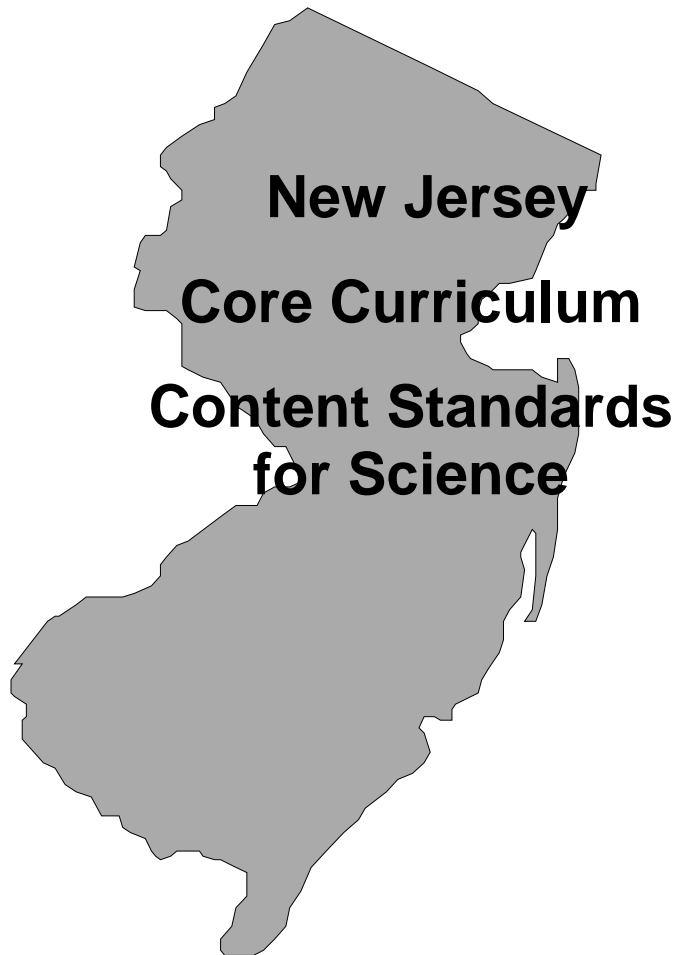


Delta Science Modules (DSM)

Grades K-8

Correlation with



February 2004



**Correlation of the
New Jersey Science Standards
from the
New Jersey Science Curriculum Framework
to
Delta Science Modules
(DSM)**

The following correlation of the New Jersey Science Curriculum Framework to the Delta Science Modules (DSM) is to show representative examples of investigations and activities that address listed standards and their objectives. A citation does not reflect all of the investigations or activities that might address a particular standard or objective.

**A Correlation of the New Jersey
Grades K-4
(with Cumulative Progress Indicators at Grade 2 & Grade 4)
Science Curriculum Standards
to the
Delta Science Modules (DSM)**

STANDARD 5.1 (SCIENTIFIC PROCESSES)

ALL STUDENTS WILL DEVELOP PROBLEM-SOLVING, DECISION-MAKING AND INQUIRY SKILLS, REFLECTED BY FORMULATING USABLE QUESTIONS AND HYPOTHESES, PLANNING EXPERIMENTS, CONDUCTING SYSTEMATIC OBSERVATIONS, INTERPRETING AND ANALYZING DATA, DRAWING CONCLUSIONS, AND COMMUNICATING RESULTS.

A. Habits of Mind		
<i>SCIENCE STANDARD By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Raise questions about the world around them and be willing to seek answers through making careful observations and experimentation.	<p>All DSM modules have students conduct scientific investigations and students must identify questions and are guided to “discover” the answers or operationally define a relationship. Some Grades K-1 examples include:</p> <p><u>Finding the Moon</u></p> <p><u>From Seed to Plant</u></p> <p><u>Investigating Water</u></p> <p>Some Grades 2-3 examples include:</p> <p><u>Classroom Plants</u></p> <p><u>Sink or Float?</u></p> <p><u>Soil Science</u></p> <p><u>States of Matter</u></p> <p><u>Weather Watching</u></p> <p>Some Grades 3-4 examples include:</p>	<p>Activity 6, 7, & 12</p> <p>Activity 5, 8, & 11</p> <p>Activity 5, 6, 7, 9, & 12</p> <p>Activity 4, 5, 6, 8, 9, 10 & 11</p> <p>Activity 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 & 11</p> <p>Activity 1, 3, 4, 5, 7, 10 & 11</p> <p>Activity 1, 2, 3, 4, 5, 7, 8, 9, 10 & 11</p> <p>Activity 3, & 11</p>

	<u>Food Chains and Webs</u> <u>Magnets</u> <u>Powders and Crystals</u> <u>Sound</u>	Activity 1, 3, 7 & 8 Activity 1, 2, 3, 4, 5, 6, 9, 10 & 11 Activity 3, 4, 5, 6, 7, 8 & 9 Activity 1, 2, 3, 7, 8, 9, 10 & 11
2. Keep records that describe observations, carefully distinguish actual observations from ideas and speculations, and are understandable weeks and months later.	Activity Sheets, found in the teacher manuals, are used by students to record observations, collect data and interpret results of investigations. It is intended for students to complete these individually and discussed collectively.	
3. Recognize that when a science investigation is replicated, very similar results are expected.	It is intended for students to complete activity sheets (for data collection) individually and discussed collectively. This grants opportunities to achieve multiple trials and discuss differences in data among students or student groups using the same/similar procedures.	
4. Know that when solving a problem it is important to plan and get ideas and help from other people.	Delta Science Modules encourage and promote cooperative learning strategies. The quantity of materials included in each kit allows small groups of students (2 or 4) to investigate and record observations and report what he or she has learned. The interaction between team members is an integral part of each activity and the nature of the Activity Sheets promotes the collection and reporting of data by group or by individuals.	

B. Inquiry and Problem Solving

<i>SCIENCE STANDARD</i> <i>By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Develop strategies and skills for information-gathering and problem-solving using appropriate tools and technologies.	Science Process Skills are defined as the skills used to take in information (through the senses) and processing the information using cognitive, language and mathematical skills. Evidence of the employment of the skills can be found in the DSM III Teacher Guides on pgs. X and 3 and in the Student Objectives of DSM II & III. Delta III Science Readers grant	

	students to develop and enhance literary skills.	
2. Identify the evidence used in an explanation.	<u>Earth Movements</u> <u>Plant and Animal Populations</u> <u>Finding the Moon</u> <u>From Seed to Plant</u> <u>Investigating Water</u> <u>Observing an Aquarium</u> <u>Properties</u> <u>Sunshine and Shadows</u>	Activity 4, 7 & 9 Activity 6 & 9 Activity 2, 4, 6 & 10 Activity 8 Activity 8, 10 & 11 Activity 1, 8 & 11 Activity 8 Activity 4

C. Safety

<i>SCIENCE STANDARD</i> By the end of Grade 4, the student will:	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Recognize that conducting science activities requires an awareness of potential hazards and the need for safe practices.		All DSM Modules contain safety information for teachers and students. For the teachers safety precautions are printed in shaded boxes within the context of the lesson instructions and on student activity sheets. Examples are listed below:
2. Understand and practice safety procedures for conducting science investigations.	<u>States of Matter</u> <u>Using Your Senses</u> <u>Electrical Circuits</u> <u>Weather Watching</u>	Activity 7, 10 & 12 Activity 2, 3, 8, & 9 Activity 1, 3, 8, 10 & 11 Activity 7, 8, 9 & 10

STANDARD 5.2 (SCIENCE AND SOCIETY)

ALL STUDENTS WILL DEVELOP AN UNDERSTANDING OF HOW PEOPLE OF VARIOUS CULTURES HAVE CONTRIBUTED TO THE ADVANCEMENT OF SCIENCE AND TECHNOLOGY, AND HOW MAJOR DISCOVERIES AND EVENTS HAVE ADVANCED SCIENCE AND TECHNOLOGY.

A. Cultural Contributions		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
Describe how people in different cultures have made and continue to make contributions to science and technology.	<p style="text-align: center;"><u>Amazing Air</u></p> <p style="text-align: center;"><u>Force and Motion</u></p> <p style="text-align: center;"><u>Sink or Float?</u></p> <p style="text-align: center;"><u>Electrical Circuits</u></p> <p style="text-align: center;"><u>States of Matter</u></p> <p style="text-align: center;"><u>Magnets</u></p>	<p>Two features in the DSM II & III program provide opportunities for students to become acquainted with scientists having varying cultural backgrounds. One is the <i>Science and Social Studies</i> component that appears in the “Connection” feature that follows every science activity. The other is in the Delta III Science Reader feature <i>People in Science</i>. See the following specific examples:</p> <p>Activity 10, and “Connections” <i>Science and Social Studies</i>; Activity 11 “Connections” <i>Science Extension</i>;</p> <p>Activity 1, “Connections” <i>Science and Social Studies</i>; Activity 6 “Connections” <i>Science and Social Studies</i>; Delta III Science Reader pgs. 12-13</p> <p>Activity 9, “Connections” <i>Science and Social Studies</i>; Activity 11, “Connections” <i>Science and Social Studies</i>;</p> <p>Activity 3, “Connections” <i>Science and Social Studies</i>; Delta III Science Reader pgs. 13-14 <i>People in Science</i></p> <p>Delta III Science Reader pg. 14</p> <p>Delta III Science Reader pg. 13</p>

B. Historical Perspectives

<i>SCIENCE STANDARD</i> By the end of Grade 4, the student will:	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Hear, read, write, and talk about scientists and inventors in historical context.		In the Delta III Science Reader feature <i>People in Science</i> contains historical biographies of famous scientists and inventors. It also focuses on careers in science. Guidance for reading, discussions and writing opportunities can be found in the Delta Science Reader Section of the Teacher Guide. See the following specific examples:
	<u>Food Chains and Webs</u>	Delta III Science Reader pgs. 11 & 12
	<u>Force and Motion</u>	Delta III Science Reader pgs. 12-13
	<u>Weather Instruments</u>	Delta III Science Reader pgs. 10-11
	<u>Earth Movements</u>	Delta III Science Reader pg. 14
	<u>Weather Watching</u>	Delta III Science Reader pg. 13
	<u>Finding the Moon</u>	Delta III Science Reader pg. 14
	<u>Plant and Animal Life Cycles</u>	Delta III Science Reader pg. 14

STANDARD 5.3 (MATHEMATICAL APPLICATIONS)

ALL STUDENTS WILL INTEGRATE MATHEMATICS AS A TOOL FOR PROBLEM-SOLVING IN SCIENCE, AND AS A MEANS OF EXPRESSING AND/OR MODELING SCIENTIFIC THEORIES.

A. Numerical Operations

<i>SCIENCE STANDARD</i> By the end of Grade 4, the student will:	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Determine the reasonableness of estimates, measurements, and computations of quantities when doing science.	<u>Length and Capacity</u>	In this module (12 activities) students use tools to explore linear measures of length, width and height and they estimate, compare and measure the capacities of different-shaped containers. They also learn the importance of uniform standard units of measure.
	<u>Measuring</u>	In this module, (12 activities) students explore the properties associated with the measurement of matter including length, width, height, area, capacity, volume and temperature. Metric measurement is introduced and applied. Suggested for Grades 3-5.
	<u>States of Matter</u>	Activity 1, 2, 7 & 11

	<u>From Seed to Plant</u> <u>Sunshine and Shadows</u> <u>Amazing Air</u>	Activity 7 Activity 8, 9, 10 & 11 Activity 3, 4, 5, 6, 7, 8, 9 & 11
2. Recognize and comprehend the orders of magnitude associated with large and small quantities.	<u>Length and Capacity</u> <u>Properties</u> <u>Sunshine and Shadows</u> <u>Length and Capacity</u>	Activity 1, 3 & 8 Activity 1, 3, 6, & 7 Activity 2 1, 2, 3, & 8
3. Express quantities using appropriate number formats, such as: <ul style="list-style-type: none"> • integers • fractions 	<u>Classroom Plants</u> <u>Force and Motion</u> <u>Length and Capacity</u> <u>States of Matter</u> <u>Weather Watching</u> <u>Food Chains and Webs</u> <u>Measuring</u>	Activity 3 Activity 1, 3, 5 & 9 Activity 4, 5, 6, 9, 10 & 11 Activity 4, 6 & 11 Activity 2, 5 & 7 Activity 2 & 6 Activity 2, 4, 6, 7, 8, & 12

B. Geometry and Measurement

<i>SCIENCE STANDARD</i> <i>By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Select appropriate measuring instruments based on the degree of precision required.	<u>Length and Capacity</u> <u>Measuring</u>	Activity 4, 5, 6, 8, 9, 10 & 11 Activity 2, 3, 5, 6, 7, 8, 10 & 12
2. Use a variety of measuring instruments and record measured quantities using the appropriate units.	<u>Classroom Plants</u> <u>Force and Motion</u> <u>Length and Capacity</u> <u>States of Matter</u> <u>Weather Watching</u> <u>Food Chains and Webs</u> <u>Measuring</u>	Activity 3 Activity 1, 3, 5 & 9 Activity 4, 5, 6, 9, 10 & 11 Activity 4, 6 & 11 Activity 2, 5 & 7 Activity 2 & 6 Activity 2, 4, 6, 7, 8, & 12

C. Patterns and Algebra

<i>SCIENCE STANDARD</i> <i>By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Identify patterns when	<u>Finding the Moon</u>	Activity 3, 4, 9, 10 & 11

observing the natural and constructed world.	<u>From Seed to Plant</u>	Activity 4
	<u>Investigating Water</u>	Activity 7
	<u>Observing an Aquarium</u>	Activity 3, 4, 5, 6 & 11
	<u>Sunshine and Shadows</u>	Activity 1, 4, 5, 6, & 7
	<u>Amazing Air</u>	Activity 9
	<u>Butterflies and Moths</u>	Activity 2, 3 & 10
	<u>Classroom Plants</u>	Activity 6 & 7
	<u>Force and Motion</u>	Activity 3, 4, 6, 7, & 12
	<u>Plant and Animal Populations</u>	Activity 2, 4, 5, 6, & 8
<u>Solar System</u>	Activity 1 & 2	

D. Data Analysis and Probability

<i>SCIENCE STANDARD</i> By the end of Grade 4, the student will:	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Use tables and graphs to represent and interpret data.	<u>Weather Instruments</u> <u>Powders and Crystals</u> <u>Magnets</u> <u>Food Chains and Webs</u> <u>Amazing Air</u> <u>Length and Capacity</u> <u>Plant and Animal Populations</u> <u>Weather Watching</u>	<p>In all DSM II's recommended for Grades K-4 activities have <i>Activity Sheets</i> on which students collect and display data in the form of graphs and tables as responses to questions about the investigation. For evidence, refer to the Activity Sheets at the end of the referenced Teacher Manuals. Some specific references include:</p> <p>Activity 1, 3, 5, 6, 10 & 11</p> <p>Activity 5, 6, 7, 8, & 9</p> <p>Activity 2, 3, & 4</p> <p>Activity 2 & 4</p> <p>Activity 5</p> <p>Activity 4</p> <p>Activity 8 & 9</p>

STANDARD 5.4 (NATURE AND PROCESS OF TECHNOLOGY)

ALL STUDENTS WILL UNDERSTAND THE INTERRELATIONSHIPS BETWEEN SCIENCE AND TECHNOLOGY AND DEVELOP A CONCEPTUAL UNDERSTANDING OF THE NATURE AND PROCESS OF TECHNOLOGY.

A. Science and Technology		
<i>Indicators for this strand are introduced at a higher grade level.</i>		
B. Nature of Technology		
<i>SCIENCE STANDARD By the end of Grade 2, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Select and use simple tools and materials to complete a task.	<u>Force and Motion</u>	Activity 3, 5, 6, 7, 8, 9, 10 & 11
	<u>Investigating Water</u>	Activity 2, 3, 4 & 12
	<u>Observing an Aquarium</u>	Activity 4, 5 & 6
	<u>Amazing Air</u>	Activity 6, 7, & 10
	<u>Length and Capacity</u>	Activity 4, & 9
C. Technological Design		
<i>SCIENCE STANDARD By the end of Grade 2, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Make a plan in order to design a solution to a problem.	<u>Investigating Water</u>	Activity 12
	<u>Sunshine and Shadows</u>	Activity 12
	<u>Amazing Air</u>	Activity 12
	<u>Sink or Float?</u>	Activity 12
	<u>Soil Science</u>	Activity 12
2. Describe a toy or other familiar object as a system with parts that work together.	<u>Butterflies and Moths</u>	Activity 2 & 10
	<u>Force and Motion</u>	Activity 3, 6, 7, 8, & 12
	<u>Plant and Animal Populations</u>	Activity 2, 4, 6, & 7
	<u>Weather Watching</u>	Activity 1, 4, 9, 10, & 12
	<u>Using Your Senses</u>	Activity 1, 2, 5, 8, 10 & 11
	<u>States of Matter</u>	Activity 5, 6 & 12
	<u>Soil Science</u>	Activity 2, 4, 5, 8, 10, & 12
	<u>Sink or Float?</u>	Activity 8, 9, 10 11 & 12
<u>Classroom Plants</u>	Activity 2, 5, 6, 7, 8, 9, 10, & 11	

A. Science and Technology

<i>SCIENCE STANDARD</i> <i>By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Distinguish between things that occur in nature and those that have been designed to solve human problems.	<u>Force and Motion</u>	Activity 3, 4, 5, 6, 7, 8, 9, 10 & 11
	<u>Sink or Float?</u>	Activity 1 & 12
	<u>Soil Science</u>	Activity 10 & 12
	<u>Magnets</u>	Activity 9 & 12

B. Nature of Technology

<i>SCIENCE STANDARD</i> <i>By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Demonstrate how measuring instruments are used to gather information in order to design things that work properly.	<u>Electrical Circuits</u>	Activity 8 & 11
	<u>Earth Movements</u>	Delta III Science Reader pg. 14

C. Technological Design

<i>SCIENCE STANDARD</i> <i>By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Describe a product or device in terms of the problem it solves or the need it meets.	<u>Sink or Float?</u>	Activity 12
	<u>Soil Science</u>	Activity 12
	<u>Amazing Air</u>	Activity 12
	<u>Butterflies and Moths</u>	Activity 8
	<u>Magnets</u>	Activity 8 & 12
	<u>Measuring</u>	Activity 12
	<u>Water Cycle</u>	Activity 12
2. Choose materials most suitable to make simple mechanical constructions.	<u>Sink or Float?</u>	Activity 12
	<u>Insect Life</u>	Activity 12
	<u>Measuring</u>	Activity 12
	<u>Sound</u>	Activity 12
3. Use the design process to identify a problem, look for ideas, and develop and share solutions with others.	<u>Water Cycle</u>	Activity 12

STANDARD 5.5 (CHARACTERISTICS OF LIFE)

ALL STUDENTS WILL GAIN AN UNDERSTANDING OF THE STRUCTURE, CHARACTERISTICS, AND BASIC NEEDS OF ORGANISMS AND WILL INVESTIGATE THE DIVERSITY OF LIFE.

A. Matter, Energy and Organization in Living Systems

<i>SCIENCE STANDARD</i> <i>By the end of Grade 2, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Investigate the basic needs of humans and other organisms.	<u>From Seed to Plant</u>	Activity 2, 4, 5, 6, 7, 11 & 13; DSM III Science Reader pgs. 12
	<u>Observing an Aquarium</u>	Activity 2, 6, 7 & 10
	<u>Finding the Moon</u>	Activity 6
	<u>Butterflies and Moths</u>	Activity 1 & 4
	<u>Classroom Plants</u>	Activity 5 & 8
	<u>Plant and Animal Population</u>	Activity 4 & 9
2. Compare and contrast essential characteristics that distinguish living things from nonliving things.	<u>Soil Science</u>	Activity 8 & 9
	<u>Plant and Animal Populations</u>	Activity 1
	<u>Plant and Animal Life Cycles</u>	Activity 2
	<u>Butterflies and Moths</u>	Delta III Science Reader pgs. 2-3

B. Diversity and Biological Evolution

<i>SCIENCE STANDARD</i> <i>By the end of Grade 2, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Recognize that different types of plants and animals live in different parts of the world.	<u>Observing an Aquarium</u>	Activity 1; Delta III Science Reader pgs. 13 & 14
2. Recognize that some kinds of organisms that once lived on earth have completely disappeared.	<u>Dinosaurs and Fossils</u> (Recommended for Grades 3-4)	Activity 1, 2 & 8; DSM III Science Reader pgs. 2-3 & 12
	<u>Earth Movements</u>	Activity 3; DSM III Science Reader pgs. 6-7

C. Reproduction and Heredity

<i>SCIENCE STANDARD</i> <i>By the end of Grade 2, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Recognize that humans and other organisms resemble their parents.	<u>Observing an Aquarium</u>	Activity 10; DSM III Science Reader pgs. 10 & 11
	<u>From Seed to Plant</u>	Activity 13; DSM III Science Reader pgs. 10 & 11

	<u>Butterflies and Moths</u>	Activity 11; DSM III Science Reader pgs. 8-9 & 11
	<u>Plant and Animal Populations</u>	Activity 5

A. Matter, Energy and Organization in Living Systems

<i>SCIENCE STANDARD</i> <i>By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Identify the roles that organisms may serve in a food chain.	<u>Food Chains and Webs</u> <u>Plant and Animal Populations</u> <u>Insect Life</u>	Activity 7, 8, 10, 11 & 12; DSM III Science Reader pgs. 6-9 Activity 10, 11 & 12 Activity 10
2. Differentiate between the needs of plants and those of animals.	<u>Plant and Animal Populations</u> <u>Soil Science</u> <u>Classroom Plants</u> <u>Food Chains and Webs</u>	Activity 1, 3, 4, 9, 10 & 11 Activity 9; DSM III Science Reader pgs. 14 & 15 Activity 5 Activity 3
3. Recognize that plants and animals are composed of different parts performing different functions and working together for the well being of the organism.	<u>Butterflies and Moths</u> <u>Classroom Plants</u> <u>Plant and Animal Populations</u> <u>Using Your Senses</u>	Activity 1, 2, 6, 9, 10 & 12 Activity 2, 6, 7, 8, 9, & 10 Activity 1, 2, 4, 6, 7, 10. & 11 Activity 1, 5, 8, 10 & 11
4. Describe the basic functions of the major systems of the human body including but not limited to: <ul style="list-style-type: none"> • digestive system • circulatory system • respiratory system • nervous system • skeletal system • muscular system • reproductive system 	<u>You & Your Body</u> (Recommended for Grades 5-6)	Activity 1, 2, 4, 5, 6 & 7; DSM III Science Reader pgs. 4-11

B. Diversity and Biological Evolution

<i>SCIENCE STANDARD</i> <i>By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Develop a simple classification scheme for grouping organisms.	<u>Insect Life</u> <u>Dinosaurs and Fossils</u>	Activity 6 Activity 9 & 10; Delta III Science Reader pgs. 2-3
2. Recognize that individuals vary within every species, including humans.	<u>Dinosaurs and Fossils</u>	Activity 6, 7, 8, 9 & 10; DSM III Science Reader pgs. 6-11

	<u>Insect Life</u>	Activity 5, 6, & 12
	<u>Small Things and Microscopes</u>	Activity 11
	<u>Plant and Animal Populations</u>	Activity 3
C. Reproduction and Heredity		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Identify different stages in the lives of various organisms.	<u>Food Chains and Webs</u>	Activity 2, 6 & 7; Delta III Science Reader pgs. 10 & 14
	<u>Insect Life</u>	Activity 2 & 7
	<u>Plant and Animal Life Cycles</u>	Activity 2, 3, 5, 6, 9, 10 & 12; Delta III Science Reader pgs. 2-13
	<u>Small Things and Microscopes</u>	Activity 5, 11, 12 & 13
	<u>Butterflies and Moths</u>	Activity 6, 9, & 11
	<u>Classroom Plants</u>	Activity 3, 4, 5 & 11
	<u>Plant and Animal Population</u>	Activity 2, 4, 5, 6, 7, 8, 9, 10, 11 & 12

STANDARD 5.6 (CHEMISTRY)

ALL STUDENTS WILL GAIN AN UNDERSTANDING OF THE STRUCTURE AND BEHAVIOR OF MATTER.

A. Structure and Properties of Matter		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 2, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Sort objects according to the materials from which they are made or their physical properties, and give a rationale for sorting.	<u>Properties</u>	Activity 2, 4, 5, 10, 11, 12 & 13; Delta III Science Reader pgs. 3-13;
	<u>Investigating Water</u>	Activity 5 & 7; Delta III Science Reader pgs. 6-13
	<u>From Seed to Plant</u>	Activity 1
2. Use magnifiers to observe materials, then draw and describe what more can be seen using the tools.	<u>Investigating Water</u>	Activity 1
	<u>Observing an Aquarium</u>	Activity 4 & 5
	<u>Soil Science</u>	Activity 1
3. Observe that water can be a liquid or a solid and can change from one form to the other.	<u>States of Matter</u>	In this module (12 activities) students use hands-on experiences as they investigate and identify the distinctive properties of the three common states of matter. They conduct

	<u>Investigating Water</u>	experiments with the melting, evaporating, freezing and condensing processes. Delta III Science Reader pgs. 7-10
	<u>Weather Watching</u>	Activity 9, 10 & 11; Delta III Science Reader pgs. 4-11
		Activity 7; Delta III Science Reader pgs. 4-5

B. Chemical Reactions
Indicators for this standard are introduced at a higher grade level.

A. Structure and Properties of Matter

<i>SCIENCE STANDARD</i> By the end of Grade 4, the student will:	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Sort materials based on physical characteristics that can be seen by using magnification.	<u>Small Things and Microscopes</u> <u>Powders and Crystals</u>	Activity 4, 6, 8, 9 & 10 Activity 3
2. Observe that water can be a liquid or a solid and can change from one form to the other and the mass remains the same.	<u>States of Matter</u>	Activity 4
3. Recognize that water, as an example of matter, can exist as a solid, liquid or gas and can be transformed from one state to another by heating or cooling.	<u>States of Matter</u> <u>Looking at Liquids</u> <u>Water Cycle</u> <u>Weather Instruments</u>	In this module (12 activities) students use hands-on experiences as they investigate and identify the distinctive properties of the three common states of matter. They conduct experiments with the melting, evaporating, freezing and condensing processes. Delta III Science Reader pgs. 7-10 Activity 11 Activity 4, 5, 8, 12 & 13 Activity 7
4. Show that not all materials respond the same way to what is done to them.	<u>States of Matter</u>	Activity 7 & 11

B. Chemical Reactions

<i>SCIENCE STANDARD</i> By the end of Grade 4, the student will:	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Combine two or more materials and show that the new material may have properties that are different from the original material.	<u>Looking at Liquids</u> <u>Powders and Crystals</u>	Activity 8 Activity 5, 6, 7, 8 & 10

STANDARD 5.7 (PHYSICS)

ALL STUDENTS WILL GAIN AN UNDERSTANDING OF NATURAL LAWS AS THEY APPLY TO MOTION, FORCES, AND ENERGY TRANSFORMATIONS.

A. Motions and Forces		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 2, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Distinguish among the different ways objects can move such as: <ul style="list-style-type: none"> • fast and slow. • in a straight line. • in a circular path. • back and forth 	<u>Sunshine and Shadows</u> <u>Finding the Moon</u> <u>Force and Motion</u>	Activity 4 & 6; Delta III Science Reader pgs. 8-9 & 14 Activity 3, 9 & 10; Activity 2; DSM III Science Reader pg. 3
2. Show that the position and motion of an object can be changed by pushing or pulling the object.	<u>Force and Motion</u>	Activity 1, 2 & 4, DSM III Science Reader pgs. 2-3, & 4-5
B. Energy Transformations		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 2, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Demonstrate that sound can be produced by vibrating objects.	<u>Sound</u>	In this module (12 activities) students investigate the phenomena of sound as energy in motion. They learn how structure and function of ear works as a sound receptacle. Students investigate pitch, volume, sound absorption and reflection and how musical instruments create sound. DSM III Science Reader pgs. 2-8
A. Motions and Forces		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Recognize that changes in the speed or direction of a moving object are caused by force and that the greater the force, the greater the change in motion will be.	<u>Force and Motion</u>	Activity 1, 2, 3, 4, 6 & 8; Delta III Science Reader pgs. 2-3, 4-5, 6, 7 & 8
2. Recognize that some forces can act at a distance. <ul style="list-style-type: none"> • gravity • magnetism • static electricity 	<u>Magnets</u> <u>Solar System</u> <u>Electrical Circuits</u>	Activity 1, 2, 3, 4, 7 & 10; Delta III Science Reader pgs. 2-3, 7 & 10 Activity 2 DSM III Science Reader pg. 2

B. Energy Transformations		
<i>SCIENCE STANDARD By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Identify sources of heat and demonstrate that heat can be transferred from one object to another.	<u>Solar System</u> <u>Weather Watching</u> <u>Weather Instruments</u> <u>Measuring</u> <u>Powders and Crystals</u> <u>States of Matter</u>	Activity 2; DSM III Science Reader pgs. 2-3 Activity 3 Activity 6; DSM III Science Reader pg.3 Activity 11 & 12 Activity 9 Activity 5, 6, & 7; DSM III Science Reader pg. 9
2. Identify sources of light and demonstrate that light can be reflected from some surfaces and pass through others.	<u>Lenses and Mirrors</u> (Recommended for Grades 5-6)	Activity 1, 2, 4, 5, 6 & 7
3. Use devices that show electricity producing heat, light, sound, and magnetic effects.	<u>Electrical Circuits</u> <u>Magnets</u>	Activity 1, 3, 4, 8, 9 & 10; DSM III Science Reader pgs. 3-6 & 10 Activity 10 & 11; DSM III Science Reader pgs. 10 & 11
4. Show that differences in sound (loud or soft, high or low) can be produced by varying the way objects vibrate.	<u>Sound</u>	Activity 7, 8, 9 10 & 11; DSM III Science Reader pgs. 6-7

STANDARD 5.8 (EARTH SCIENCE)

ALL STUDENTS WILL GAIN AN UNDERSTANDING OF THE STRUCTURE, DYNAMICS, AND GEOPHYSICAL SYSTEMS OF THE EARTH.

A. Earth's Properties and Materials		
<i>SCIENCE STANDARD By the end of Grade 2, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Observe and describe rocks and soil.	<u>Soil Science</u> <u>Properties</u>	Activity 1, 2, 3 & 7; Delta III Science Reader pgs. 2-3 & 7-8 Activity 7; DSM III Science Reader pg. 7
B. Atmosphere and Water		
<i>SCIENCE STANDARD By the end of Grade 2, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Identify the sources and uses of water.	<u>Investigating Water</u>	Activity 9 & 11; DSM III Science Reader pgs. 2-3

	<u>Observing an Aquarium</u>	Activity 1 & 11; DSM III Science Reader pgs. 11-12
	<u>Classroom Plants</u>	Activity 5
2. Recognize that water can disappear (evaporate) and collect on cold surfaces (condense).	<u>Investigating Water</u>	Activity 10 & 11; DSM III Science Reader pgs. 4-5 & 10-11
	<u>States of Matter</u>	Activity 8 & 9; DSM III Science Reader pgs. 7, 9 & 10
3. Describe current weather conditions and recognize how these conditions affect our daily lives.	<u>Weather Watching</u>	Activity 1, 3, 4, 5, 6, 7 & 12; DSM III Science Reader pgs. 2 & 11
4. Describe daily and seasonal changes and patterns in the weather.	<u>Weather Watching</u>	Activity 3, 6, 7, 8, & 12; DSM III Science Reader pgs. 8-10
C. Processes that Shape the Earth <i>Indicators for this standard are introduced at a higher grade level.</i>		
D. How We Study the Earth		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 2, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Record observations that describe the features of the natural world in their local environment.	<u>Finding the Moon</u>	Activity 3, 4 & 6; DSM III Science Reader pgs. 2-10
	<u>Sunshine and Shadows</u>	Activity 3, 6 & 7; DSM III Science Reader pgs. 2-6, 8-9, 10 & 11
A. Earth's Properties and Materials		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Observe that most rocks and soils are made of several substances or minerals.	<u>Soil Science</u>	Activity 1, 3, 4 & 7 Delta III Science Reader pgs. 2-3 & 7-8
	<u>Earth Movements</u>	Activity 3 & Delta III Science Reader pg. 15
	<u>Rocks and Minerals</u> (Recommended for Grades 5-6)	Activity 1; Delta III Science Reader pgs. 9-13
2. Observe that properties of soil vary from place to place and will affect the soil's ability to support life.	<u>Soil Science</u>	Activity 1, 7 & 8; Delta III Science Reader pgs. 2-3 & 7-8
3. Recognize that air is a substance that surrounds us, takes up space, and moves around us as wind.	<u>Amazing Air</u>	Activity 1, 2, 3, 7 & 10
	<u>Weather Instruments</u>	Activity 4 & 5; Delta III Science Reader pg. 5

B. Atmosphere and Water

<i>SCIENCE STANDARD By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Recognize that air is a substance that surrounds us, takes up space, and moves around us as wind.	<u>Amazing Air</u> <u>Weather Instruments</u>	Activity 1, 2, 3, 7 & 10 Activity 4 & 5; Delta III Science Reader pg. 5
2. Recognize that most of Earth's surface is covered by water and be able to identify the characteristics of those sources of water. <ul style="list-style-type: none"> • oceans • rivers • lakes • underground sources • glaciers 	<u>Water Cycle</u> <u>Oceans</u> (Recommended for Grades 5-6) <u>Soil Science</u> <u>Earth Movements</u>	Activity 1, 2, 3, & 4 Activity 1, 2, 3, 6, 7, 8 & 9; Delta III Science Reader pgs. 2, 3, 7, 8 & 9 Delta III Science Reader pg. 5 Delta III Science Reader pgs. 13-14
3. Observe weather changes and patterns by measurable quantities such as temperature, wind direction and speed, and amounts of precipitation.	<u>Weather Watching</u> <u>Weather Instruments</u>	Activity 2, 3, 4, 5, & 7; Delta III Science Reader pgs. 6-7 Activity 1, 2, 3, 4, 5, 6 & 11; Delta III Science Reader pgs. 3-5 & 7-8
4. Observe that when liquid water disappears, it turns into a gas (vapor) in the air and can reappear as a liquid when cooled, or as a solid if cooled below its freezing point.	<u>Weather Instruments</u> <u>Water Cycle</u> <u>States of Matter</u> <u>Looking at Liquids</u>	Activity 7, 8 & 9; Delta III Science Reader pgs. 6 & 8 Activity 4, 5, 8, 9, 12 & 13 Activity 4, 7, 8, 9, 10, & 11 Activity 11
5. Observe that rain, snow and other forms of precipitation come from clouds, but that not all clouds produce precipitation.	<u>Weather Watching</u> <u>Weather Instruments</u>	Activity 6 & 7; Delta III Science Reader pgs. 4-5 Activity 9, 10 & 11; Delta III Science Reader pgs. 6 & 8
6. Recognize that clouds and fog are made of tiny droplets of water and possibly tiny particles of ice.	<u>Weather Instruments</u> <u>Water Cycle</u>	Activity 8-10; Delta III Science Reader pgs. 6-8 Activity 4, 5, 8 & 9
C. Processes that Shape the Earth		
<i>SCIENCE STANDARD By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Recognize that some changes of the Earth's surface are due to slow processes such as erosion and weathering, and some changes are due to rapid changes such as landslides, volcanic eruptions, and earthquakes.	<u>Soil Science</u> <u>Earth Movements</u> <u>Erosion</u> (Recommended for Grades 5-6)	Activity 5, 6, & 12; Delta III Science Reader pgs. 4-5 & 9 Activity 9, 10 & 11; Delta III Science Reader pgs. 6-12 Activity 1, 2, 3, 6, 9, 10, 11 & 12
2. Recognize that moving	<u>Erosion</u> (Recommended for Grades 5-6)	Activity 2, 5, 6, 10, 11 & 12

water, wind, and ice continually shape the Earth's surface by eroding rock and soil in some areas and depositing them in other areas.	<u>Soil Science</u>	Activity 12
D. How We Study the Earth		
<i>SCIENCE STANDARD</i> By the end of Grade 4, the student will:	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Use maps to locate and identify physical features on the Earth.	<u>Earth Movements</u> <u>Oceans</u>	Delta III Science Reader pgs. 6-7 & 11 Delta III Science Reader pgs. 2, 4-5, 8-10

STANDARD 5.9 (ASTRONOMY & SPACE SCIENCE)

ALL STUDENTS WILL GAIN AN UNDERSTANDING OF THE ORIGIN, EVOLUTION, AND STRUCTURE OF THE UNIVERSE

A. Earth, Moon, Sun System		
<i>SCIENCE STANDARD</i> By the end of Grade 2, the student will:	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Recognize that the sun supplies light and heat to the Earth.	<u>Sunshine and Shadows</u> <u>Weather Watching</u>	Activity 1; Delta III Science Reader pgs. 2-3 Activity 1, 2, & 3; Delta III Science Reader pgs. 2-3, 4-5 & 10
2. Observe the patterns of day and night and the movements of the shadows of an object on the Earth during the course of the day.	<u>Sunshine and Shadows</u>	Activity 1, 4, 6 & 7 Delta III Science Reader pgs. 2 & 8-9
B. Solar System		
<i>SCIENCE STANDARD</i> By the end of Grade 2, the student will:	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Recognize that the sun can only be seen during the day, but the moon can be seen sometimes at night and sometimes during the day.	<u>Finding the Moon</u>	Activity 3, 5 & 6; Delta III Science Reader pgs. 2-3 & 4-5
C. Stars		
<i>SCIENCE STANDARD</i> By the end of Grade 2, the student will:	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Observe that stars are many, scattered, and different in brightness.	<u>Finding the Moon</u>	Activity 1; Delta III Science Reader pgs. 2-3
2. Observe that the position of the stars, with respect to each other (constellations) is unchanging.	<u>Solar System</u> (Recommended for Grades 3-4)	Activity 11 & 12

D. Galaxies and Universe

Indicator for this standard are introduced at a higher grade level.

A. Earth, Moon, Sun System

<i>SCIENCE STANDARD</i> <i>By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Observe patterns that result from the Earth's position relative to the sun and rotation of the Earth on its axis.	<u>Solar System</u>	Activity 9; Delta III Science Reader pgs. 2-3 & 6-7
2. Recognize and describe the phases of the moon.	<u>Finding the Moon</u> (Recommended for Grades K-1) Solar System	Activity 4, 5, 9 & 10 Delta III Science Reader pgs. 7

B. Solar System

<i>SCIENCE STANDARD</i> <i>By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Describe Earth as one of several planets that orbit the sun and the moon as a satellite of the Earth.	<u>Solar System</u>	Activity 1, 6 & 8; Delta III Science Reader pgs. 2-12

C. Stars

<i>SCIENCE STANDARD</i> <i>By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Observe that stars are not all the same in brightness, size, and color.	<u>Solar System</u>	Activity 11 & 12

D. Galaxies and Universe

<i>SCIENCE STANDARD</i> <i>By the end of Grade 4, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Recognize that images of celestial objects can be magnified and seen in greater detail when observed using binoculars and light telescopes.	<u>Solar System</u>	Activity 2 "Con-nections" <i>Science and Social Studies</i> ; Activity 3 "Con-nections" <i>Science and Careers</i> ; Activity 11 "Connections" <i>Science, Technology and Society</i>
2. Observe and record short-term and long-term changes in the night sky.	<u>Solar System</u>	Activity 12

**A Correlation of the New Jersey
Grades 5-8
Science Curriculum Standards
to the
Delta Science Modules II & III
and Full Option Science System (FOSS)**

STANDARD 5.1 (SCIENTIFIC PROCESSES)

ALL STUDENTS WILL DEVELOP PROBLEM-SOLVING, DECISION-MAKING AND INQUIRY SKILLS, REFLECTED BY FORMULATING USABLE QUESTIONS AND HYPOTHESES, PLANNING EXPERIMENTS, CONDUCTING SYSTEMATIC OBSERVATIONS, INTERPRETING AND ANALYZING DATA, DRAWING CONCLUSIONS, AND COMMUNICATING RESULTS.

A. Habits of Mind		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Evaluate the strengths and weaknesses of data, claims, and arguments.		The format of the Teacher Guide for implementation of the lesson is a two-column format. The <i>Additional Information</i> features provides guidance for handling situations where occasional contradictory data occurs as students share and discuss their data. Experiments are completed in groups of 2 or 4. The data that is collected is compared and discussed. Experimental errors will surface through the discussion and data comparison.
2. Communicate experimental findings to others.	<u>Erosion</u> <u>Flight and Rocketry</u>	All DSM Activities have given students opportunities for discussion and to think reflectively. Communicating (talking, drawing, explaining and acting) is done through Student Activity Sheets. Other forms of communication include tables, graphs, charts, and models. The Delta III Science Reader also provide visuals associated with concepts. Some examples if these include: Activity 4 & 7

	<u>Fungi-Small Wonders</u> <u>Lenses and Mirrors</u> <u>Pollution</u> <u>Pond Life</u> <u>Rocks and Minerals</u> <u>Simple Machines</u>	Activity 2, 3 & 5 Activity 7 & 11 Activity 2, 5 & 12 Activity 2, 7, 8, 10 & 12 Activity 12 Activity 3, 4, 5, & 6 Activity 2, 5, 7 & 8
3. Recognize the results of scientific investigations are seldom exactly the same and that replication is often necessary.	<u>Electromagnetism</u> <u>Flight and Rocketry</u> <u>Fungi-Small Wonders</u> <u>Lenses and Mirrors</u> <u>Pond Life</u> <u>Rocks and Minerals</u> <u>Simple Machines</u> <u>Solar Energy</u>	Activity 6 Activity 5 Activity 7 & 11 Activity 9 & 12 Activity 9 & 10 Activity 4, 5, & 6 Activity 3 Activity 3, 4, 5, 6, 8, 11 & 12
4. Recognize that curiosity, skepticism, open-mindedness, and honesty are attributes of scientists.		In all DSM modules, students work in cooperative groups and employ the nature of scientific activity, which involves, skepticism and alternative explanations, intellectual honesty and proprietary discovery.
B. Inquiry and Problem Solving		
<i>SCIENCE STANDARD</i> By the end of Grade 8, the student will:	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Identify questions and make predictions that can be addressed by conducting investigations.	<u>Color and Light</u> <u>Electromagnetism</u> <u>Erosion</u> <u>Flight and Rocketry</u> <u>Fungi-Small Wonders</u>	In the DSM II Science modules, activities are designed around inquiry and students' questions. Indicators of inquiry in the lesson objectives are in the terms "discover" and "predict". The following are examples: Activity 10 & 12 Activity 6 & 10 Activity 10 & 11 Activity 3 & 5 Activity 7, 8 & 11

	<u>Lenses and Mirrors</u> <u>Pollution</u> <u>Rocks and Minerals</u> <u>You and Your Body</u> <u>Chemical Interactions</u> <u>Pond Life</u> <u>Simple Machines</u> <u>Plants in Our World</u> <u>Famous Scientists</u> <u>Pollution</u> <u>Pond Life</u>	Activity 2, 9 & 12 Activity 7 & 8 Activity 4, 5, 6, & 9 Activity 9, 10 & 11 Activity 10 & 11 Activity 9 & 10 Activity 3 Activity 5 Activity 5 & 7 Activity 10 Activity 12
2. Design and conduct investigations incorporating the use of a control.	All DSM Modules provide opportunity to test hypotheses and repeated trials are conducted. The following include examples: <u>Plants in Our World</u> <u>Chemical Interactions</u> <u>Newton's Toy Box</u> <u>Animal Behavior</u> <u>Electrical Circuits</u> <u>Food Chains and Webs</u> <u>Looking at Liquids</u>	Activity 3 Activity 11 & 12 Activity 9, 11 & 12 Activity 3,4, 5, 6, 7, 11 & 12 Activity 6 & 7 Activity 3 & 8 Activity 2, 7 & 10
3. Collect, organize, and interpret the data that result from experiments.	<u>Dinosaur Classification:</u> <u>Earth Movements:</u> <u>Solar System:</u>	“Hands-on Science” is the nature of Delta Science Modules thus, the success of the lessons is dependent on developmentally- appropriate observations and use of data-gathering tools to provide evidence of scientific phenomena. Examples of how these are used can be found in the following references: Activity 3 & 4 Activity 2, 6, 7, & 9 Activity 5, 6, 7, & 8

	<u>Erosion:</u> <u>Oceans:</u> <u>You and Your Body:</u> <u>Chemical Interactions:</u> <u>DNA-From Genes to Proteins:</u> <u>Earth, Moon and Sun:</u>	Activity 2 Activity 6, 7 & 8 Activity 1, 2 & 6 Activity 4, 5, 7 & 8 Activity 4 & 6 Activity 3, 4, 10 11 & 12
C. Safety		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Know when and how to use appropriate safety equipment with all classroom materials.	All DSM Modules contain safety information for teachers and students. For the teachers safety precautions are printed in shaded boxes within the context of the lesson instructions and on student activity sheets. <u>Powders and Crystals</u> <u>Color and Light</u> <u>Lens and Mirrors</u> <u>Pond Life</u>	Activity 2, 6, 7 & 9 Activity 1, 2, 5 & 8 Activity 10 Activity 7, 8 & 11
2. Understand and practice safety procedures for conducting science investigations.	See above references.	

STANDARD 5.2 (SCIENCE AND SOCIETY)

ALL STUDENTS WILL DEVELOP AN UNDERSTANDING OF HOW PEOPLE OF VARIOUS CULTURES HAVE CONTRIBUTED TO THE ADVANCEMENT OF SCIENCE AND TECHNOLOGY, AND HOW MAJOR DISCOVERIES AND EVENTS HAVE ADVANCED SCIENCE AND TECHNOLOGY.

A. Cultural Contributions		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Recognize that scientific theories: a. develop over time b. depend on the contributions of many people, and c. reflect the social and political climate of their time.		Two features in the DSM II & III program provide opportunities for students to become acquainted with scientists having varying cultural backgrounds. Two are the <i>Science and Social Studies</i> and <i>Science and Careers</i> component that appears in the “Connection” feature that follows every science activity. The other is in the

	<p><u>Electromagnetism</u></p> <p><u>Electrical Connections</u></p> <p><u>Pond Life</u></p> <p><u>Chemical Interactions</u></p> <p><u>Famous Scientists</u></p> <p><u>You and Your Body</u></p> <p><u>Oceans</u></p> <p><u>Rocks and Minerals</u></p> <p><u>Dinosaurs and Fossils</u></p> <p><u>Color and Light</u></p> <p><u>Pollution</u></p> <p><u>Flight and Rocketry</u></p>	<p>Delta III Science Reader feature <i>People in Science</i>. See the following specific examples:</p> <p>Activity 12 “Connections” <i>Science and Careers</i></p> <p>Activity 1 “Con-nections” <i>Science and Social Studies</i></p> <p>Activity 10 “Connections” <i>Science and Social Studies</i></p> <p>Activity 6 “Con- nections” <i>Science and Social Studies</i></p> <p>Biographical supplement found within Teaching guide: Activity 1& 2 (Archimedes), Activity 3 & 4 (Galileo Galilei), Activity 5 & 6 (Tho-mas Edison), Activity 7 & 8 (Matthew Henson), Activity 9 & 10 (Rachel Carson), Activity 11 & 12 (Stephen Hawking)</p> <p>DSM III Science Reader pgs. 12-13;</p> <p>DSM III Science Reader pg. 14</p> <p>DSM III Science Reader pg. 14</p> <p>DSM III Science Reader pg. 14</p> <p>DSM III Science Reader pg. 14</p> <p>DSM III Science Reader pg. 14</p> <p>DSM III Science Reader pgs. 14 & 15</p>
<p>2. Know that scientists are men and women of many cultures who often work together to solve scientific and technological problems.</p>	<p><u>Flight and Rocketry</u></p> <p><u>Pollution</u></p> <p><u>Dinosaurs and Fossils</u></p>	<p>DSM III Science Reader pgs. 14 & 15</p> <p>DSM III Science Reader pg. 14</p> <p>DSM III Science Reader pg. 14</p>
<p>3. Describe how different people in different cultures have made and continue to make contributions to science and technology.</p>	<p><u>Pond Life</u></p> <p><u>Flight and Rocketry</u></p>	<p>Activity 2 “Connections”, <i>Science and Social Studies</i>;</p> <p>Activity 2 “Connections”, <i>Science and Social Studies</i>; Activity “Connections”, <i>Science and Language Arts</i>; Activity 4 “Connections”, <i>Science and Social Studies</i>; Activity 4 “Connections”, <i>Science and Careers</i>; Activity 8 “Connections”, <i>Science and Careers</i>; Activity 12 “Connections”, <i>Science and Social Studies</i>;</p>

	<p><u>Color and Light</u></p> <p><u>Electromagnetism</u></p> <p><u>If Shipwrecks Could Talk</u></p> <p><u>Chemical Interactions</u></p> <p><u>Electrical Connections</u></p>	<p>Activity 1 “Connections”, <i>Science and Social Studies</i>; Activity 7 “Connections”, <i>Science and Social Studies</i>; Activity 8 “Connections”, <i>Science and Social Studies</i>;</p> <p>Activity 12 “Connections” <i>Science and Careers</i></p> <p>Activity 3 “Connections” <i>Science and Social Studies</i>; Activity 7 “Connections” <i>Science and Social Studies</i>;</p> <p>Activity 2 “Connections” <i>Science and Social Studies</i>; Activity 4 “Connections” <i>Science and Social Studies</i>; Activity 5 “Connections” <i>Science and Social Studies</i>; Activity 6 “Connections” <i>Science and Social Studies</i>; Activity 8 “Connections” <i>Science and Social Studies</i>;</p> <p>Activity 2 “Connections” <i>Science and Social Studies</i>; Activity 4 “Connections” <i>Science and Social Studies</i>; Activity 5 “Connections” <i>Science and Social Studies</i>; Activity 11 “Connections” <i>Science and Social Studies</i>;</p>
B. Historical Perspectives		
<i>SCIENCE STANDARD</i> By the end of Grade 8, the student will:	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Describe the impact of major events and people in the history of science and technology, in conjunction with other world events.	<p><u>Flight and Rocketry</u></p> <p><u>Pollution</u></p> <p><u>Weather Forecasting</u></p>	<p>DSM III Science Reader pgs. 14 & 15</p> <p>DSM III Science Reader pgs. 7, 10 & 12</p> <p>DSM III Science Reader pgs. 12-14</p>
2. Describe the development and exponential growth of scientific knowledge and technological innovations.	<u>DNA-From Genes to Proteins</u>	<p>Following every activity, in the “Connections” section of the Teacher Manual, a sequence historical reviews are provided about the study of genetics as it has progressed from early discoveries up to the present.</p> <p>This module is a prime example of the inquiry famous scientists employed as they devised a</p>

STANDARD 5.3 (MATHEMATICAL APPLICATIONS)

ALL STUDENTS WILL INTEGRATE MATHEMATICS AS A TOOL FOR PROBLEM-SOLVING IN SCIENCE, AND AS A MEANS OF EXPRESSING AND/OR MODELING SCIENTIFIC THEORIES.

A. Numerical Operations		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Express quantities using appropriate number formats, such as: <ul style="list-style-type: none"> • decimals • percents • scientific notation 	<u>Famous Scientists</u> <u>Chemical Interactions</u> <u>Lenses and Mirrors</u> <u>Simple Machines</u>	Activity 8 Activity 1, 2, 7, 8 & 13 Activity 1, 5, 9 Activity 1, 3, 4, 8, 9
B. Geometry and Measurement		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Perform mathematical computations using labeled quantities and express answers in correctly derived units.	<u>Lenses and Mirrors</u> <u>Simple Machines</u> <u>Newton's Toy Box</u> <u>Astronomy</u> <u>DNA-From Genes to Proteins</u> <u>Pond Life</u>	Activity 1 Activity 1, 3, 7, 8 & 9 Activity 7 & 8 Activity 3 Activity 7 Activity 8
C. Patterns and Algebra		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Express physical relationships in terms of mathematical equations derived from collected data.	<u>Lenses and Mirrors</u> <u>Simple Machines</u> <u>Newton's Toy Box</u> <u>Electrical Connections</u>	Activity 1 Activity 7 Activity 3, 7 & 8 Activity 5 & 6
D. Data Analysis and Probability		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Represent and describe mathematical relationships among variables using: <ul style="list-style-type: none"> • graphs • tables 	<u>Astronomy</u> <u>Newton's Toy Box</u> <u>You and Your Body</u>	Activity 6, 11 & 12 Activity 3, 7 & 8 Activity 5

	<u>Pollution</u> <u>Pond Life</u> <u>Animal Behavior</u> <u>Electrical Connections</u> <u>Famous Scientists</u> <u>Earth, Moon, and Sun</u>	Activity 9 Activity 8 Activity 9 & 10 Activity 8 & 9 Activity 7 Activity 7
2. Analyze experimental data sets using measures of central tendency: <ul style="list-style-type: none"> • mean • mode • median 	<u>You and Your Body</u> <u>Pond Life</u> <u>Newton's Toy Box</u>	Activity 3 & 5 Activity 8 Activity 8 & 9
3. Construct and use a graph of experimental data to draw a line of best fit and identify a linear relationship between variables when appropriate.	<u>Electrical Connections</u> <u>Famous Scientists</u> <u>You and Your Body</u> <u>Solar Energy</u>	Activity 8 & 9 Activity 7 Activity 3 Activity 2, 3, 4, 5, 6, 7 & 8
4. Use computer spreadsheets, graphing and database applications to assist in quantitative analysis of data.		

STANDARD 5.4 (NATURE AND PROCESS OF TECHNOLOGY)

ALL STUDENTS WILL UNDERSTAND THE INTERRELATIONSHIPS BETWEEN SCIENCE AND TECHNOLOGY AND DEVELOP A CONCEPTUAL UNDERSTANDING OF THE NATURE AND PROCESS OF TECHNOLOGY.

A. Science and Technology <i>Reinforce indicators from previous grade level</i>		
B. Nature of Technology <i>Reinforce indicators from previous grade level</i>		
C. Technological Design		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 6, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Select a technological problem and describe the criteria and constraints that are addressed in solving the problem.	<u>Solar Energy</u> <u>Lenses and Mirrors</u> <u>Fungi-Small Wonders</u> <u>Flight and Rocketry</u> <u>Erosion</u>	Activity 9 & 13 Activity 12 Activity 11 Activity 5 & 10 Activity 11

<p>2. Identify the basic components of a technological system:</p> <ul style="list-style-type: none"> • input • process • output • feedback 		Not addressed in the DSM II or III program
<p><i>SCIENCE STANDARD</i> By the end of Grade 8, the student will:</p>	<p><i>DELTA SCIENCE MODULES II & III</i></p>	<p><i>DSM II & III ACTIVITIES</i></p>
<p>1. Compare and contrast science with technology, illustrating similarities and differences between those two human endeavors.</p>		<p>Although this standard is not directly addressed in the DSM three resources exemplify the application of the standard. DSM II Famous Scientists Module is based on six science pioneers who applied science principles to inventions and discoveries. A second resource is found in the “Science Connections” that follows every activity. Within this feature <i>Science and Technology</i> provides connections to the lesson and human endeavors that are applied to the topic of the activity. The third resource is found in the Delta III Science Reader feature “People in Science”. This article is most often about the applied science in industry or by inventors/inventions that unite science and technology as a human endeavor.</p>
<p>B. Nature of Technology</p>		
<p><i>SCIENCE STANDARD</i> By the end of Grade 8, the student will:</p>	<p><i>DELTA SCIENCE MODULES II & III</i></p>	<p><i>DSM II & III ACTIVITIES</i></p>
<p>1. Analyze a product or system to determine the problem it was designed to solve, the design constraints, trade-offs and risks involved in using the product or system, how the product or system might fail, and how the product or system might be improved.</p>	<p><u>If Shipwrecks Could Talk</u></p> <p><u>Famous Scientists</u></p> <p><u>Electrical Connections</u></p> <p><u>Solar Energy</u></p> <p><u>Pollution</u></p> <p><u>Flight and Rocketry</u></p>	<p>Activity 4</p> <p>Activity 5, 7 & 10</p> <p>Activity 12 & 13</p> <p>Activity 9 & 13</p> <p>Activity 12</p> <p>Activity 5</p>
<p>C. Technological Design</p>		
<p><i>SCIENCE STANDARD</i> By the end of Grade 8, the student will:</p>	<p><i>DELTA SCIENCE MODULES II & III</i></p>	<p><i>DSM II & III ACTIVITIES</i></p>
<p>1. Recognize how feedback loops are used to control systems.</p>		Not addressed in the DSM II or III program

STANDARD 5.5 (CHARACTERISTICS OF LIFE)

ALL STUDENTS WILL GAIN AN UNDERSTANDING OF THE STRUCTURE, CHARACTERISTICS, AND BASIC NEEDS OF ORGANISMS AND WILL INVESTIGATE THE DIVERSITY OF LIFE.

A. Matter, Energy and Organization in Living Systems		
<i>SCIENCE STANDARD By the end of Grade 6, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Explain how systems of the body are interrelated and regulate the body's internal environment.	<u>You and Your Body</u>	Activity 2,4,6,7,& 14; DSM III Science Reader pgs. 2-11
2. Identify and describe the structure and function of cells and cell parts.	<u>You and Your Body</u> <u>Plants in Our World</u> <u>DNA-From Genes to Proteins</u> <u>Small Things and Microscopes</u> (Recommended for Grades 3-4)	Delta III Science Reader pgs. 2-3 Activity 1 & 11 Activity 3, 4, & 5 Activity 7, 8 & 9
B. Diversity and Biological Evolution		
<i>SCIENCE STANDARD By the end of Grade 6, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Describe and give examples of the major categories of organisms and of the characteristics shared by organisms.	<u>Plants in Our World</u> <u>Pond Life</u>	Activity 1 "Connections" <i>Science Challenge</i> Activity 1 "Connections" <i>Science Extension</i>
2. Compare and contrast acquired and inherited characteristics in human and other species.	<u>DNA-From Genes to Proteins</u>	Activity 1 and "Connections" <i>Science Challenge</i> ; Activity 3 "Connections" <i>Science Extension</i>
C. Reproduction and Heredity		
<i>SCIENCE STANDARD By the end of Grade 6, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Describe the life cycles of humans and other organisms.	<u>Plant and Animal Life Cycles</u> (Recommended for Grades 3-4) <u>Fungi-Small Wonders</u> <u>Pond Life</u>	Activity 2, 4, 9, 10 & 11; DSM III Science Reader pgs. 2-13 Activity 4 Activity 10
A. Matter, Energy and Organization in Living Systems		
<i>SCIENCE STANDARD By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Explain how the products respiration and photosynthesis are recycled.	<u>Plants in Our World</u>	Activity 5, 6, 7, 9 & 10
2. Recognize that complex multicellular organisms, including humans, are composed of and defined by interactions of the following:	<u>You and Your Body</u> <u>Plants in Our World</u>	Activity 1, 2, 4, 6, 7, 8 & 14; Delta III Science Reader pgs. 2-11 Activity 1, 2, 4, & 10

<ul style="list-style-type: none"> • cells • tissues • organs • systems 	<u>DNA-From Genes to Proteins</u>	Activity 3 & 4
B. Diversity and Biological Evolution		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Compare and contrast kinds of organism using their internal and external characteristics.	<u>Fungi-Small Wonders</u> <u>Pond Life</u> <u>You and Your Body</u> <u>Famous Scientists</u> <u>Plants in Our World</u> <u>Small Things and Microscopes</u> (Recommended for Grades 3-4)	Activity 2 & 6 Activity 5, 6, 8, 9 & 10 Activity 1, 2, 4, 6, 7, 8, & 14; Delta III Science Reader pgs. 2-12 Activity 9 Activity 1 & 2 Activity 7, 8 & 9
2. Discuss how changing environmental conditions can result in evolution or extinction of a species.	<u>Small Things and Microscopes</u> (Recommended for Grades 3-4) <u>Oceans</u> <u>Pollution</u> <u>Famous Scientists</u>	Activity 13 Activity 10 & 11 Activity 10 Activity 9
3. Recognize that individual organisms with certain traits are more likely to survive and have offspring.	<u>Oceans</u> <u>Plants in Our World</u> <u>DNA-From Genes to Proteins</u>	Activity 10 & 11 Activity 3 <i>Science and Social Studies</i> Activity 1 “Connections” <i>Science Challenge</i>
C. Reproduction and Heredity		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Describe how the sorting and recombining of genetic material results in the potential for variation among off spring of humans and other species.	<u>DNA-From Genes to Proteins</u>	Activity 6, 8, 9 & 13

STANDARD 5.6 (CHEMISTRY)

ALL STUDENTS WILL GAIN AN UNDERSTANDING OF THE STRUCTURE AND BEHAVIOR OF MATTER.

A. Structure and Properties of Matter		
<i>SCIENCE STANDARD By the end of Grade 6, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Recognize that about 100 different elements have been identified and most materials on Earth are made of a few of them.	<u>Chemical Interactions</u>	Activity 4, 5, & 6
2. Show that equal volumes of different substances usually have different masses.	<u>Chemical Interactions</u> <u>If Shipwrecks Could Talk</u> <u>Looking at Liquids</u>	Activity 1 Activity 4 Activity 8 & 9
3. Describe the properties of mixtures and solutions, including concentration and saturation.	<u>Powders and Crystals</u> (Recommended for Grades 3-4) <u>Chemical Interactions</u>	Activity 5, 10 & 12 Activity 3 & 9
4. Measure characteristic physical properties such as boiling point, melting point, and solubility, and recognize that the property is independent of the amount of sample.	<u>Powders and Crystals</u> <u>Chemical Interactions</u>	Activity 5 & 9 Activity 3
B. Chemical Reactions		
<i>SCIENCE STANDARD By the end of Grade 6, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Combine two or more materials and show that the new material may have properties that are different from the original material.	<u>Chemical Interactions</u> <u>Pollution</u>	Activity 6, 8, 9, 10, 11 & 12 Activity 8
A. Structure and Properties of Matter		
<i>SCIENCE STANDARD By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Know that all matter is composed of atoms that may join together to form molecules.	<u>Chemical Interactions</u>	Activity 4 & 5
2. Recognize that the phase of matter is determined by the arrangement and motion of atoms and molecules and that the motion of these particles is related to the energy of the system.	<u>Chemical Interactions</u>	Activity 1, 2 and "Connections" <i>Science Challenge & Science Extension</i> ; Activity 4
3. Know that there are groups of elements that have similar properties, including highly reactive metals, less reactive metals, highly reactive non-metals, and some almost completely non-reactive	<u>Chemical Interactions</u>	Activity 4 and "Connections" <i>Science and the Arts</i> , and <i>Science and Health</i>

gases.		
4. Recognize that a mixture often can be separated into the original substances using one or more of their characteristic physical properties.	<u>Chemical Interactions</u> <u>Powders and Crystals</u>	Activity 3 Activity 10
B. Chemical Reactions		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Show how substances can chemically react with each other to form new substances having properties different from those of the original substances.	<u>Chemical Interactions</u> <u>Pollution</u>	Activity 6, 8, 9, 10, 11 & 12 Activity 8
2. Show that in most chemical reactions, energy is transferred into or out of a system.	<u>Chemical Interactions</u>	Activity 4, 6 & 7 “Connections” <i>Science Challenge</i> and <i>Science Extension</i>
3. Demonstrate that regardless how substances within a simple closed system interact, the total mass of the system remains the same.	<u>Chemical Interactions</u>	Activity 7
4. Illustrate how atoms are rearranged when substances react, but that the total number of atoms and the total mass of the products remain the same as the original substances.	<u>Chemical Interactions</u>	Activity 7, 10 & 11

STANDARD 5.7 (PHYSICS)

ALL STUDENTS WILL GAIN AN UNDERSTANDING OF NATURAL LAWS AS THEY APPLY TO MOTION, FORCES, AND ENERGY TRANSFORMATIONS.

A. Motions and Forces		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 6, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Recognize that an object at rest will remain at rest and an object moving in a straight line at a steady speed will continue to move in a straight line at a steady speed unless a net (unbalanced) force acts on it.	<u>Newton's Toy Box</u>	Activity 1 & 3
2. Recognize that motion can be retarded by forces such as friction and air resistance.	<u>Newton's Toy Box</u> <u>Simple Machines</u>	Activity 4 Activity 3
3. Recognize that everything on or near the earth is pulled toward the earth's center by gravitational force.	<u>Simple Machines</u> <u>Famous Scientists</u> <u>Earth, Moon, and Sun</u> <u>Newton's Toy Box</u>	Activity 8 Activity 3 Activity 12 Activity 2, 5, 11 & 12

B. Energy Transformations

<i>SCIENCE STANDARD</i> <i>By the end of Grade 6, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Recognize that heat flows through materials or across space from warmer objects to cooler ones.	<u>Earth Processes</u>	Activity 6 & 12
	<u>Solar Energy</u>	Activity 2, 3, 4, 5, 8, & 10
	<u>Famous Scientists</u>	Activity 7
2. Show that vibrations in materials can generate waves that can transfer energy from one place to another.	<u>Earth Processes</u>	Activity 8 & 9
	<u>Famous Scientists</u>	Activity 6
3. Design an electric circuit to investigate the behavior of a system.	<u>Electrical Circuits</u>	Activity 1, 3, 4, 5, 8, 9 & 11
	<u>Electromagnetism</u>	Activity 6, 7, 8, 9, & 11
	<u>Electrical Connections</u>	Activity 2, 5, 6, 7, 8, 9, 10, 11 12 & 13

A. Motions and Forces

<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Use quantitative data to show that when more than one force acts on an object at the same time, the forces can reinforce or cancel each other producing a new (unbalanced) force that will change speed and/or direction of the object.		
2. Recognize that every object exerts a gravitational force on every other object, and that the force depends on how much mass the objects have and how far apart they are.	<u>Newton's Toy Box</u>	Activity 1, 5, 6, & 11

B. Energy Transformations

<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Recognize that the sun is a major source of the Earth's energy and that solar energy includes visible, infrared and ultraviolet radiation.	<u>Solar Energy</u>	Activity 1 & 2
	<u>Color and Light</u>	Activity 1 "Connections" <i>Science, Technology, and Society</i> DSM III Science Reader pgs. 8-9
2. Describe the nature of various forms of energy, including heat, light, sound, chemical, mechanical, and electrical and trace energy transformations from one form to another.	<u>Solar Energy</u>	Activity 10
	<u>Simple Machines</u>	Activity 7 & 12
	<u>Electrical Connections</u>	Activity 11
	<u>Color and Light</u>	Activity 1 & DSM III Science Reader pgs. 2-3
3. Describe how heat can be conducted through materials or	<u>Solar Energy</u>	Activity 2, 3, 4, 8, 11 & 12

transferred across space by radiation and know that if the material is a fluid, convection currents may aid the transfer of heat.		
4. Show that light is reflected, refracted, or absorbed when it interacts with matter and that colors may appear as a result of this interaction.	<u>Lenses and Mirrors</u> <u>Color and Light</u> <u>Solar Energy</u> <u>Famous Scientists</u>	Activity 1, 2, 4, 5 & 6 Activity 1, 4 & 10; DSM III Science Reader pgs. 4-5, 8-9 & 13 Activity 3 Activity 4

STANDARD 5.8 (EARTH SCIENCE)

ALL STUDENTS WILL GAIN AN UNDERSTANDING OF THE STRUCTURE, DYNAMICS, AND GEOPHYSICAL SYSTEMS OF THE EARTH..

A. Earth's Properties and Materials <i>Reinforce indicators from previous grade level.</i>		
B. Atmosphere and Water		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 6, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Describe the composition, circulation, and distribution of the world's oceans, estuaries, and marine environments.	<u>Oceans</u> <u>Famous Scientists</u>	Activity 1, 2, 3, 7, 8 & 9; DSM III Science Reader pgs. 2-3, 6-10 Activity 9
2. Describe and illustrate the water cycle.	<u>Weather Forecasting</u> <u>Oceans</u> <u>Solar Energy</u> <u>Water Cycle</u>	Activity 9; DSM III Science Reader pgs. 4-5; Activity 5 Activity 13 Activity 4, 5, 8, 12 & 13; DSM III Science Reader pgs. 10-11;
C. Processes that Shape the Earth		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 6, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Summarize the process involved in the rock cycle and describe the characteristics of the rocks involve.	<u>Rocks and Minerals</u> <u>Earth Movements</u> (Recommended for Grades 3-5) <u>Earth Processes</u>	Activity 2; DSM III Science Reader pg. 13 DSM III Science Reader pg. 15 Activity 6
D. How We Study the Earth		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 6, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Utilize various tools such as map projections and topographical maps to interpret features of Earth's	<u>Oceans</u> <u>Weather Forecasting</u>	DSM III Science Reader pgs. 4-5 DSM III Science Reader pgs. 6& 9

surface.	<u>Oceans</u>	DSM III Science Reader pgs. 2,
A. Earth's Properties and Materials <i>Reinforce indicators from previous grade level.</i>		
B. Atmosphere and Water		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Describe conditions in the atmosphere that lead to weather systems and how these systems are represented on weather maps.	<u>Weather Forecasting</u>	Activity 1, 3, 4, 5, 6, 7, 8, 9, & 12; Delta III Science Reader pgs. 2-7
C. Processes that Shape the Earth		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Explain how Earth's landforms and materials are created through constructive and destructive processes.	<u>Erosion</u> <u>Rocks and Minerals</u> <u>Oceans</u> <u>Earth Processes</u> <u>Earth Movements</u> (Recommended for Grades 3-4)	Activity 1, 2, 3, 5, 6, 9, 10, 11 & 12 Activity 2 & 9, DSM III Science Reader pgs. 9-13 DSM III Science Reader pgs. 4-5 Activity 3, 4, 5, 7, 8, 13 & 14 Activity 3, 5, 6, 7, 9 & 11; DSM III Science Reader pgs. 4-10
2. Show how successive layers of sedimentary rock and the fossils contained in them can be used to confirm the age, history, changing life forms, and geology of Earth.	<u>Earth Processes</u> <u>Erosion</u> <u>Earth Movements</u> (Recommended for Grades 3-4) <u>Rocks and Minerals</u>	Activity 1, 2, 3, 4, 13 & 14 Activity 2, 9 & 12 Activity 3, 5, 6, 7, 9 & 10 DSM III Science Reader pgs. 14 & 15
D. How We Study the Earth		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Utilize data gathering from emerging technologies (i.e. geographic information systems (GIS) and global positioning systems (GPS) to create representations and describe processes of change on the Earth's surface.	<u>Weather Forecasting</u> <u>Oceans</u>	DSM III Science Reader pg. 14; Activity 7 "Connections" <i>Science and Social Studies</i> and <i>Science, Technology, and Society</i> DSM III Science Reader pg. 15
Explain how technology designed to investigate features of the Earth's surface impacts how scientists study the Earth.	<u>Weather Forecasting</u> <u>Astronomy</u>	DSM III Science Reader pg. 14 Activity 6 "Connections" <i>Science, Technology and Society</i> ; Activity 11

STANDARD 5.9 (ASTRONOMY & SPACE SCIENCE)

ALL STUDENTS WILL GAIN AN UNDERSTANDING OF THE ORIGIN, EVOLUTION, AND STRUCTURE OF THE UNIVERSE

A. Earth, Moon, Sun System		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 6, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Explain how the motions of the Earth, sun, and moon, define units of time including: •days •months •years	<u>Earth, Moon, and Sun</u> <u>Astronomy</u> <u>Solar System</u> (Recommended for Grades 3-4)	Activity 1, 2, 6 & 7 Activity 1 & 2 Activity 9; DSM III Science Reader pgs. 2-3
2. Recognize that changes in the Earth's position relative to the sun produces differing amounts of daylight seasonally.	<u>Earth, Moon, and Sun</u> <u>Astronomy</u> <u>Solar System</u> (Recommended for Grades 3-4)	Activity 5, 6, 7 & 8 Activity 1, 2 & 5 Activity 9; DSM III Science Reader pgs. 2-3
B. Solar System		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 6, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Using models, demonstrate an understanding of the scale of the solar system that shows distance and size relationships among the sun and planets.	<u>Solar System</u> (Recommended for Grades 3-4) <u>Astronomy</u> <u>Earth, Moon, and Sun</u>	Activity 6, 7 & 8 Activity 6 Activity 3, 4 & 5
2. Recognize that the sun's gravitational pull holds the planets in their orbits and that the planets' gravitational pull holds their moons in their orbits.	<u>Solar System</u> (Recommended for Grades 3-4) <u>Earth, Moon, and Sun</u>	Activity 2 & 3 Activity 12
C. Stars		
<i>SCIENCE STANDARD</i> <i>By the end of Grade 6, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Observe and record short-term and long-term changes in the positions of the constellations in the night sky.	<u>Astronomy</u>	Activity 1, 2, 3, & 4
2. Observe that the planets appear to change their position against the background of stars.	<u>Astronomy</u>	Activity 6 & 7
D. Galaxies and Universe		
<i>Reinforce indicators from previous grade level.</i>		

A. Earth, Moon, Sun System

<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Investigate the Earth, moon, and sun as a system and explain how the motion of these bodies results in the phases of the moon and eclipses.	<u>Earth, Moon, and Sun</u>	Activity 10 & 11
2. Explain how the regular and predictable motions of the Earth and moon produce tides.	<u>Earth, Moon, and Sun</u> <u>Oceans</u>	Activity 12 Activity 9; DSM III Science Reader pg. 9
3. Explain how the tilt, rotation, and orbital pattern of the Earth relative to the sun produces seasons and weather patterns.	<u>Astronomy</u> <u>Earth, Moon, and Sun</u>	Activity 5 Activity 8 & 9

B. Solar System

<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Describe the physical characteristics of the planets and other objects within the solar system and compare Earth to the rest of the planets.	<u>Earth, Moon, and Sun</u> <u>Astronomy</u> <u>Solar System</u> (Recommended for Grades 3-4)	Activity 3 & 4 Activity 6, 7, & 11 Activity 6 & 10; DSM III Science Reader pgs. 4-13

C. Stars

<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Understand that the sun is a star and that it shares characteristics with other stars.	<u>Solar System</u> (Recommended for Grades 3-4) <u>Astronomy</u> <u>Earth, Moon, and Sun</u>	Activity 1, 2 & 11; DSM III Science Reader pg. 3 Activity 4, 8 & 10 Activity 1

D. Galaxies and Universe

<i>SCIENCE STANDARD</i> <i>By the end of Grade 8, the student will:</i>	<i>DELTA SCIENCE MODULES II & III</i>	<i>DSM II & III ACTIVITIES</i>
1. Know that the universe consists of many billions of galaxies, each including billions of stars.	<u>Astronomy</u>	Activity 10, 11 & 12