10 Science and Social Studies Earth Processes Activity 11 Science, Technology, and Society</p>
<p>Students should understand the risks associated with natural hazards (fires, floods, tornadoes, hurricanes, earthquakes, and volcanic eruptions), with chemical hazards (pollutants in air, water, soil, and food), with biological hazards (pollen, viruses, bacterial, and parasites), social hazards (occupational safety and transportation), and with personal hazards (smoking, dieting, and drinking).</p>	<p>Plant and Animal Life Cycles Activity 8 Science and Health Electromagnetism Activity 5 Science and Health Pollution Activity 10 Earth Processes Activity 11 Science, Technology, and Society</p>
<p>Individuals can use a systematic approach to thinking critically about risks and benefits. Examples include applying probability estimates to risks and comparing them to estimated personal and social benefits.</p>	<p>Small Things and Microscopes Activity 12 Science and Health Electrical Circuits Activity 2 Science and Health</p>
<p>Important personal and social decisions are made based on perceptions of benefits and risks.</p>	<p>Water Cycle Activity 11 Science and Math Small Things and Microscopes Activity 12 Science and health DNA—From Genes to Protein Activity 12 Science, Technology, and Society</p>

CONTENT STANDARD F

SCIENCE IN PERSONAL AND SOCIAL PERSPECTIVES

As a result of activities in grades 5-8, all students should develop understanding of science and technology in society

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>Science influences society through its knowledge and world view. Scientific knowledge and the procedures used by scientists influence the way many individuals in society think about themselves, others, and the environment. The effect of science on society is neither entirely beneficial nor entirely detrimental.</p>	<p>Small Things and Microscopes Activity 4 Science, Technology, and Society Astronomy Activity 6 Science Extension Famous Scientists Activity 4 Science, Technology, and Society If Shipwrecks Could Talk Activity 7 Science and Social Studies</p>
<p>Societal challenges often inspire questions for scientific research, and social priorities often influence research priorities through the availability of funding for research.</p>	<p>Magnets Activity 3 Science, Technology, and Society Fungi—Small Wonders Activity 11 Science, Technology, and Society Chemical Interactions Activity 9 Science, Technology, and Society</p>
<p>Technology influences society through its products and processes. Technology influences the quality of life and the ways people act and interact. Technological changes are often accompanied by social, political, and economic changes that can be beneficial or detrimental to individuals and to society. Social needs, attitudes, and values influence the direction of technological development.</p>	<p>Sound Activity 6 Science, Technology, and Society Color and Light Activity 13 Science, Technology, and Society Flight and Rocketry Activity 9 Science, Technology, and Society Famous Scientists Activity 7 Science, Technology, and Society</p>
<p>Science and technology have advanced through contributions of many different people, in different cultures, at different times</p>	<p>Dinosaur Classification Activity 3 Science and Social Studies</p>

in history. Science and technology have contributed enormously to economic growth and productivity among societies and groups within societies.

Scientists and engineers work in many different settings, including colleges and universities, businesses and industries, specific research institutes, and government agencies.

Scientists and engineers have ethical codes requiring that human subjects involved with research be fully informed about risks and benefits associated with the research before the individuals choose to participate. This ethic extends to potential risks to communities and property. In short, prior knowledge and consent are required for research involving human subjects or potential damage to property.

Science cannot answer all questions and technology cannot solve all human problems or meet all human needs. Students should understand the difference between scientific and other questions. They should appreciate what science and technology can reasonably contribute to society and what they cannot do. For example, new technologies often will decrease some risks and increase others.

Simple Machines Activity 1
Science and Social Studies

Plants in Our World

Activity 8

Science and Social Studies

Electrical Connections

Activity 12

Science, Technology, and Society

Insect Life Activity 4

Science and Careers

Measuring Activity 11

Science and Careers

Weather Forecasting

Activity 12

Science and Social Studies

Oceans Activity 12

Science, Technology, and Society

CONTENT STANDARD G

HISTORY AND NATURE OF SCIENCE

As a result of activities in grades 5-8, all students should develop understanding of science as a human endeavor

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>Women and men of various social and ethnic backgrounds—and with diverse interests, talents, qualities, and motivations—engage in the activities of science, engineering, and related fields such as the health professions. Some scientists work in teams, and some work alone, but all communicate extensively with others.</p> <p>Science requires different abilities, depending on such factors as the field of study and type of inquiry. Science is very much a human endeavor, and the work of science relies on basic human qualities, such as reasoning, insight, energy, skill, and creativity—as well as on scientific habits of mind such as intellectual honesty, tolerance of ambiguity, skepticism, and openness to new ideas.</p>	<p>Sound Activity 2 Science and Social Studies</p> <p>Rocks and Minerals Activity 4 Science and Social Studies</p> <p>Astronomy Activity 9 Science and Language Arts</p> <p>Chemical Interactions Activity 6 Science and Social Studies</p> <p>Powders and Crystals Activity 12 Science and Careers</p> <p>Pollution Activity 12 Science and Social Studies</p> <p>Plants in Our World Activity 8 Science and Social Studies</p> <p>Earth Processes Activity 7 Science, Technology, and Society</p>

CONTENT STANDARD G

HISTORY AND NATURE OF SCIENCE

As a result of activities in grades 5-8, all students should develop understanding of nature of science

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>Scientists formulate and test their explanations of nature using observation, experiments, and theoretical and mathematical models. Although all scientific ideas are tentative and subject to change and improvement in principle, for most major ideas in science, there is much experimental and observational confirmation. Those ideas are not likely to change greatly in the future. Scientists do and have changed their ideas about nature when they encounter new experimental evidence that does not match their existing explanations.</p>	<p>Animal Behavior Activity 8 Science and Social Studies Fungi—Small Wonders Activity 2 Science and Health Newton's Toy Box Activity 5 Science and Social Studies DNA—From Genes to Protein Activity 12 Science Challenge</p>
<p>In areas where active research is being pursued and in which there is not a great deal of experimental or observational evidence and understanding, it is normal for scientists to differ with one another about interpretation of the evidence or theory being considered. Different scientists might publish conflicting experimental results or might draw different conclusions from the same data. Ideally, scientists acknowledge such conflict and work towards finding evidence that will resolve their disagreement.</p>	<p>Astronomy Activity 2 Science and Social Studies DNA—From Genes to Protein Activity 7 Science, Technology, and Society Famous Scientists Activity 3</p>
<p>It is part of scientific inquiry to evaluate the results of scientific investigations, experiments, observations, theoretical models, and the explanations proposed by other scientists. Evaluation includes reviewing the experimental procedures, examining the evidence, identifying faulty reasoning, pointing out statements that go beyond the evidence, and suggesting alternative explanations for</p>	<p>Insect Life Activity 5 Science, Technology, and Society Earth Movements Activity 7 Science Extensions Astronomy Activity 1 Science Extension Earth Processes Activity 14 Science Extension</p>

he same observations. Although scientists may disagree about explanations of phenomena, about interpretations of data, or about the value of rival theories, they agree that questioning, response to criticism, and open communication are integral to the process of science. As scientific knowledge evolves, major disagreements are eventually resolved through such interactions between scientists.

CONTENT STANDARD G

HISTORY AND NATURE OF SCIENCE

As a result of activities in grades 5-8, all students should develop understanding of history of science

Examples of each of the standard's guidelines are listed from DSM II modules, the elementary FOSS modules for grades 5-6, and from the FOSS Middle School Short Courses for grades 7-8. Of the short courses, Human Brain and Senses, Earth History, Planetary Science, and Electronics are completed and included fully in the correlation. The other short courses, Weather and Water, Force and Motion, Chemistry, Populations and Ecosystems, and Diversity of Life are in various stages of development and are included where their correlation is anticipated.

<i>GUIDELINE</i>	<i>DSM II</i>
<p>Many individuals have contributed to the traditions of science. Studying some of these individuals provides further understanding of scientific inquiry, science as a human endeavor, the nature of science, and the relationships between science and society.</p>	<p>Magnets Activity 10 Science and Language Arts Pond Life Activity 2 Science and Social Studies Famous Scientists Activity 1, 3, 5, 7, 9, 11 Chemical Interactions Activity 2 Science and Social Studies</p>
<p>In historical perspective, science has been practiced by different individuals in different cultures. In looking at the history of many peoples, one finds that scientists and engineers of high achievement are considered to be among the most valued contributors to their culture.</p>	<p>Solar System Activity 4 Science and Social Studies Flight and Rocketry Activity 12 Science and Social Studies Solar Energy Activity 9 Science and Social Studies Chemical Interactions Activity 2 Science and Social Studies</p>
<p>Tracing the history of science can show how difficult it was for scientific innovators to break through the accepted ideas of their time to reach the conclusions that we currently take for granted.</p>	<p>Small Things and Microscopes Activity 9 Science and Social Studies Famous Scientists Activity 3</p>