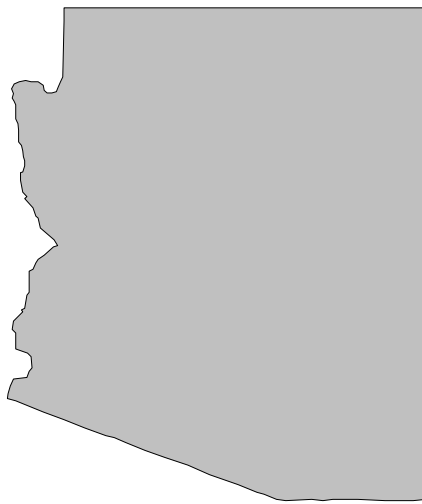


**DELTA SCIENCE MODULES
(DSM™)
K-8**

Correlation With

**Arizona
Academic Science Standards
and Performance Objectives**



Arizona Academic Science Standards and Performance Objectives

Correlation To Delta Science Modules

The following is a correlation of the grades K-8 portions of the Arizona Academic Standards for Science to Delta Science Modules (DSM). This correlation shows representative examples of investigations and activities from the DSM program, which address the science standards and their performance objectives.

A citation does *not* reflect all of the investigations or activities from DSM that might address a particular standard or performance standard.

Strand 1: Science as Inquiry

Concept 1: Observation, Questions, and Hypotheses

<i>PERFORMANCE OBJECTIVES</i> <i>Students will:</i>	<i>DSM ACTIVITY</i>	<i>PAGE NUMBER (S)</i>
Kindergarten		
PO 1. Observe common objects using multiple senses.	From Seed to Plant Activity 1-4 Investigation Water Activity 1-12 Properties Activity 1-12	Pages 15-44 Pages 13-100 Pages 13-93
PO 2. Ask questions based on experiences with objects, organisms, and events in the environment.	Observing an Aquarium Activity 7-11 Investigating Water Activity 3-11 Sunshine and Shadows Activity 6-11	Pages 69-116 Pages 27-94 Pages 49-88
PO 3. Predict results of an investigation based on life, physical, and earth and space sciences (e.g., the five senses, changes in weather).	Properties Activity 10 Investigation Water Activity 5-7 Sunshine and Shadows Activity 3 and 7	Pages 75-80 Pages 41-61 Pages 27-37, 57-63
Grade 1		
PO 1. Compare common objects using multiple senses.	From Seed to Plant Activity 1-4 Investigation Water Activity 1-12 Properties Activity 1-12	Pages 15-44 Pages 13-100 Pages 13-93
PO 2. Ask questions based on experiences with objects, organisms, and events in the environment.	Observing an Aquarium Activity 7-11 Investigating Water Activity 3-11 Sunshine and Shadows Activity 6-11	Pages 69-116 Pages 27-94 Pages 49-88
PO 3. Predict results of an investigation based on life, physical, and earth and space sciences (e.g., animal life cycles, physical properties, earth materials).	Properties Activity 10 Investigation Water Activity 5-7 Sunshine and Shadows Activity 3 and 7	Pages 75-80 Pages 41-61 Pages 27-37, 57-63
Grade 2		
PO 1. Formulate relevant questions about the properties of objects, organisms and events in the environment.	Soil Science Activity 1-4 Force and Motion Activity 7 and 8 States of Matter Activity 8-10 Plants and Animal Populations	Pages 15-44 Pages 68-82 Pages 65-88

	Activity 10 and 11	Pages 95-110
PO 2. Predict the results of investigations (e.g., in animal life cycles, phases of matter, the water cycle).	Sink or Float Activity 1, 9 Length and Capacity Activity 12 Amazing Air Activity 6 Using Your Senses Activity 4	Pages 13-19, 75-80 Pages 89-94 Pages 51-57 Pages 37-44
Grade 3		
PO 1. Formulate relevant questions about the properties of objects, organisms and events of the environment using observations and prior knowledge.	Soil Science Activity 1-4 Force and Motion Activity 7 and 8 Food Chains and Webs Activity 4-10 Water Cycle Activity 4-9	Pages 15-44 Pages 68-82 Pages 39-87 Pages 39-83
PO 2. Predict the results of an investigation based on observed patterns, not random guessing.	Sink or Float Activity 1 and 9 Using Your Senses Activity 4 Animal Behavior Activity 9-11 Sound Activity 9-11	Pages 13-19, 75-80 Pages 37-44 Pages 59-75 Pages 73-98
Grade 4		
PO 1. Differentiate inferences from observations.	The DSM program provides the opportunity for the teaching of this understanding. For example: Magnets Activity 3 and 4	Pages 25-34
PO 2. Formulate a relevant question through observations that can be tested by an investigation.	Insect Life Activity 8 Food Chains and Webs Activity 4-10 Water Cycle Activity 4-9 Magnets Activity 3 and 4	Pages 55-60 Pages 39-87 Pages 39-83 Pages 25-34
PO 3. Formulate predictions in the realm of science based on observed cause and effect relationships.	Food Chains and Webs Activity 3 Water Cycle Activity 12 Animal Behavior Activity 9-12	Pages 31-37 Pages 107-114 Pages 59-81
PO 4. Locate information (e.g., book, article, website) related to an investigation.	Insect Life Activity 13 Solar System Activity 1 Earth Movements Activity 9, Science Challenge	Pages 85-89 Pages 13-20 Page 85

Grade 5		
PO 1. Formulate a relevant question through observations that can be tested by an investigation.	Lenses and Mirrors Activity 12 Fungi-Small Wonders Activity 7 Pond Life Activity	Pages 89-94 Pages 45-49 Pages 81-86
PO 2. Formulate predictions in the realm of science based on observed cause and effect relationships..	Erosion Activity 10 and 11 Color and Light Activity 2, 4 and 9 Lenses and Mirrors Activity 8	Pages 83-97 Pages 20-27, 37-43, 77-83 Pages 55-62
PO 3. Locate information (e.g., book, article, website) related to an investigation.	Color and Light Activity 8, Science and Language Arts Rocks and Minerals Activity 6, Science and Social Studies Oceans Activity 3, Science and Social Studies	Page 76 Page 54 Page 41
Grade 6		
PO 1. Differentiate among a question, hypothesis, and prediction.	The DSM program provides the opportunity for the teaching of this understanding. For example: Pond Life Activity 12 Fungi-Small Wonders Activity 7	Pages 81-86 Pages 45-49
PO 2. Formulate questions based on observations that lead to the development of a hypothesis.	Lenses and Mirrors Activity 12 Fungi-Small Wonders Activity 7 Pond Life Activity 12 Chemical Interactions Activity 12	Pages 89-94 Pages 45-49 Pages 81-86 Pages 87-92
PO 3. Locate research information, not limited to a single source, for use in the design of a controlled investigation.	Color and Light Activity 8, Science and Language Arts Rocks and Minerals Activity 6, Science and Social Studies Oceans Activity 3, Science and Social Studies Famous Scientists Activity 7, Science, Technology, and Society	Page 76 Page 54 Page 41 Page 75

Grade 7		
PO 1. Formulate questions based on observations that lead to the development of a hypothesis.	Chemical Interactions Activity 12 Plants in Our World Activity 3	Pages 87-92 Pages 19-24
PO 2. Select appropriate resources for background information related to a question, for use in the design of a controlled investigation.	Chemical Interactions Activity 12, Science and the Arts	Page 92
PO 3. Explain the role of a hypothesis in a scientific inquiry.	The DSM program provides the opportunity for the teaching of this understanding. For example: Chemical Interactions Activity 12 Plants in Our World Activity 3	Pages 87-92 Pages 19-24
Grade 8		
PO 1. Formulate questions based on observations that lead to the development of a hypothesis.	Chemical Interactions Activity 12 Plants in Our World Activity 3	Pages 87-92 Pages 19-24
PO 2. Use appropriate research information, not limited to a single source, to use in the development of a testable hypothesis.		
PO 3. Generate a hypothesis that can be tested.	Chemical Interactions Activity 12 Plants in Our World Activity 3	Pages 87-92 Pages 19-24

Concept 2: Scientific Testing (Investigating and Modeling)

<i>PERFORMANCE OBJECTIVES</i> <i>Students will:</i>	<i>DSM ACTIVITY</i>	<i>PAGE NUMBER (S)</i>
Kindergarten		
PO 1. Demonstrate safe behavior and appropriate procedures (e.g. use of instruments, materials and organisms) in all science inquiry.	Sunshine and Shadows Properties Observing an Aquarium	Pages 15, 21, 115 Pages 20, 121 Pages 122, 145
PO 2. Participate in guided investigations in life, physical and earth and space sciences.	Observing an Aquarium Activity 2-11 Investigation Water Activity 1-12 Finding the Moon Activity 2-12	Pages 23-116 Pages 13-100 Pages 21-104

PO 3. Perform simple measurements using non-standard units of measure to collect data.	Sunshine and Shadows Activity 7 From Seed to Plant Activity 7 Properties Activity 6 and 7	Pages 57-63 Pages 59-66 Pages 47-60
Grade 1		
PO 1. Demonstrate safe behavior and appropriate procedures (e.g. use of instruments, materials, and organisms) in all science inquiry.	Sunshine and Shadows Properties Observing an Aquarium	Pages 15, 21, 115 Pages 20, 121 Pages 122, 145
PO 2. Conduct guided investigations in life, physical and earth and space sciences.	Observing an Aquarium Activity 2-11 Investigating Water Activity 1-12 Finding the Moon Activity 2-12	Pages 23-116 Pages 13-100 Pages 21-104
PO 3. Use simple tools such as rulers, thermometers, magnifiers, and balances to collect data (U.S. customary units).	Properties Activity 6 From Seed to Plant Activity 1-3 Observing an Aquarium Activity 4-6	Pages 47-52 Pages 15-38 Pages 39-67
PO 4. Record data from guided investigations in an organized and appropriate format (e.g., lab book, log, notebook, chart paper).	Investigating Water Activity 2-7 Sunshine and Shadows Activity 6-9 Finding the Moon Activity 5-8	Pages 21-61 Pages 49-76 Pages 47-76
Grade 2		
PO 1. Demonstrate safe behavior and appropriate procedures (e.g. use of instruments, materials, and organisms) in all science inquiry.	Force and Motion States of Matter Using Your Senses	Pages 34, 93, 105, 139 Pages 58, 82, 125 Pages 25, 29, 71, 125
PO 2. Conduct guided investigations in life, physical and earth and space sciences.	Amazing Air Activity 1-12 Classroom Plants Activity 2-11 Soil Science Activity 10-12	Pages 7-108 Pages 23-104 Pages 91-104
PO 3. Use simple tools such as rulers, thermometers, magnifiers, and balances to collect data (U.S. customary units).	Weather Watching Activity 2 and 3 Force and Motion Activity 1-3 Length and Capacity Activity 5 and 6, 10 and 11 Classroom Plants Activity 2-4 Amazing Air Activity 3-5	Pages 21-36 Pages 13-39 Pages 37-48, 77-78 Pages 23-46 Pages 25-49
PO 4. Record data from	Force and Motion	

<p>guided investigations in an organized and appropriate format (e.g., lab book, log, notebook, chart paper).</p>	<p>Activity 1-3 Plant and Animal Populations Activity 9-11 Amazing Air Activity 5 States of Matter Activity 6</p>	<p>Pages 13-39 Pages 85-110 Pages 43-119 Pages 51-56</p>
Grade 3		
<p>PO 1. Demonstrate safe behavior and appropriate procedures (e.g. use of instruments, materials, and organisms) in all science inquiry.</p>	<p>Force and Motion States of Matter Using Your Senses</p>	<p>Pages 43, 93, 105, 134 Pages 58, 82, 125 Pages 25, 29, 71, 125</p>
<p>PO 2. Plan simple investigations (e.g. one plant receives adequate water, one receives too much water, and one receives too little water) based on formulated questions.</p>	<p>Classroom Plants Activity 5 Using Your Senses Activity 6 Electric Circuits Activity 6 and 7 Sound Activity 7-11</p>	<p>Pages 47-53 Pages 53-60 Pages 51-62 Pages 59-98</p>
<p>PO 3. Conduct simple investigations (e.g. plant life cycles, changing the pitch of sound, properties of rocks) in life, physical, and earth and space sciences.</p>	<p>Classroom Plants Activity 5 Using Your Senses Activity 6 Electric Circuits Activity 6 and 7 Sound Activity 7-11</p>	<p>Pages 47-53 Pages 53-60 Pages 51-62 Pages 59-98</p>
<p>PO 4. Use metric and U.S. customary units to measure objects.</p>	<p>Length and Capacity Activity 5, 6, 10-12 Weather Watching Activity 2 and 3 Measuring Activity 3, 6, 8, 10-12 Solar System Activity 5-7</p>	<p>Pages 37-48, 77-94, Pages 21-36 Pages 37-50, 57-63, 71-95 Pages 43-64</p>
<p>PO 5. Record data in an organized and appropriate format (e.g., t-chart, table, list, written log).</p>	<p>Plant and Animal Populations Activity 9-11 Amazing Air Activity 5 Looking at Liquids Activity 5 and 11</p>	<p>Pages 85-110 Pages 43-49 Pages 35-41, 77-81</p>
Grade 4		
<p>PO 1. Demonstrate safe behavior and appropriate procedures (e.g. use of instruments, materials, and organisms) in all science inquiry.</p>	<p>Electric Circuits Magnets Water Cycle</p>	<p>Pages 69, 79, 87, 117 Pages 20, 16, 68, 105 Pages 79, 137</p>

PO 2. Plan a simple investigation that identifies the variables to be controlled.	Food Chains and Webs Activity 3 Insect Life Activity 8 Animal Behavior Activity 3-7	Pages 31-37 Pages 55-60 Pages 19-52
PO 3. Conduct controlled investigations in the life, physical, and earth and space sciences (e.g. erosion, plant life cycles, weather, magnetism).	Animal Behavior Activity 3-7 Insect Life Activity 8 Food Chains and Webs Activity 3	Pages 19-52 Pages 55-60 Pages 19-52
PO 4. Measure using appropriate tools (e.g., ruler, scale, balance) and units of measure (i.e. metric, U.S. customary).	Measuring Activity 5, 6, 8, and 10-12 Weather Instruments Activity 1, 2, 6 Solar System Activity 5-7 Dinosaurs and Fossils Activity 6 and 7	Pages 37-50, 57-63, 71-95 Pages 13-19, 51-57 Pages 43-64 Pages 47-60
PO 5. Record data in an organized and appropriate format (e.g., t-chart, table, list, written log).	Looking at Liquids Activity 5, 11 Weather Instruments Activity 1 and 6 Animal Behavior Activity 3-7 Plant and Animal Life Cycles Activity 6	Pages 35-41, 77-81 Pages 13-21, 51-57 Pages 19-52 Pages 57-63
Grade 5		
PO 1. Demonstrate safe behavior and appropriate procedures (e.g. use of instruments, materials, and organisms) in all science inquiry.	Erosion Electromagnetism Simple Machines	Pages 62, 127 Pages 28, 107 Pages 51, 79, 87, 121
PO 2. Plan a simple investigation that identifies the variables to be controlled.	Solar Energy Activity 3-6 Fungi-Small Wonders Activity 7 Pond Life Activity 12	Pages 21-46 Pages 45-49 Pages 81-86
PO 3. Conduct simple investigations based on student-developed questions in life, physical, and earth and space science (e.g. forces and motion, earth processes),	Electromagnetism Activity 6 Lenses and Mirrors Activity 12 Erosion Activity 11	Pages 43-48 Pages 89-94 Pages 91-97
PO 4. Measure using appropriate tools (e.g., ruler, scale, balance) and units of measure (i.e. metric, U.S. customary).	Simple Machines Activity 1-3 Weather Forecasting Activity 3 Solar Energy Activity 2-7	Pages 13-31 Pages 25-32 Pages 13-52

PO 5. Record data in an organized and appropriate format (e.g., t-chart, table, list, written log).	You and Your Body Activity 3 Solar Energy Activity 2 Pollution Activity 10 Electromagnetism Activity 6	Pages 27-31 Pages 13-58 Pages 71-76 Pages 43-48
Grade 6		
PO 1. Demonstrate safe behavior and appropriate procedures (e.g. use of instruments, materials, and organisms) in all science inquiry.	Erosion Electromagnetism Simple Machines Chemical interactions	Pages 62, 127 Pages 28, 107 Pages 51, 79, 87, 121 Pages 76, 83, 95
PO 2. Design investigations to test individual variables using scientific processes.	Solar Energy Activity 3-6 Fungi-Small Wonders Activity 7 Pond Life Activity 12 Chemical Interactions Activity 12	Pages 21-46 Pages 45-49 Pages 81-86 Pages 87-92
PO 3. Conduct a controlled investigation using scientific processes.	Pollution Activity 10 Fungi-Small Wonders Activity 7 Pond Life Activity 12 Chemical Interactions Activity 12	Pages 71-76 Pages 45-49 Pages 81-86 Pages 87-92
PO 4. Perform measurements using appropriate scientific tools (e.g., balances, microscopes, probes, micrometers).	Simple Machines Activity 1-3 Weather Forecasting Activity 7 Solar Energy Activity 2-7 Newton's Toy Box Activity 7-9	Pages 13-31 Pages 25-32 Pages 13-52 Pages 39-54
PO 5. Keep a record of observations, notes, sketches, questions, and ideas using tools such as written and/or computer logs.	You and Your Body Activity 3 Solar Energy Activity 2-8 Pollution Activity 10 Electromagnetism Activity 6 Plants in Our World Activity 3	Pages 27-31 Pages 13-58 Pages 71-76 Pages 43-48 Pages 19-24
Grade 7		
PO 1. Demonstrate safe behavior and appropriate procedures (e.g. use of instruments, materials, and organisms) in all science	Chemical Interactions Electrical Connections Plants in Our World	Pages 75, 76, 83, 95 Pages 47, 49 Pages 59, 71, 72

inquiry.		
PO 2. Design investigations to test individual variables using scientific processes.	Chemical Interactions Activity 12 Plants in Our World Activity 3	Pages 87-92 Pages 19-24
PO 3. Conduct a controlled investigation, utilizing multiple trials, to test a hypothesis using scientific processes.	Chemical Interactions Activity 12 Plants in Our World Activity 3	Pages 87-92 Pages 19-24
PO 4. Perform measurements using appropriate scientific tools (e.g., balances, microscopes, probes, micrometers).	Newton's Toy Box Activity 7-9 Famous Scientists Activity 1 and 2 Chemical Interactions Activity 1 and 2	Pages 39-54 Pages 11-28 Pages 7-21
PO 5. Keep a record of observations, notes, sketches, questions, and ideas using tools such as written and/or computer logs.	Newton's Toy Box Activity 7-9 If Shipwrecks Could Talk Activity 4 Electrical Connections Activity 5-10	Pages 39-54 Pages 35-45 Pages 31-70
Grade 8		
PO 1. Demonstrate safe behavior and appropriate procedures (e.g. use of instruments, materials, and organisms) in all science inquiry.	Chemical Interactions Electrical Connections Plants in Our World	Pages 75, 76, 83, 95 Pages 47, 49 Pages 59, 71, 72
PO 2. Design a controlled investigation to support or reject a hypothesis.	Chemical Interactions Activity 12 Plants in Our World Activity 3	Pages 87-92 Pages 19-24
PO 3. Conduct a controlled investigation to support or reject a hypothesis.	Chemical Interactions Activity 12 Plants in Our World Activity 3	Pages 87-92 Pages 19-24
PO 4. Perform measurements using appropriate scientific tools (e.g., balances, microscopes, probes, micrometers).	Newton's Toy Box Activity 7-9 Famous Scientists Activity 1 and 2 Chemical Interactions Activity 1 and 2	Pages 39-54 Pages 11-28 Pages 7-21
PO 5. Keep a record of observations, notes, sketches, questions, and ideas using tools such as written and/or computer logs.	Newton's Toy Box Activity 7-9 If Shipwrecks Could Talk Activity 4 Electrical Connections Activity 5-10	Pages 39-54 Pages 35-45 Pages 31-70

Concept 3: Analysis and Conclusions

<i>PERFORMANCE OBJECTIVES</i> <i>Students will:</i>	<i>DSM ACTIVITY</i>	<i>PAGE NUMBER (S)</i>
Kindergarten		
PO 1. Observe (e.g., compare, classify, and sequence) objects, organisms, and events according to various characteristics.	Observing an Aquarium Activity 3-6 From Seed to Plant Activity 1 Properties Activity 3-7	Pages 31-67 Pages 15-20 Pages 25-60
PO 2. Compare objects according to their measurable characteristics (e.g., longer/shorter, lighter/heavier).	Properties Activity 6 and 7 Sunshine and Shadows Activity 8 and 9 Investigation Water Activity 8	Pages 53-66 Pages 65-76 Pages 63-69
Grade 1		
PO 1. Observe (e.g., compare, classify, and sequence) objects, organisms, and events according to various characteristics.	Observing an Aquarium Activity 3-6 From Seed to Plant Activity 1 Properties Activity 3-7	Pages 31-67 Pages 15-20 Pages 25-60
PO 2. Compare the results of the investigation to predictions made prior to the investigation.	From Seed to Plant Activity 4, 9, and 12 Properties Activity 10 and 11 Investigation Water Activity 6, 7, 9, and 10	Pages 39-44, 73-78, 91-96 Pages 75-86 Pages 47-61, 81-94
Grade 2		
PO 1. Organize data using graphs (i.e., pictograph, tally chart), tables, and journals.	Plant and Animal Populations Activity 8 and 9 Amazing Air Activity 5 Weather Watching Activity 3	Pages 77-93 Pages 43-49 Pages 29-36
PO 2. Construct reasonable explanations of observations on the basis of data obtained (e.g., Based on the data, does this make sense? Could this really happen?)	Classroom Plants Activity 5 Soil Science Activity 8 and 10 Force and Motion Activity 4 and 5	Pages 47-53 Pages 69-79, 91-97 Pages 41-55
PO 3. Compare the results of the investigation to predictions made prior to the investigation.	Sink or Float Activity 9 Length and Capacity Activity 12 Amazing Air Activity 6 Using Your Senses Activity 4	Pages 75-80 Pages 89-94 Pages 51-57 Pages 37-44

PO 4. Generate questions for possible future investigations based on the conclusions of the investigation.	States of Matter Activity 5 Soil Science Activity 10-12 Classroom Plants Activity 5 Amazing Air Activity 12	Pages 41-50 Pages 91-114 Pages 47-53 Pages 101-108
Grade 3		
PO 1. Organize data using the following methods with appropriate labels: <ul style="list-style-type: none"> • Bar graphs • Pictographs • Tally charts 	Plant and Animal Populations Activity 8 and 9 Weather Watching Activity 3 Animal Behavior Activity 5-8 Weather Instruments Activity 6	Pages 77-93 Pages 29-36 Pages 31-57 Pages 51-57
PO 2. Construct reasonable interpretations of the collected data based on formulated questions.	Soil Science Activity 8, 10 Force and Motion Activity 4 and 5 Water Cycle Activity 4 and 5 Powders and Crystals Activity 10	Pages 69-79, 91-97 Pages 41-55 Pages 39-51 Pages 71-78
PO 3. Compare the results of the investigation to predictions made prior to the investigation.	Sink or Float Activity 1, 9 Using Your Senses Activity 4 Animal Behavior Activity 9-11 Sound Activity 9-11	Pages 13-19, 75-80 Pages 37-40 Pages 59-75 Pages 73-98
PO 4. Generate questions for future inquiry in the investigation based on the conclusions of the investigation.	States of Matter Activity 5 Soil Science Activity 10-12 Food Chains and Webs Activity 8-10 Magnets Activity 10 and 11	Pages 41-50 Pages 91-114 Pages 67-87 Pages 65-76
PO 5. Record questions for further inquiry in the investigation based on the conclusions of the investigation.	DSM activities provide the opportunity to teach this objective. For example: States of Matter Activity 5 Soil Science Activity 10-12 Food Chains and Webs Activity 8-10	Pages 41-50 Pages 91-114 Pages 67-87
Grade 4		
PO 1. Analyze data obtained in a scientific investigation to identify trends.	Magnets Activity 2 and 3 Weather Instruments	Pages 19-28

	Activity 6 Sound Activity 7-11	Pages 51-57 Pages 59-98
PO 2. Formulate conclusions based upon identified trends in the data.	Magnets Activity 2 and 3 Weather Instruments Activity 6 Sound Activity 7-11	Pages 19-28 Pages 51-57 Pages 59-98
PO 3. Determine that the data collected is consistent with the formulated question.	DSM activities provide the opportunity to teach this objective. For example: Magnets Activity 2 and 3 Sound Activity 7-11	 Pages 19-28 Pages 59-98
PO 4. Determine whether or not the data supports the prediction for an investigation.	DSM activities provide the opportunity to teach this objective. For example: Magnets Activity 2 and 3 Sound Activity 7-11	 Pages 19-28 Pages 59-98
PO 5. Develop new questions and predictions based upon the data collected in the investigation.	DSM activities provide the opportunity to teach this objective. For example: Magnets Activity 2 and 3 Sound Activity 7-11	 Pages 19-28 Pages 59-98
Grade 5		
PO 1. Analyze data obtained in a scientific investigation to identify trends.	Solar Energy Activity 3-8 Fungi-Small Wonders Activity 7 You and Your Body Activity 3	Pages 21-58 Pages 45-49 Pages 27-31
PO 2. Analyze whether the data is consistent with the proposed explanation that motivated the investigation.	DSM activities provide the opportunity to teach this objective. For example: Solar Energy Activity 3-8 Fungi-Small Wonders Activity 7 You and Your Body Activity 3	 Pages 21-58 Pages 45-49 Pages 27-31
PO 3. Evaluate the reasonableness of the outcome of an investigation.	DSM activities provide the opportunity to teach this objective. For example: Solar Energy Activity 3-8 Fungi-Small Wonders Activity 7 You and Your Body Activity 3	 Pages 21-58 Pages 45-49 Pages 27-31

PO 4. Develop new investigations and predictions based on questions that arise from the findings of an investigation.	DSM activities provide the opportunity to teach this objective. For example: Solar Energy Activity 3-8 Fungi-Small Wonders Activity 7 You and Your Body Activity 3	Pages 21-58 Pages 45-49 Pages 27-31
PO 5. Identify possible relationships between variables in simple investigations (e.g. time and distance, incline and mass of object).	Simple Machines Activity 2 Electromagnetism Activity 6 Erosion Activity 5	Pages 19-24 Pages 43-48 Pages 43-49
Grade 6		
PO 1. Analyze data obtained in a scientific investigation to identify trends.	Solar Energy Activity 3-8 Fungi-Small Wonders Activity 7 You and Your Body Activity 3	Pages 21-58 Pages 45-49 Pages 27-31
PO 2. Form a logical argument about a correlation between variables or sequence of events (e.g., construct a cause-and-effect chain that explains a sequence of events).	Solar Energy Activity 3-8 Fungi-Small Wonders Activity 7 You and Your Body Activity 3 Chemical Interactions Activity 12	Pages 21-58 Pages 45-49 Pages 27-31 Pages 87-92
PO 3. Evaluate the observations and data reported by others.	Pollution Activity 10 Lenses and Mirrors Activity 12 Color and Light Activity 3-5 Newton's Toy Box Activity 7-9	Pages 71-76 Pages 89-94 Pages 29-52 Pages 39-54
PO 4. Interpret simple tables and graphs produced by others.	Solar Energy Activity 2-8 Simple Machines Activity 6-8 Electromagnetism Activity 6 Electrical Connections Activity 8 and 9	Pages 13-58 Pages 49-69 Pages 43-48 Pages 53-64
PO 5. Analyze the results from previous and/or similar investigations to verify the results of the current investigation.	Simple Machines Activity 9-11 Solar Energy Activity 2-4 Erosion Activity 10-12 Electrical Connections Activity 8 and 9	Pages 71-89 Pages 49-69 Pages 75-104 Pages 53-64
PO 6. Formulate new	DSM activities provide the	

questions based on the results of a completed investigation.	opportunity to teach this objective. For example: Solar Energy Activity 2-3 Pond Life Activity 12 Lenses and Mirrors Activity 12 Chemical Interactions Activity 12	Pages 13-26 Pages 81-86 Pages 89-94 Pages 87-92
Grade 7		
PO 1. Analyze data obtained in a scientific investigation to identify trends.	If Shipwrecks Could Talk Activity 4 Famous Scientists Activity 2, 7 Plants in Our World Activity 3	Pages 35-45 Pages 21-28, 65-75 Pages 19-24
PO 2. Form a logical argument about a correlation between variables or sequence of events (e.g., construct a cause-and-effect chain that explains a sequence of events).	If Shipwrecks Could talk Activity 4 Famous Scientists Activity 2, 7 Plants in our World Activity 3	Pages 35-45 Pages 21-28, 65-75 Pages 19-24
PO 3. Analyze results of data collection in order to accept or reject the hypothesis.	Chemical Interactions Activity 12 Plants in Our World Activity 3	Pages 87-92 Pages 19-24
PO 4. Determine validity and reliability of results of an investigation.	DSM activities provide the opportunity to teach this objective. For example: Chemical Interactions Activity 12 Plants in Our World Activity 3	Pages 87-92 Pages 19-24
PO 5. Formulate a conclusion based on data analysis.	Chemical Interactions Activity 12 Plants in Our World Activity 3 If Shipwrecks Could Talk Activity 4	Pages 87-92 Pages 19-24 Pages 35-45
PO 6. Refine hypotheses based on results from investigations.	DSM activities provide the opportunity to teach this objective. For example: Chemical Interactions Activity 12 Plants in Our World Activity 3	Pages 87-92 Pages 19-24
PO 7. Formulate new questions based on the results of a previous investigation.	DSM activities provide opportunity to teach this objective. For example: Chemical Interactions Activity 12 Plants in Our World Activity 3	Pages 87-92 Pages 19-24

Grade 8		
PO 1. Analyze data obtained in a scientific investigation to identify trends.	If Shipwrecks Could Talk Activity 4 Famous Scientists Activity 2, 7 Plants in Our World Activity 3	Pages 35-45 Pages 65-75 Pages 19-24
PO 2. Form a logical argument about a correlation between variables or sequence of events (e.g., construct a cause-and-effect chain that explains a sequence of events).	If Shipwrecks Could Talk Activity 4 Famous Scientists Activity 2, 7 Plants in Our World Activity 3	Pages 35-45 Pages 65-75 Pages 19-24
PO 3. Interpret data that show a variety of possible relationships between two variables. <ul style="list-style-type: none"> • Positive relationship • Negative relationship • No relationship 	Electrical Connections Activity 7 and 8 Chemical Interactions Activity 1 and 2 Famous Scientists Activity 2	Pages 45-58 Pages 7-21 Pages 21-28
PO 4. Formulate a future investigation based on the data collected.	DSM activities provide the opportunity to teach this objective. For example: Chemical Interactions Activity 12 Plants in Our World Activity 3	 Pages 87-92 Pages 19-24
PO 5. Explain how evidence supports the validity and reliability of a conclusion.	DSM activities provide the opportunity to teach this objective. For example: Chemical Interactions Activity 12 Plants in Our World Activity 3	 Pages 87-92 Pages 19-24
PO 6. Identify the potential investigational error that may occur (e.g., flawed investigational design, inaccurate measurement, computational errors, unethical reporting).	DSM activities provide the opportunity to teach this objective. For example: Chemical Interactions Activity 12 Plants in Our World Activity 3	 Pages 87-92 Pages 19-24
PO 7. Critique scientific reports from periodicals, television, or other media.		
PO 8. Formulate new questions based on the results of a previous investigation.	DSM activities provide the opportunity to teach this objective. For example: Chemical Interactions Activity 12 Plants in Our World Activity 3	 Pages 87-92 Pages 19-24

Concept 4: Communication

<i>PERFORMANCE OBJECTIVES</i> <i>Students will:</i>	<i>DSM ACTIVITY</i>	<i>PAGE NUMBER (S)</i>
Kindergarten		
PO 1. Communicate observations with pictographs, pictures, models, and/or words.	Finding the Moon Activity 5-8 Sunshine and Shadows Activity 6-9 Investigation Water Activity 2-7	Pages 47-76 Pages 49-76 Pages 21-61
PO 2. Communicate with other groups to describe the results of an investigation.	From Seed to Plant Activity 6-8 Properties Activity 10 and 11 Investigation Water Activity 5-8	Pages 53-72 Pages 75-86 Pages 41-69
Grade 1		
PO 1. Communicate the results of an investigation using pictures, graphs, models, and/or words.	Finding the Moon Activity 5-8 Sunshine and Shadows Activity 6-9 Investigating Water Activity 2-7	Pages 47-76 Pages 49-76 Pages 21-61
PO 2. Communicate with other groups to describe the results of an investigation.	From Seed to Plant Activity 6-8 Properties Activity 10 and 11 Investigation Water Activity 5-8	Pages 53-72 Pages 75-86 Pages 41-69
Grade 2		
PO 1. Communicate the results and conclusions of an investigation (e.g. verbal, drawn, or written).	Plant and Animal Populations Activity 9-11 Classroom Plants Activity 5 Amazing Air Activity 5 States of Matter Activity 6	Pages 85-110 Pages 47-53 Pages 43-49 Pages 51-56
PO 2. Communicate with other groups to describe the results of an investigation.	From Seed to Plant Activity 6-8 Properties Activity 10-11 Investigation Water Activity 5-8	Pages 53-72 Pages 75-86 Pages 41-69
Grade 3		
PO 1. Communicate investigations and explanations using evidence and appropriate terminology.	Plant and Animal Populations Activity 9-11 Classroom Plants Activity 5 Small Things and Microscopes	Pages 85-110 Pages 47-53

	Activity 12 and 13 Sound Activity 9-11	Pages 73-84 Pages 73-98
PO 2. Describe an investigation in ways that enable others to repeat it.	DSM activities provide the opportunity to teach this objective. For example: Classroom Plants Activity 5 Plant and Animal Populations Activity 9-11 Animal Behavior Activity 5-8 Magnets Activity 3 and 4	Pages 47-63 Pages 85-110 Pages 31-57 Pages 25-34
PO 3. Communicate with other groups to describe the results of an investigation.	DSM activities provide the opportunity to teach this objective. For example: States of Matter Activity 6 Amazing Air Activity 5 Water Cycle Activity 4 and 5 Food Chains and Webs Activity 7 and 8	Pages 51-56 Pages 43-49 Pages 39-51 Pages 59-72
Grade 4		
PO 1. Communicate verbally or in writing the results of an inquiry.	DSM activities provide the opportunity to teach this objective. For example: Sound Activity 7-9 Insect Life Activity 8 Magnets Activity 3 and 4	Pages 59-81 Pages 55-60 Pages 25-34
PO 2. Choose an appropriate graphic representation for collected data: <ul style="list-style-type: none"> • Bar graph • Line graph • Venn diagram • Model. 	Weather Instruments Activity 6 Animal Behavior Activity 3-7 Insect Life Activity 8	Pages 51-57 Pages 19-52 Pages 55-60
PO 3. Communicate with other groups/individuals to compare the results of a common investigation.	DSM activities provide the opportunity to teach this objective. For example: Water Cycle Activity 4 and 5 Food Chains and Webs Activity 7 and 8 Animal Behavior Activity 5-8	Pages 39-51 Pages 59-72 Pages 31-57
Grade 5		
PO 1. Communicate verbally or in writing the results of an	Lenses and Mirrors Activity 5-9	Pages 35-74

inquiry.	Electromagnetism Activity 4-6 Pond Life Activity 12	Pages 31-48 Pages 81-86
PO 2. Choose an appropriate graphic representation for collected data: <ul style="list-style-type: none"> • Bar graph • Line graph • Venn diagram • Model 	You and Your Body Activity 3 Electromagnetism Activity 6 Solar Energy Activity 2-8	Pages 27-31 Pages 43-48 Pages 13-58
PO 3. Communicate with other groups/individuals to compare the results of a common investigation.	The objective is met through investigations and projects for all DSM modules. For example: Fungi-Small Wonders Activity 7 Pond Life Activity 12 Erosion Activity 10-12	 Pages 45-49 Pages 81-86 Pages 83-104
Grade 6		
PO 1. Choose an appropriate graphic representation for collected data: <ul style="list-style-type: none"> • Line graph • Double bar graph • Stem and leaf plot • Histogram 	You and Your Body Activity 3 Electromagnetism Activity 6 Solar Energy Activity 2-8 Electrical Connections Activity 8 and 9	Pages 27-31 Pages 43-48 Pages 13-59 Pages 53-64
PO 2. Display data collected from a controlled investigation.	Pond Life Activity 12 Pollution Activity 10 Fungi-Small Wonders Activity 7 Chemical Interaction Activity 12	Pages 81-86 Pages 71-76 Pages 45-49 Pages 87-92
PO 3. Communicate the results of an investigation with appropriate use of qualitative and quantitative information.	Lenses and Mirrors Activity 5-9 Solar Energy Activity 2-8 Electromagnetism Activity 4-6 If Shipwrecks Could Talk Activity 4	Pages 35-74 Pages 13-59 Pages 31-38 Pages 35-45
PO 4. Create a list of instructions that others can follow in carrying out a procedure (without the use of personal pronouns).	DSM activities provide the opportunity to teach this objective. For example: Solar Energy Activity 2-8 Electromagnetism Activity 4-6 If Shipwrecks Could Talk Activity 4	 Pages 13-59 Pages 31-48 Pages 35-45

PO 5. Communicate the results and conclusion of the investigation.	Pond Life Activity 12 Pollution Activity 10 Fungi-Small Wonders Activity 7 Newton's Toy Box Activity 4	Pages 81-86 Pages 71-76 Pages 45-49 Pages 39-54
Grade 7		
PO 1. Choose an appropriate graphic representation for collected data: <ul style="list-style-type: none"> • Line graph • Double bar graph • Stem and leaf plot • Histogram 	Famous Scientists Activity 7 Electrical Connections Activity 8 and 9	Pages 65-75 Pages 53-64
PO 2. Display data collected from a controlled investigation.	Chemical Interactions Activity 12 Plants in Our World Activity 3 Famous Scientists Activity 7	Pages 87-92 Pages 19-24 Pages 65-75
PO 3. Communicate the results of an investigation with appropriate use of qualitative and quantitative information.	DSM activities provide the opportunity to teach this objective. For example: Chemical Interactions Activity 12 Plants in Our World Activity 3 Famous Scientists Activity 7	Pages 87-92 Pages 19-24 Pages 65-75
PO 4. Write clear, step-by-step instructions for following procedures (without the use of personal pronouns).	DSM activities provide the opportunity to teach this objective. For example: Chemical Interactions Activity 12 Plants in Our World Activity 3 Famous Scientists Activity 7	Pages 87-92 Pages 19-24 Pages 65-75
PO 5. Communicate the results and conclusion of the investigation.	DSM activities provide the opportunity to teach this objective. For example: Chemical Interactions Activity 12 Plants in Our World Activity 3 Famous Scientists Activity 7	Pages 87-92 Pages 19-24 Pages 65-75
Grade 8		
PO 1. Communicate the results of an investigation.	DSM activities provide the opportunity to teach this objective. For example: Chemical Interactions	

	Activity 12 Plants in Our World Activity 3 Famous Scientists Activity 7	Pages 87-92 Pages 19-24 Pages 65-75
PO 2. Choose an appropriate graphic representation for collected data: <ul style="list-style-type: none"> • Line graph • Double bar graph • Stem and leaf plot • Histogram 	Famous Scientists Activity 7 Electrical Connections Activity 8 and 9	Pages 65-75 Pages 53-64
PO 3. Present analyses and conclusions in clear, concise formats.	DSM activities provide the opportunity to teach this objective. For example: Chemical Interactions Activity 12 Plants in Our World Activity 3 Famous Scientists Activity 7	Pages 87-92 Pages 19-24 Pages 65-75
PO 4. Write clear, step-by-step instructions for conducting investigations or operating equipment (without the use of personal pronouns).	DSM activities provide the opportunity to teach this objective. For example: Chemical Interactions Activity 12 Plants in Our World Activity 3 Famous Scientists Activity 7	Pages 87-92 Pages 19-24 Pages 65-75
PO 5. Communicate the results and conclusion of the investigation.	DSM activities provide the opportunity to teach this objective. For example: Chemical Interactions Activity 12 Plants in Our World Activity 3 Famous Scientists Activity 7	Pages 87-92 Pages 19-24 Pages 65-75

Strand 2: Science as Inquiry

Concept 1: History of Science as a Human Endeavor

<i>PERFORMANCE OBJECTIVES Students will:</i>	<i>DSM ACTIVITY</i>	<i>PAGE NUMBER (S)</i>
Kindergarten		
PO 1. Give examples of how diverse people (e.g., children, parents, weather reporters, cooks, healthcare workers, gardeners) use science in daily life.	Properties Reader Investigating Water Reader From Seed to Plant Reader Sunshine and Shadows Reader	Page 14 Page 14 Page 13 Page 12
PO 2. Identify how diverse people and/or cultures, past and present, have made important contributions to scientific innovations (e.g., Jane Goodall, supports Strand 4; Louis Braille, supports Strand 4).	Finding the Moon Activity 12, Science and Careers Reader	Page 104 Page 6
Grade 1		
PO 1. Give examples of how diverse people (e.g., children, parents, weather reporters, cooks, healthcare workers, gardeners) use science in daily life.	Properties Reader Investigating Water Reader From Seed to Plant Reader Sunshine and Shadows Reader	Page 14 Page 14 Page 13 Page 12
PO 2. Identify how diverse people and/or cultures, past and present, have made important contributions to scientific innovations (e.g., Sally Ride, supports Strand 6; Neil Armstrong, supports Strand 6).	Finding the Moon Activity 12, Science and Careers Reader	Page 104 Page 14
Grade 2		
PO 1. Identify how diverse people and/or cultures, past and present, have made important contributions to scientific innovations (e.g., Daniel Hale Williams, supports Strand 4; Charles Drew, supports Strand 4), Elizabeth Blackwell, supports Strand 4).	Classroom Plants Reader Using Your Senses Reader States of Matter Activity 6, Science, and Social Studies Force and Motion Activity 1, Science and Social Studies	Page 14 Page 14 Page 56 Page 22
PO 2. Identify science-related career opportunities.	Weather Watching Reader	Page 14

	States of Matter Reader Butterflies and Moths Activity 6, Science and Careers Reader	Pages 13-14 Page 14 Page 59
Grade 3		
PO 1. Identify how diverse people and/or cultures, past and present, have made important contributions to scientific innovations (e.g., John Muir, supports Strand 4; Thomas Edison, supports Strand 5, Mae Jemison, supports Strand 6; Edmund Halley, supports Strand 6).	Classroom Plants Reader Plant and Animal Life Cycles Reader States of Matter Activity 6, Science and Social Studies Force and Motion Activity 1, Science and Social Studies	Page 14 Page 14 Page 56 Page 22
PO 2. Recognize science-related career opportunities.	Weather Watching Reader States of Matter Reader Butterflies and Moths Activity 6, Science and Careers Sound Reader	Page 14 Pages 13-14 Page 59 Page 14
Grade 4		
PO 1. Identify how diverse people and/or cultures, past and present, have made important contributions to scientific innovations (e.g., Margaret Mead, supports Strand 4; Nikola Tesla, supports Strand 5; Michael Faraday, supports Strand 5; Benjamin Franklin, supports Strand 5).	Water Cycle Reader Plant and Animal Life Cycles Reader Electric Circuits Reader Magnets Reader	Page 13 Page 14 Pages 12-13 Page 13
PO 2. Describe science-related career opportunities.	Sound Reader Food Chains and Webs Reader Weather Instruments Activity 7, Science and Careers Earth Movements Activity 11, Science and Careers	Page 14 Page 13 Page 66 Pages 103
Grade 5		
PO 1. Identify how diverse people and/or cultures, past and present, have made important contributions to scientific innovations (e.g., Percy Lavon Julian, supports	Flight and Rocketry Reader Simple Machines Reader Electromagnetism Reader	Page s 14-15 Page 12 Page 14

Strand 4; Edwin Hubble, supports Strand 6; Neils Bohr, supports Strand 5).	Rocks and Minerals Activity 4, Science and Social Studies	Page 40
Grade 6		
PO 1. Identify how diverse people and/or cultures, past and present, have made important contributions to scientific innovations (e.g., Jacques Cousteau, supports Strand 4; William Beebe, supports Strand 4; Thor Heyerdahl, supports Strand 5).	Flight and Rocketry Reader Simple Machines Reader Electromagnetism Reader Rocks and Minerals Activity 4, Science and Social Studies Famous Scientists Activity 1-12	Pages 14-15 Page 12 Page 14 Page 40 Pages 11-121
PO 2. Describe how a major milestone in science or technology has revolutionized the thinking of the time (e.g., sonar, SCUBA, underwater robotics, submarines).	Flight and Rocketry Activity 12, Science and Social Studies Reader Color and Light Reader Electromagnetism Reader Famous Scientists Activity 1, 2, 4, 11	Page 130 Pages 14-15 Page 14 Page 14 Pages 11-28, 35-43, 105-113
PO 3. Analyze the impact of a major scientific development occurring within the past decade.		
Grade 7		
PO 1. Identify how diverse people and/or cultures, past and present, have made important contributions to scientific innovations (e.g., Rachel Carson, supports Strand 4; Luis Alvarez and Walter Alvarez, supports Strand 6; Percival Lowell, supports Strand 6; Copernicus, supports Strand 6).	Famous Scientists Activity 1-12 Newton's Toy Box Activity 1 Activity 1, Science and Social Studies DNA-From Genes to Proteins Activity 3, Science Challenge Activity 5, Science Challenge	Pages 11-121 Pages 7-11 Page 11 Page 23 Page 35
PO 2. Describe how a major milestone in science or technology has revolutionized the thinking of the time (e.g. global positioning system, telescopes, seismographs, photography).	Famous Scientists Activity 1, 2, 4, 11 Newton's Toy Box Activity 1 Activity 1, Science and Social Studies DNA-From Genes to Proteins Activity 3, Science Challenge Activity 6, Science Challenge	Pages 11-38, 35-43, 105-113 Pages 7-11 Page 11 Page 23 Page 44
PO 3. Analyze the impact of a major scientific development occurring within the past		

decade.		
PO 4. Analyze the use of technology in science-related careers.	Astronomy Activity 9, Science, Technology, and Society Electrical Connections Activity 3, Science and Careers If Shipwrecks Could Talk Activity 8, Science, Technology, and Society	Page 83 Page 24 Page 88
Grade 8		
PO 1. Identify how diverse people and/or cultures, past and present, have made important contributions to scientific innovations (e.g., Watson and Crick, supports Strand 4; Rosalind Franklin, supports Strand 4; George Washington Carver, supports Strand 4; Joseph Priestley, supports Strand 5; Sir Francis Bacon, supports Strand 5; Isaac Newton, supports Strand 5).	Famous Scientists Activity 1-12 Newton's Toy Box Activity 1 Activity 1, Science and Social Studies DNA-From Genes to Proteins Activity 3, Science Challenge Activity 5, Science Challenge	Pages 11-121 Pages 7-11 Page 11 Page 23 Page 35
PO 2. Evaluate the effects of the following major scientific milestones on society: <ul style="list-style-type: none"> • Mendelian Genetics • Newton's Laws. 	Newton's Toy Box Activity 5, Science and Social Studies Activity 11, Science, Technology, and Society DNA- From Genes to Proteins Activity 3, Science Challenge Activity 12 and 13	Page 34 Page 62 23 pages 81-94
PO 3. Evaluate the impact of a major scientific development occurring within the past decade.		
PO 4. Evaluate career opportunities related to science content areas.	Electrical Connections Activity 3, Science and Careers If Shipwrecks Could Talk Activity 8, Science and Careers Plants in Our World Activity 5, Science and Careers	Page 24 Page 88 Page 36

Concept 2: Nature of Scientific Knowledge

<i>PERFORMANCE OBJECTIVES Students will:</i>	<i>DSM ACTIVITY</i>	<i>PAGE NUMBER (S)</i>
Grade 2		
PO 1. Identify components of familiar systems (e.g. organs of the digestive system, bicycle).	Plant and Animal Population Activity 12 Classroom Plants Activity 6-9 Force and Motion Activity 7 and 8 Using Your Senses Activity 1 and 5 Reader	Pages 111-117 Pages 55-86 Pages 65-82 Pages 13-21, 45-52 Pages 5, 7
PO 2. Identify the following characteristics of a system: <ul style="list-style-type: none"> Consists of multiple parts or subsystems Parts work interdependently 	Force and Motion Activity 7 and 8 Using Your Senses Activity 1 and 5 Classroom Plants Activity 6-9	Pages 65-82 Pages 13-21, 45-52 Pages 55-86
PO 3. Identify parts of a system too small to be seen (e.g. plant and animal cells, crystals).	Using Your Senses Activity 11 Reader	Pages 89-95 Pages 5, 7, 9, 11
Grade 3		
PO 1. Describe how, in a system (e.g. terrarium, house) with many components, the components usually influence each other.	Using Your Senses Activity 1 and 5 Reader Classroom Plants Activity 6-9 Water Cycle Activity 13 Electric Circuits Activity 1-4	Pages 13-21, 45-52 Pages 5, 7, 9, 11 Pages 55-86 Pages 107-114 Pages 13-43
PO 2. Explain why a system may not work if a component is defective or missing.	DSM activities provide the opportunity to teach this objective. For example: Using Your Senses Activity 1 and 5 Small Things and Microscopes Activity 3 Electric Circuits Activity 1-4	Pages 13-21, 45-52 Pages 19-24 Pages 13-43
Grade 4		
PO 1. Explain the role of experimentation in scientific inquiry.	DSM activities provide the opportunity to teach this objective. For example: Magnets Activity 3 and 4 Animal Behavior Activity 5-8 Sound Activity 7-11	Pages 25-34 Pages 31-57 Pages 59-98

<p>PO 2. Describe the interaction of components in a system (e.g. flashlight, radio).</p>	<p>Electrical Circuits Activity 1-4 Small Things and Microscopes Activity 3 Sound Activity 4</p>	<p>Pages 13-43 Pages 19-24 Pages 37-43</p>
<p>PO 3. Explain various ways scientists generate ideas (e.g. observation, experiment, collaboration, theoretical and mathematical models).</p>	<p>DSM activities provide the opportunity to teach this objective. For example: Solar System Activity 6, Science, Technology and Society Food Chains and Webs Reader Plant and Animal Life Cycles Reader</p>	<p>Page 58 Pages 11-12 Pages 14</p>
Grade 5		
<p>PO 1. Provide examples that support the premise that science is an ongoing process that changes in response to new information and discoveries (e.g. space exploration, medical advances).</p>	<p>Flight and Rocketry Activity 12, Science and Social Studies Reader Solar Energy Activity 10 Activity 10, Science, Technology, and Society Oceans Reader You and Your Body Reader</p>	<p>Page 130 Pages 4-13 Pages 65-70 Page 70 Page 15 Page 12</p>
<p>PO 2. Explain the cycle in which new scientific knowledge generates new scientific inquiry.</p>	<p>DSM activities provide the opportunity to teach this objective. For example: Solar Energy Activity 10</p>	<p>Pages 65-70</p>
<p>PO 3. Describe how scientific knowledge is subject to modification and/or change as new information/technology challenges prevailing theories.</p>	<p>DSM activities provide the opportunity to teach this objective. For example: Flight and Rocketry Reader Oceans Reader</p>	<p>Pages 4-15 Page 15</p>
<p>PO 4. Compare collaborative approaches that scientists use for investigations (e.g., teams, individual with peer review).</p>	<p>DSM activities provide the opportunity to teach this objective.</p>	
<p>PO 5. Describe qualities of the scientists' habits of mind (e.g. openness, skepticism, integrity, tolerance).</p>	<p>DSM activities provide the opportunity to teach this objective.</p>	
Grade 6		
<p>PO 1. Recognize that science is an ongoing process that changes in response to new information and discoveries.</p>	<p>Flight and Rocketry Activity 12, Science and Social Studies Reader</p>	<p>Page 130 Pages 4-13</p>

	Solar Energy Activity 10 Activity 10, Science, Technology, and Society Oceans Reader You and Your Body Reader	Pages 65-70 Page 70 Page 15 Page 12
PO 2. Describe how scientific knowledge is subject to change as new information and/or technology challenges prevailing theories.	Flight and Rocketry Reader Oceans Reader Earth Processes Activity 14 Activity 1 Science Extension DNA-From Genes to Proteins Activity 4, Science Challenge	Pages 14-15 Page 15 Pages 105-112 Page 14 Page 29
PO 3. Apply the following scientific processes to other problem solving or decision making situations: <ul style="list-style-type: none"> • Observing • Questioning • Communicating • Comparing • Measuring • Classifying • Predicting • Organizing data • Inferring • Generating hypotheses • Identifying variables 	DSM activities provide the opportunity to teach this objective. For example: Solar Energy Activity 3-8 Pond Life Activity 12 Chemical Interactions Activity 12	 Pages 21-58 Pages 81-86 Pages 87-92
Grade 7		
PO 1. Describe how science is an ongoing process that changes in response to new information and discoveries.	Earth Processes Activity 1, Science Challenge Activity 14 DNA-From Genes to Proteins Activity 4, Science Challenge Newton's Toy Box Activity 5, Science and Social Studies	Page 14 Pages 105-112 Page 29 Page 34
PO 2. Describe how scientific knowledge is subject to change as new information and/or technology challenges prevailing theories.	DNA- From Genes to Proteins Activity 4, Science Challenge Earth Processes Activity 1, Science Challenge Activity 14	Page 29 Page 14 Pages 105-112
PO 3. Apply the following scientific processes to other problem solving or decision making situations:	DSM activities provide the opportunity to teach this objective. For example: Plants in Our World	

<ul style="list-style-type: none"> • Observing • Questioning • Communicating • Comparing • Measuring • Classifying • Predicting • Organizing data • Inferring • Generating hypotheses • Identifying variables 	<p>Activity 3 Famous Scientists Activity 7 Chemical Interactions Activity 12</p>	<p>Pages 19-24 Pages 65-75 Pages 87-92</p>
Grade 8		
<p>PO 1. Apply the following scientific processes to other problem solving or decision making situations:</p> <ul style="list-style-type: none"> • Observing • Questioning • Communicating • Comparing • Measuring • Classifying • Predicting • Organizing data • Inferring • Generating hypotheses • Identifying variables 	<p>DSM activities provide the opportunity to teach this objective. For example: Plants in Our World Activity 3 Famous Scientists Activity 7 Chemical Interactions Activity 12</p>	<p>Pages 19-24 Pages 65-75 Pages 87-92</p>
<p>PO 2. Describe how scientific knowledge is subject to change as new information and/or technology challenges prevailing theories.</p>	<p>DNA- From Genes to Proteins Activity 4, Science Challenge Earth Processes Activity 1, Science Challenge Activity 14</p>	<p>Page 29 Page 14 Pages 105-112</p>
<p>PO 3. Defend why accurate record-keeping openness and replication are essential for maintaining an investigator's credibility with other scientists.</p>	<p>DSM activities provide the opportunity to teach this objective.</p>	
<p>PO 4. Explain why scientific claims may be questionable if based on very small samples of data, biased samples, or samples for which there was no control.</p>	<p>DSM activities provide the opportunity to teach this objective.</p>	

Strand 3: Science in Personal and Social Perspectives

Concept 1: Changes in Environments

<i>PERFORMANCE OBJECTIVES</i> <i>Students will:</i>	<i>DSM ACTIVITY</i>	<i>PAGE NUMBER (S)</i>
Grade 3		
PO 1. Describe the major factors that would impact a human population (e.g. famine, drought, disease, improved transportation, medical breakthroughs).	Weather Watching Activity 10 Reader Soil Science Activity 11, Science, Technology and Society	Pages 87-100 Pages 11-12 Page 105
PO 2. Describe the beneficial and harmful impacts of natural events and human activities on the environment (e.g. forest fires, sandstorms, flooding, drought, pesticides, pollution).	Soil Science Activity 10, Science and Social Studies Reader Butterflies and Moths Activity 8, Science Technology and Society Food Chains and Webs Activity 12, Science, Technology and Society	Page 97 Pages 10-11 Pages 77 Page 101
Grade 4		
PO 1. Describe how natural events and human activities have positive and negative impacts on environments (e.g. fire, floods, pollution, dams).	Small Things and Microscopes Activity 13, Science, Technology and Society Food Chains and Webs Activity 12, Science, Technology and Society Water Cycle Reader	Page 84 Page 101 Pages 14-15
PO 2. Evaluate the consequences of environmental occurrences that happen either rapidly (e.g., fire, flood, tornado) or over a long period of time (e.g., drought, melting ice caps, the greenhouse effect).	Water Cycle Activity 12, Science, Technology and Society Activity 13, Science Challenge	Page 106 Page 114
Grade 5		
PO 1. Explain the impacts of natural hazards on habitats (e.g. global warming, floods, asteroid or large meteor impacts).	Weather Forecasting Reader Erosion Reader Pollution Activity 12, Science, Technology, and Society Pond Life Activity 12, Science, Technology, and Society	Pages 10, 12 Page 15 Page 52 Page 86

PO 2. Propose a solution, resource, or product that addresses human, animal or habitat needs.	Weather Forecasting Reader Pollution Activity 6, Science, Technology, and Society Reader Electromagnetism Reader	Pages 12-13 Page 52 Pages 2-13, 15 Pages 11-13, 15
PO 3. Evaluate the possible strengths and weaknesses of a proposed solution to the problem relevant to human, animal, or habitat needs.	DSM activities provide the opportunity to teach this objective. For example: Weather Forecasting Reader Pollution Activity 6, Science, Technology, and Society Reader Electromagnetism Reader	Pages 12-13 Page 52 Pages 2-13, 15 Pages 11-13, 15
Grade 6		
PO 1. Evaluate the effects of the following natural hazards: <ul style="list-style-type: none"> • Sandstorm • Hurricane • Tornado • Ultraviolet light • Ozone • Lightning-caused fire 	Weather Forecasting Activity 12 Reader Erosion Activity 11, Science and Social Studies	Pages 87-93 Pages 8, 10, 12 Page 97
PO 2. Describe how people respond to issues regarding the following natural disasters <ul style="list-style-type: none"> • Drought • Flooding • Tornadoes 	Weather Forecasting Activity 12 Activity 12, Science and Health Erosion Activity 6, Science and Social Studies	Pages 87-93 Page 93 Page 57
Grade 7		
PO 1. Analyze environmental risks of human interaction with biological or geological systems (e.g. pollution, destruction of habitat).	DNA-From Genes to Proteins Activity 12, Science Extension Famous Scientists Activity 9 Activity 9, Science Extension Activity 10 Activity 10. Science Extension	Page 87 Pages 85-93 Page 93 Pages 95-103 Page 103
PO 2. Analyze environmental benefits of the following human interactions with biological or geological systems: <ul style="list-style-type: none"> • Reforestation • Habitat restoration • Construction of dams. 		
PO 3. Propose possible solutions to address the	Famous Scientists Activity 10, Science,	

environmental risks in biological or geological systems.	Technology, and Society DNA-From Genes to Proteins Activity 12, Science, Technology, and Society	Page 103 Page 87
Grade 8		
PO 1. Analyze the risk factors associated with natural, human induced and/or biological hazards, including <ul style="list-style-type: none"> Waste disposal of industrial chemicals Greenhouse gases 	DNA-From Genes to Proteins Activity 12, Science, Technology and Society Famous Scientists Activity 10, Science and Health Earth Processes Activity 8, Science and Social Studies	Page 87 Page 103 Page 68
PO 2. Analyze possible solutions to address the environmental risks associated with chemicals and biological systems.	DNA-From Genes to Proteins Activity 12, Science, Technology and Society Famous Scientists Activity 10, Science, Technology, and Society	Page 87 Page 103

Concept 2: Science and Technology in Society

<i>PERFORMANCE OBJECTIVES</i> <i>Students will:</i>	<i>DSM ACTIVITY</i>	<i>PAGE NUMBER (S)</i>
Kindergarten		
PO 1. Describe how simple tools (e.g. scissors, pencils, paper clips, hammers) can make tasks easier.	From Seed to Plant Activity 1-3 Properties Activity 6 and 7 Sunshine and Shadows Activity 11 and 12	Pages 15-38 Pages 47-60 Pages 83-95
Grade 1		
PO 1. Identify various technologies (e.g., automobiles, radios, refrigerators) that we use.	From Seed to Plant Activity 5, Science, Technology and Society Investigating Water Activity 11, Science, Technology and Society Observing an Aquarium Activity 11, Science, Technology and Society	Page 52 Page 94 Page 116
PO 2. Describe how suitable tools (e.g. magnifiers, thermometers) help make better observations and measurements.	From Seed to Plant Activity 1-3 Observing an Aquarium Activity 3-6 Properties Activity 6 and 7	Pages 15-38 Pages 31-67 Pages 47-60
Grade 2		
PO 1. Analyze how various	States of Matter	

technologies impact aspects of our lives (e.g. entertainment, medicine, transportation, communication).	Reader Classroom Plants Reader Force and Motion Activity 11, Science and Social Studies Reader	Page 15 Page 15 Page 109 Pages 6-13
PO 2. Describe important technological contributions made by people, past and present: <ul style="list-style-type: none"> • Automobile – Henry Ford • Airplane – Wright Brothers • Telephone – Alexander G. Bell 	Weather Watching Reader State of Matter Activity 6, Science and Social Studies	Page 13 Page 56
PO 3. Identify a simple problem that could be solved by using a suitable tool.	Force and Motion Activity 1 and 2 Weather Watching Activity 4 Amazing Air Activity 11 States of Matter Activity 7 and 11	Pages 13-29 Pages 37-44 Pages 95-100 Pages 57-63, 89-96
Grade 3		
PO 1. Identify ways that people use tools and technologies to solve problems.	States of Matter Reader Force and Motion Reader Earth Movements Reader Electric Circuits Reader	Page 15 Pages 5-15 Page 14 Pages 10-11
PO 2. Describe the development of different technologies (e.g. communication, entertainment, transportation, medicine) in response to resources, needs, and values).	Water Cycle Reader Electric Circuits Reader Magnets Reader Activity 3, Science, Technology, and Society	Pages 14-15 Page 14 Pages 14-15 Page 28
PO 3. Design and construct a technological solution to a common problem or need using common materials.	Sink or Float Activity 12 States of Matter Activity 5 Sound Activity 12	Pages 97-107 Pages 41-50 Pages 99-105
Grade 4		
PO 1. Describe how science and technology (e.g. computers, air conditioning, medicine) have improved the lives of many people.	Magnets Reader Activity 3, Science, Technology, and Society Water Cycles Reader	Pages 14-15 Page 28 Pages 14-15

	Electric Circuits Reader	Pages 10-11, 14
PO 2. Describe some benefits (e.g. easy communications, rapid transportation) and risks (e.g. pollution, destruction of natural resources) related to the use of technology.	Magnets Activity 8, Science and Careers Reader Water Cycles Reader Electric Circuits Reader	Page 58 Pages 14-15 Pages 14-15 Pages 10-11, 14
PO 3. Design and construct a technological solution to a common problem or need using common materials.	Sound Activity 12 Magnets Activity 2, Science Challenge	Pages 99-101 Page 23
Grade 5		
PO 1. Describe the relationship between science and technology.	DSM activities provide the opportunity to teach this objective. For example: Simple Machines Activity 6, Science, Technology, and Society Color and Light Activity 10, Science, Technology, and Society	Page 55 Page 91
PO 2. Explain how scientific knowledge, skills, and technological capabilities are integral to a variety of careers.	Weather Forecasting Reader You and Your Body Reader Electromagnetism Activity 2, Science and Careers Reader Simple Machines Activity 7, Science and Careers	Pages 11-13 Page 12 Page 23 Page 14 Page 63
PO 3. Design and construct a technological solution to a common problem or need using common materials.	Solar Energy Activity 11 and 12 Simple Machines Activity 12, Science Challenge Flight and Rocketry Activity 5, Reinforcement	Pages 71-82 Page 95 Page 63
Grade 6		
PO 1. Propose viable methods of responding to an identified need or problem.	Solar Energy Activity 11 and 12 Simple Machines Activity 12, Science Challenge Newton's Toy Box Activity 8, Science Challenge If Shipwrecks Could Talk Activity 11, Science Challenge	Pages 71-82 Page 95 Page 49 Page 108
PO 2. Compare solutions to best address an identified need or problem.	Solar Energy Activity 11 and 12 Simple Machines	Pages 71-82

	Activity 12, Science Challenge Newton's Toy Box Activity 8, Science Challenge If Shipwrecks Could Talk Activity 11, Science Challenge	Page 95 Page 49 Page 108
PO 3. Design and construct a technological solution to a common problem or need using simple classroom materials.	Solar Energy Activity 11 and 12 Simple Machines Activity 12, Science Challenge Newton's Toy Box Activity 8, Science Challenge If Shipwrecks Could Talk Activity 11, Science Challenge	Pages 71-82 Page 95 Page 49 Page 108
PO 4. Describe a technological discovery that influences science.	Electromagnetism Activity 11, Science, Technology, and Society Flight and Rocketry Activity 12 Famous Scientists Activity 4, Science, Technology, and Society	Page 83 Pages 121-130 Page 43
Grade 7		
PO 1. Propose viable methods of responding to an identified need or problem.	Newton's Toy Box Activity 8, Science Challenge Activity 10, Science Challenge If Shipwrecks Could Talk Activity 4, Science Extension Activity 11, Science Challenge	Page 49 Page 58 Page 45 Page 108
PO 2. Compare solutions to best address an identified need or problem.	Newton's Toy Box Activity 8, Science Challenge Activity 10, Science Challenge If Shipwrecks Could Talk Activity 4, Science Extension Activity 11, Science Challenge	Page 49 Page 58 Page 45 Page 108
PO 3. Design and construct a technological solution to an identified need or problem using simple classroom materials.	Newton's Toy Box Activity 8, Science Challenge Activity 10, Science Challenge If Shipwrecks Could Talk Activity 4, Science Extension Activity 11, Science Challenge	Page 49 Page 58 Page 45 Page 108
PO 4. Describe a technological discovery that influences science.	Earth Processes Activity 9, Science, Technology, and Society Astronomy Activity 9, Science, Technology, and Society Famous Scientists Activity 4, Science, Technology, and Society	Page 75 Page 83 Page 43
Grade 8		
PO 1. Propose viable methods of responding to an identified need or problem.	Newton's Toy Box Activity 8, Science Challenge Activity 10, Science Challenge	Page 49 Page 58

	If Shipwrecks Could Talk Activity 4, Science Extension Activity 11, Science Challenge	Page 45 Page 108
PO 2. Compare solutions to best address an identified need or problem.	Newton's Toy Box Activity 8, Science Challenge Activity 10, Science Challenge If Shipwrecks Could Talk Activity 4, Science Extension Activity 11, Science Challenge	Page 49 Page 58 Page 45 Page 108
PO 3. Design and construct a technological solution to an identified need or problem using simple classroom materials.	Newton's Toy Box Activity 8, Science Challenge Activity 10, Science Challenge If Shipwrecks Could Talk Activity 4, Science Extension Activity 11, Science Challenge	Page 49 Page 58 Page 45 Page 108
PO 4. Compare risks and benefits of the following technological advances: <ul style="list-style-type: none"> • Radiation treatments • Genetic engineering • Airbags. 	DNA-From Genes to Proteins Activity 12 Activity 12, Science Challenge	Pages 81-87 Page 87

Strand 4: Life Science

Concept 1: Characteristics of Organisms

<i>PERFORMANCE OBJECTIVES</i> <i>Students will:</i>	<i>DSM ACTIVITY</i>	<i>PAGE NUMBER (S)</i>
Kindergarten		
PO 1. Distinguish between living things and nonliving things.	Observing an Aquarium Activity 1-6 From Seed to Plant Activity 1	Pages 15-67 Pages 15-20
PO 2. Name the following body parts: <ul style="list-style-type: none"> • Head * Toes • Shoulders * Fingers • Arms * Ankles • Hands * Heels • Fingers * Elbows • Legs * Wrists • Knees * Hips • Feet 		
PO3. Identify the five senses and their related body parts: <ul style="list-style-type: none"> • Sight – eyes • Hearing – ears • Smell – nose • Taste – tongue • Touch - skin 		
Grade 1		
PO 1. Identify the following as characteristics of living things: <ul style="list-style-type: none"> • Growth and development • Reproduction • Response to stimulus 	Observing an Aquarium Activity 8-10 Reader From Seed to Plant Activity 3-6 Reader	Pages 79-101 Pages 10-12 Pages 33-58 Page 12
PO 2. Compare the following observable features of living things: <ul style="list-style-type: none"> • Movement – legs and wings • Protection – skin, feathers, tree bark • Respiration – lungs and gills • Support – plant stems and tree trunks. 	Observing an Aquarium Activity 3-6 Reader From Seed to Plant Activity 2 and 9 Reader	Pages 31-67 Pages 4-9 Pages 21-31, 73-78 Pages 2-9
PO 3. Identify observable similarities and differences (e.g., number of legs, body coverings, size) between/among different groups of animals.	Observing an Aquarium Activity 4-6 Reader	Pages 39-67 Pages 4-5

Grade 2		
PO 1. Identify animal structures that serve different functions (e.g., sensory, defense, locomotion).	Butterflies and Moths Activity 2 and 12 Reader Plant and Animal Populations Activity 4-7, 10 and 11 Reader	Pages 25-30, 105-110 Pages 4-5 Pages 43-76, 95-110 Pages 5-7
PO 2. Identify the following major parts of: <ul style="list-style-type: none"> • The digestive system – mouth, esophagus, stomach, small and large intestines • Respiratory system – nose, trachea, lungs • Circulatory system – heart, arteries, veins 		
PO 3. Describe the basic functions of the following systems: <ul style="list-style-type: none"> • Digestive – breakdown and absorption of food • Respiratory – exchange of oxygen and carbon dioxide • Circulatory – transportation of nutrients and oxygen throughout the body 		
Grade 3		
PO 1. Describe the function of the following plant structures: <ul style="list-style-type: none"> • Roots – absorb nutrients • Stems – provide support • Leaves – create food • Flowers – attract pollinators and produce seeds for reproduction 	Classroom Plants Activity 6-9 Reader Plant and Animal Life Cycles Activity 6 and 8	Pages 55-86 Pages 6-12 Pages 57-63, 75-82
Grade 4		
PO 1. Compare structures in plants (e.g., roots, stems, leaves, flowers) and animals (muscles, bones, nerves) that serve different functions in growth, and survival..	Food Chains and Webs Activity 4-6 Reader Plant and Animal Life Cycles Activity 8 Reader Dinosaurs and Fossils Activity 8 Insect Life Activity 9	Pages 39-53 Pages 4-5 Pages 75-82 Pages 4-5 Pages 61-66 Pages 61-66

<p>PO 2. Classify animals by identifiable group characteristics:</p> <ul style="list-style-type: none"> vertebrates – mammals, birds, fish, reptiles, and amphibians invertebrates – insects, arachnids. 	<p>Plant and Animal Life Cycles Reader Insect Life Activity 5</p>	<p>Pages 7-12 Pages 35-39</p>
Grade 5		
<p>PO 1. Identify the functions and parts of the skeletal system:</p> <ul style="list-style-type: none"> Protection – rib cage, cranium Support – vertebrae Movement – pelvis and femur 	<p>You and Your Body Activity 1 Reader</p>	<p>Pages 13-18 Page 4</p>
<p>PO 2. Identify the following types of muscles:</p> <ul style="list-style-type: none"> Cardiac – heart Smooth – stomach Skeletal - bicep. 	<p>You and Your Body Activity 2 Reader</p>	<p>Pages 19-25 Page 5</p>
<p>PO 3. Identify the functions and parts of the nervous system:</p> <ul style="list-style-type: none"> Control center – brain Relay mechanism – spinal cord Transport messages - nerves. 	<p>You and Your Body Activity 3, Science and Language Arts Reader</p>	<p>Page 31 Page 10</p>
<p>PO 4. Distinguish between voluntary and involuntary responses.</p>	<p>You and Your Body Activity 2 and 3 Reader</p>	<p>Pages 19-31 Page 14</p>
Grade 6		
<p>PO 1. Explain the importance of water to organisms.</p>	<p>Pond Life Activity 1, 3, 4 Plants in Our World Activity 3</p>	<p>Pages 7-11, 19-34 Pages 19-24</p>
<p>PO 2. Differentiate between plant and animal cells.</p>	<p>Plants in Our World Activity 1 You and Your Body Reader</p>	<p>Pages 7-12 Page 2</p>
<p>PO 3. Analyze the basic structures, components, and functions of plant and animal cells for:</p> <ul style="list-style-type: none"> Cell wall Cell membrane nucleus. 	<p>Plants in Our World Activity 1 You and Your Body Reader DNA-From Genes to Proteins Activity 3 and 4</p>	<p>Pages 7-12 Page 2 Pages 19-29</p>
<p>PO 4. Differentiate between cells, tissues, organs, and systems.</p>	<p>Plants in Our World Activity 1, 2, 4 You and Your Body</p>	<p>Pages 7-18, 25-30</p>

	Reader	Pages 2-3
<p>PO 5. Relate the following structures of living organisms to their functions:</p> <p>Animals</p> <ul style="list-style-type: none"> • respiration – gills, lungs • digestion – stomach, intestine • circulation – heart, veins, arteries • locomotion – muscles, skeleton <p>Plants</p> <ul style="list-style-type: none"> • transpiration – stomate, roots, xylem, phloem • absorption – roots, xylem, phloem • response to stimulus (phototropism, hydrotropism, geotropism) – roots, xylem, phloem. 	<p>Plants in Our World Activity 2, 4, 11</p> <p>You and Your Body Activity 1-6 Reader</p> <p>Pond Life Activity 8 and 9</p>	<p>Pages 13-18, 25-30, 69-75</p> <p>Pages 13-54 Pages 4-9</p> <p>Pages 57-67</p>
<p>PO 6. Describe how the various systems of living organisms work together to perform a vital function:</p> <ul style="list-style-type: none"> • respiratory and circulatory • muscular and skeletal • digestive and excretory. 	<p>You and Your Body Activity 2, 4-6 Reader</p>	<p>Pages 19-25, 33-54 Pages 4-8</p>

Concept 2: Life Cycles

<i>PERFORMANCE OBJECTIVES Students will:</i>	<i>DSM ACTIVITY</i>	<i>PAGE NUMBER (S)</i>
Kindergarten		
PO 1. Describe that most plants and animals will grow to physically resemble their parents.	<p>Observing an Aquarium Activity 10 Reader</p> <p>From Seed to Plant Activity 13 Reader</p>	<p>Pages 97-107 Pages 10-11</p> <p>Pages 97-103 Pages 10-11</p>
Grade 1		
PO 1. Identify stages of human life (e.g., infancy, adolescence, adulthood).		

PO 2. Identify similarities and differences that animals can have to their parents.	Observing an Aquarium Activity 10 Reader From Seed to Plant Activity 13 Reader	Pages 97-107 Pages 10-11 Pages 97-103 Pages 10-11
Grade 2		
PO 1. Describe the life cycles of various insects.	Plant and Animal Populations Activity 3 Butterflies and Moths Activity 1, 6, 9, and 11 Reader	Pages 51-57 Pages 15-21, 53-59, 79-86, 97-104 Pages 8-13
PO 2. Describe the life cycles of various mammals.		
PO 3. Compare the life cycles of various organisms.	Butterflies and Moths Activity 9, Science Challenge Activity 11 Reader	Page 87 Pages 97-104 Pages 8-13
Grade 3		
PO 1. Describe the life cycles of various plants (e.g. conifers, deciduous, ferns, flowers).	Plant and Animal Life Cycles Activity 2, 3, 6, 9 Reader	Pages 23-41, 57-63, 83-89 Page 13
PO 2. Explain how growth, death, and decay are part of the plant life cycle.	Plant and Animal Life Cycles Activity 9, 12 Reader	Pages 83-89, 105-113 Page 13
Grade 8		
PO 1. Explain the purposes of cell division: <ul style="list-style-type: none"> • growth and repair • reproduction 	DNA-From Genes to Proteins Activity 5, Science Extension	Page 35
PO 2. Explain the basic principles of heredity using the human example of: <ul style="list-style-type: none"> • eye color • widow's peak • blood type. 	DNA-From Genes to Proteins Activity 1 and 2 Activity 3, Science Extension	Pages 7-18 Page 23
PO 3. Distinguish between the nature of dominant and recessive traits in humans.	DNA-From Genes to Proteins Activity 3, Science Extension	Page 23

Concept 3: Organisms and Environments

<i>PERFORMANCE OBJECTIVES</i> <i>Students will:</i>	<i>DSM ACTIVITY</i>	<i>PAGE NUMBER (S)</i>
Kindergarten		
PO 1. Identify some plants and animals that exist in the local environment.	Observing an Aquarium Activity 3-6, 12 Activity 12, Science Extension	Pages 31-67, 117-125 Page 125

PO 2. Identify that plants and animals need the following to grow and survive: <ul style="list-style-type: none"> • food • air • water • space 	Observing an Aquarium Activity 2 Reader From Seed to Plant Activity 8, 14 Reader	Pages 23-30 Page 12 Pages 62-72, 105-109 Page 12
PO 3. Describe changes observed in a simple system (e.g. ant farm, plant terrarium, aquarium).	Observing an Aquarium Activity 7-11 From Seed to Plant Activity 4-7	Pages 69-116 Pages 39-66
Grade 1		
PO 1. <i>Identify some plants and animals that exist in the local environment.</i>	Observing an Aquarium Activity 3-6, 12 Activity 12, Science Extension	Pages 31-67, 117-125 Page 125
PO 2. Compare the habitats (e.g., deserts, forests, prairie, water, underground) in which plants and animals live.	Observing an Aquarium Activity 12	Pages 117-125
PO 3. Describe how plants and animals within a habitat are dependent on each other.	Observing an Aquarium Activity 7	Pages 69-78
Grade 3		
PO 1. Identify the living and non-living components of an ecosystem.	Plant and Animal Populations Reader Food Chains and Webs Activity 1-9 Reader	Pages 8-9 Pages 15-79 Pages 2-3, 6-9
PO 2. Examine an ecosystem to identify microscopic and macroscopic organisms.	Plant and Animal Populations Reader Food Chains and Webs Activity 3-9 Small Things and Microscopes Activity 11	Pages 8-9 Pages 31-79 Pages 67-71
PO 3. Explain the interrelationships among plants and animals in different environments: <ul style="list-style-type: none"> • producers – plants • consumers – animals • decomposers – fungi, insects, bacteria 	Plant and Animal Populations Activity 10-12 Reader Food Chains and Webs Activity 3 and 9,10 Reader Insect Life Activity 10	Pages 95-117 Pages 10-13 Pages 31-37, 73-101 Page 9 Pages 67-71
PO 4. Describe how plants and animals cause change in their environment.	Plant and Animal Populations Activity 7, Science, Technology and Society Food Chains and Webs Activity 9	Page 76 Pages 73-79
PO 5. Describe how environmental factors (e.g. soil	Plant and Animal Populations	

composition, range of temperature, quantity and quality of light or water) in the ecosystem may affect a member organism's ability to grow, reproduce, and thrive.	Activity 7, Science, Technology and Society Food Chains and Webs Activity 3	Pages 76 Pages 31-37
Grade 4		
PO 1. Describe ways various resources (e.g., air, water, plants, animals, soil) are utilized to meet the needs of a population.	Food Chains and Webs Reader	Pages 2-3, 6-9
PO. 2 Differentiate renewable resources from nonrenewable resources.		
PO 3. Analyze the effect that limited resources may have on an environment (e.g. natural gas, minerals).		
PO 4. Describe ways in which resources can be conserved (e.g., reduce, reuse, recycle, find substitutes).	Water Cycles Activity 11, Science and Math Activity 11, Science, Technology and Society Reader	Page 98 Pages 98 Pages 14-15
Grade 6		
PO 1. Identify that sunlight is the major source of energy for most ecosystems.	Pond Life Activity 10 Plants in Our World Activity 8 and 9	Pages 69-74 Pages 51-61
PO 2. Describe how the following environmental conditions affect the quality of life: <ul style="list-style-type: none"> • water quality • climate • population density • smog 	Pond Life Activity 12, Science, Technology, and Society Pollution Activity 4, Science and Health Activity 5, Science and Social Studies Reader	Page 86 Page 38 Page 45 Pages 2-13
Grade 7		
PO. Compare food chains and their corresponding food web.		
PO 2. Explain how living organisms obtain and use resources to develop and thrive while living in an ecosystem: <ul style="list-style-type: none"> • niches • predator/prey relationships 		
PO 3. Analyze the interactions of living organisms with their ecosystems: <ul style="list-style-type: none"> • limiting factors • carrying capacity 		

PO 4. Evaluate data related to problems associated with population growth (e.g. overgrazing, forest management, invasion of non-native species) and their possible solutions.		
PO 5. Determine how environmental factors affect survival rates in living organisms (e.g., floods, droughts).		
Po 6. Create a model of the interactions of living organisms within an ecosystem.		

Concept 4: Diversity, Adaptation, and Behavior

<i>PERFORMANCE OBJECTIVES</i> <i>Students will:</i>	<i>DSM ACTIVITY</i>	<i>PAGE NUMBER (S)</i>
Grade 3		
PO 1. Identify adaptations of plants and animals that allow them to live in specific environments.	Plant and Animal Populations Activity 4-7 Reader Classroom Plants Activity 11 Food Chains and Webs Activity 4-6 Insect Life Activity 9 and 12	Pages 43-76 Pages 4-7 Pages 97-104 Pages 39-58 Pages 61-66, 79-83
PO 2. Explain ways that species adapt when introduced into new environments.	Food Chains and Webs Activity 5	Pages 47-52
PO 3. Cite examples of how a species' inability to adapt to changing conditions in the ecosystem has led to extinction of that species.	Plant and Animal Populations Reader Dinosaurs and Fossils Reader	Page 15 Page 12
Grade 4		
PO 1. Recognize that characteristics of an organism are inherited and result from environmental conditions.	Food Chains and Webs Activity 4 and 5 Plant and Animal Life Cycles Activity 4 and 5 Insect Life Activity 2 and 7	Pages 39-52 Pages 43-56 Pages 15-22, 47-54
Po 2. Give examples of adaptations that allow plants and animals to survive. <ul style="list-style-type: none"> • Camouflage – horned lizards, coyotes • Mimicry – Monarch and Viceroy butterflies 	Food Chains and Webs Activity 5 Reader Insect Life Activity 9 Dinosaurs and Fossils Activity 8	Pages 47-52 Pages 4-5 Pages 61-66 Pages 61-66

<ul style="list-style-type: none"> Physical – cactus spines 		
Grade 8		
PO 1. Explain how an organism's behavior allows it to survive in an environment.		
PO 2. Describe how an organism can maintain a stable internal environment while living in a constantly changing external environment.		
PO 3. Determine characteristics of organisms which could change over several generations.		
PO 4. Compare the symbiotic and competitive relationships in organisms within an ecosystem (e.g. Mistletoe/tree, lichen, clownfish/sea anemone, native/non-native species).		
PO 5. Analyze the behavioral cycles of organisms <ul style="list-style-type: none"> Hibernation Migration Dormancy (plants) 		
PO 6. Describe the following factors that allow for the survival of living organisms: <ul style="list-style-type: none"> Protective coloration Beak design Seed dispersal Pollination 		

Strand 5: Physical Science

Concept 1: Properties of Objects and Materials

<i>PERFORMANCE OBJECTIVES</i> <i>Students will:</i>	<i>DSM ACTIVITY</i>	<i>PAGE NUMBER (S)</i>
Kindergarten		
PO 1. Identify the following observable properties of objects using the senses: <ul style="list-style-type: none"> • Shape • Texture • Size • Color. 	Properties Activity 3-5 Reader	Pages 25-46 Pages 3-7
PO 2. Compare objects by the following observable properties: <ul style="list-style-type: none"> • Size • Color • Type of material. 	Properties Activity 3, 12 Reader	Pages 25-32, 87-93 Page 4
Grade 1		
PO 1. Classify objects by the following observable properties: <ul style="list-style-type: none"> • Shape • Texture • Size • Color • Weight. 	Properties Activity 3-6 Reader	Pages 25-52 Page 4
PO 2. Classify materials as solids or liquids.	Properties Activity 7 and 8 Reader	Pages 53-66 Pages 5-11
Grade 2		
PO 1. Describe objects in terms of measurable properties (e.g. length, volume, weight, temperature) using scientific tools.	Amazing Air Activity 3-5 Length and Capacity Activity 5, 6, 10-12 States of Matter Activity 7 and 11	Pages 25-49 Pages 37-48, 77-94 Pages 57-63, 89-96
PO 2. Classify materials as solids, liquids, or gases.	States of Matter Activity 1-3 Reader Sink or Float Reader Amazing Air Activity 1-3	Pages 13-34 Pages 4-6 Pages 5, 6, 15 Pages 7-33
PO 3. Demonstrate that water can exist as a: <ul style="list-style-type: none"> • Gas - vapor • Liquid – water • Solid - ice 	States of Matter Activity 4, and 7-10 Reader	Pages 35-40, 57-88 Pages 8-10

PO 4. Demonstrate that solids have a definite shape and that liquids and gases take the shape of their container.	Amazing Air Activity 1-3 States of Matter Activity 1-3 Reader	Pages 7-35 Pages 13-34 Pages 4-5
Grade 5		
PO 1. Identify that matter is made of smaller units called: <ul style="list-style-type: none"> • Molecules (e.g., H₂O, CO₂, NaCl) • Atoms (e.g. nucleus, protons, neutrons, electrons) 	This objective is addressed in the grade 6 module <u>Chemical Interactions</u>	
PO 2. Distinguish between mixtures and compounds.	This objective is addressed in the grade 6 module <u>Chemical Interactions</u>	
PO 3. Describe changes of matter: <ul style="list-style-type: none"> • Physical – cutting wood, ripping paper, freezing water • Chemical – burning of wood, rusting of iron, milk turning sour. 	This objective is addressed in the grade 6 module <u>Chemical Interactions</u>	
Grade 8		
PO 1. Identify matter based on the following physical properties: <ul style="list-style-type: none"> • States of matter • Density • Boiling point • Melting point • Solubility 	Chemical Interactions Activity 1, 3	Pages 7-13, 23-28
PO 2. Identify matter based on the following chemical properties: <ul style="list-style-type: none"> • Reactivity • pH • Oxidation (corrosion). 	Chemical Interactions Activity 10-12	Pages 73-92
PO 3. Identify the following types of evidence that a chemical reaction has occurred: <ul style="list-style-type: none"> • Formation of a precipitate • Generation of gas • Color change • Absorption or release of heat. 	Chemical Interactions Activity 11-13	Pages 81-97

PO 4. Classify matter in terms of elements, compounds, or mixtures.	Chemical Interactions Activity 3-6	Pages 23-51
PO 5. Classify matter as being homogeneous or heterogeneous.	Chemical Interactions Activity 3	Pages 23-28
PO 6. Explain the systematic organization of the periodic table.	Chemical Interactions Activity 4-7	Pages 29-57
PO 7. Investigate how the transfer of energy can affect the properties (physical and chemical) of matter.	Chemical Interactions Activity 9	Pages 65-71

Concept 2: Position and Motion of Objects/Motion and Forces

<i>PERFORMANCE OBJECTIVES</i> <i>Students will:</i>	<i>DSM ACTIVITY</i>	<i>PAGE NUMBER (S)</i>
Kindergarten		
PO 1. Describe spatial relationships (i.e. above, below, next to, left, right, middle, center) of objects.	Finding the Moon Activity 3-5 Sunshine and Shadows Activity 5-12 Reader Investigating Water Activity 5 and 8	Pages 29-54 Pages 43-95 Pages 4-6, 8-9 Pages 41-46, 63-69
Grade 1		
PO 1. Demonstrate the various ways that objects can move (e.g. straight line, zigzag, back-and-forth, round-and-round, fast, and slow).	Investigating Water Activity 3, 5 and 8 Sunshine and Shadows Activity 6 and 7 Reader	Pages 27-34, 41-46, 63-69 Pages 49-63 Pages 8-9
Grade 5		
PO 1. Describe the following forces: <ul style="list-style-type: none"> • Gravity • Friction 	Flight and Rocketry Activity 2 Simple Machines Activity 3 and 4 Reader	Pages 23-32 Pages 25-37 Pages 2, 15
PO 2. Describe the various forces can have on an object (e.g. cause motion, halt motion, change direction, cause deformation).	Flight and Rocketry Activity 2-4, 6-12 Reader Simple Machines Activity 1-8 Reader	Pages 23-54, 65-130 Pages 2-14 Pages 13-69 Pages 2-12, 15
PO 3. Examine forces and motion through investigations using simple machines (e.g. wedge, plane, wheel and axle, pulley, lever).	Simple Machines Activity 2, 5-12	Pages 19-29, 39-95
PO 4. Demonstrate effects of variables on an object's motion (e.g., incline angle,	Flight and Rocketry Activity 2, 8, 9, 11, 12 Simple Machines	Pages 23-32, 81-97, 111-130

friction, applied forces).	Activity 3, 4, 6	Pages 25-37, 49-55
Grade 8		
PO 1. Demonstrate velocity as the rate of change of position over time.	Newton's Toy Box Activity 7-9	Pages 39-54
PO 2. Identify the conditions under which an object will continue in its state of motion (Newton's first Law of Motion).	Newton's Toy Box Activity 1, 5	Pages 7-11, 31-34
PO 3. Describe the effects of mass and force on the acceleration of a body (Newton's 2 nd Law of Motion).	Newton's Toy Box Activity 3 and 4, 9	Pages 19-29, 51-54
PO 4. Describe forces as interactions between bodies (Newton's 3 rd Law of Motion).	Newton's Toy Box Activity 11-13	Pages 59-70
Po 5. Create a graph devised from measurements of moving objects and their interactions, including: <ul style="list-style-type: none"> • Position-time graphs • Velocity-time graphs 		

Concept 3: Energy and Magnetism/Transfer of Energy

<i>PERFORMANCE OBJECTIVES</i> <i>Students will:</i>	<i>DSM ACTIVITY</i>	<i>PAGE NUMBER (S)</i>
Kindergarten		
PO 1. Investigate that applied forces (push and pull) can make things move.	Properties Activity 11	Pages 81-86
PO 2. Investigate that forces can make things move without touching them (e.g., magnets, static electricity).	Properties Activity 11 Reader	Pages 81-86 Page 8
PO 3. Sort materials according to whether they are or are not attracted by a magnet.	Properties Activity 11 Reader	Pages 81-86 Page 8
PO 4. Identify familiar everyday uses of magnets (e.g., in toys, cabinet locks, decoration).	Properties Activity 11, Science Challenge	Page 86
Grade 3		
PO 1. Demonstrate that light can be: <ul style="list-style-type: none"> • Reflected (with mirrors) • Refracted (with prisms) • Absorbed (by dark colors) 		

PO 2. Describe how light reacts to objects that are: <ul style="list-style-type: none"> • Transparent (clear plastic) • Translucent (waxed paper) • Opaque (cardboard) 		
PO 3. Demonstrate that vibrating objects produce sound.	Using Your Senses Activity 5 Sound Activity 2 and 3 Reader	Pages 45-52 Pages 21-35 Pages 2-3
PO 4. Demonstrate that the pitch of a sound changes as the result of a change in the rate of the vibration (e.g., a long rubber band has a lower pitch than a short rubber band).	Using Your Senses Activity 6 Sound Activity 7-11 Reader	Pages 53-60 Pages 59-98 Pages 6-7
Grade 4		
PO 1. Demonstrate that electricity flowing in circuits can produce light, heat, sound, and magnetic effects.	Electric Circuits Activity 1-4 Reader	Pages 13-43 Page 4
PO 2. Create series and parallel electric circuits.	Electric Circuits Activity 3 and 4 Reader	Pages 27-43 Pages 5-6
PO 3. Explain the role of conductors and insulators.	Electric Circuits Activity 7 and 8 Reader	Pages 57-70 Page 3
PO 4. Investigate the characteristics of magnets (e.g., opposite poles attract, like poles repel).	Magnets Activity 1-6 Reader Electric Circuits Reader	Pages 13-45 Pages 2-7 Page 9
PO 5. State cause and effect relationships between magnets and circuitry.	Magnets Activity 10-11 Reader Electric Circuits Reader	Pages 69-76 Pages 10-11 Pages 10-11
Grade 6		
PO 1. Identify various ways in which energy is generated using renewable and non-renewable resources (e.g., wind, water, dams, coal).	Oceans Activity 9, Science, Technology, and Society Solar Energy Activity 10 Electromagnetism Reader Electrical Connections Activity 8, Science, Technology, and Society	Page 11 Pages 65-70 Pages 11-12 Page 64

<p>PO 2. Identify several ways in which energy may be stored.</p>	<p>Solar Energy Activity 10 Activity 10, Science, Technology, and Society Electromagnetism Reader Electrical Connections Activity 2, Science and Social Studies</p>	<p>Pages 65-70 Page 70 Pages 4-5 Page 18</p>
<p>PO 3. Compare the following ways in which energy may be transferred:</p> <ul style="list-style-type: none"> • Mechanical to electrical • Electrical to thermal 	<p>Electromagnetism Activity 6 Activity 6, Science, Technology and Society Reader Electrical Connections Activity 7, Science and Social Studies</p>	<p>Pages 43-48 Page 48 Pages 4, 10-12 Page 51</p>
<p>PO 4. Explain how thermal energy (heat) can be transferred:</p> <ul style="list-style-type: none"> • Conduction • Convection • Radiation. 	<p>Solar Energy Activity 2 Earth Processes Activity 12, Science Challenge</p>	<p>Pages 13-19 Page 93</p>

Strand 6: Earth and Space Science

Concept 1: Properties of Earth Materials

<i>PERFORMANCE OBJECTIVES</i> <i>Students will:</i>	<i>DSM ACTIVITY</i>	<i>PAGE NUMBER (S)</i>
Kindergarten		
PO 1. Identify rocks, soil and water as basic earth materials.	Properties Activity 7, Science Challenge Investigating Water Activity 1 Reader	Page 60 Pages 13-20 Pages 2-3
PO 2. Compare physical properties (e.g. color, texture, capacity to retain water) of basic earth materials.	Properties Activity 7, Science Challenge	Page 60
PO 3. Classify a variety of objects as being natural or man-made.	Properties Activity 12, Science Extension	Page 93
PO 4. Identify ways some natural or man-made materials can be reused or recycled (e.g. efficient use of paper, recycle aluminum cans).	Investigating Water Activity 12, Science, Technology and Society	Page 100
Grade 1		
PO 1. Describe the following basic earth materials: <ul style="list-style-type: none"> • Rocks • Soil • Water. 	Investigating Water Activity 1, 2, 4	Pages 13-26, 35-40
PO 2. Compare the following physical properties of basic earth materials: <ul style="list-style-type: none"> • Color • Texture • Capacity to retain water. 		
PO 3. Identify common uses (e.g. construction, decoration) of basic earth materials (i.e. rocks, water, soil).	Properties Activity 12, Science, Technology and Society	Page 93
PO 4. Identify the following as being natural resources: <ul style="list-style-type: none"> • Air • Water • Soil • Trees • Wildlife. 	Properties Activity 7, Science Challenge Investigation Water Activity 1 This objective is addressed further in the grade 2 modules, <u>Amazing Air and Soil Science</u> .	Page 60 Pages 13-20
PO 5. Identify ways to conserve natural resources (e.g. reduce, reuse, recycle, find alternatives).	Investigating Water Activity 12, Science, Technology and Society Reader	Page 100 Page 15

Grade 3		
PO 1. Identify the layers of the Earth: <ul style="list-style-type: none"> • Crust • Mantle • Core (inner and outer). 	Earth Movements Activity 1 Reader	Pages 13-19 Pages 3-4
PO 2. Describe the different types of rocks and how they are formed: <ul style="list-style-type: none"> • Metamorphic • Igneous • Sedimentary. 	Earth Movements Activity 3 Reader	Pages 29-37 Page 15
PO 3. Classify rocks based on the following physical properties: <ul style="list-style-type: none"> • Color • Texture. 	Earth Movements Activity 3	Pages 29-37
PO 4. Describe fossils as a record of past life forms.	Earth Movements Activity 3 Dinosaurs and Fossils Activity 2-3 and 8	Pages 29-37 Pages 21-34, 61-66
PO 5. Describe how fossils are formed.	Dinosaurs and Fossils Activity 2 Earth Movements Activity 3 Activity 3, Science Extension	Pages 21-28 Pages 29-37 Page 37
PO 6. Describe ways humans use earth materials (e.g. fuel, building materials, growing food).	Soil Science Reader Earth Movements Activity 3, Science and Health Activity 10, Science, Technology and Society	Pages 10-11 Page 37 Page 96
Grade 6		
PO 1. Describe the properties and the composition of the layers of the atmosphere.	Weather Forecasting Activity 1, Science Challenge Reader	Page 18 Page 2
PO 2. Explain the composition, properties and structure of the Earth's lakes and rivers.	Erosion Reader	Page 9
PO 3. Explain the composition, properties, and structures of the oceans' zones and layers.	Oceans Activity 2 Reader	Pages 23-30 Pages 4-5, 15
PO 4. Analyze the interactions between the Earth's atmosphere and the Earth's bodies of water (water cycle).	Oceans Activity 5 Activity 8, Science Challenge Reader Weather Forecasting Activity 10, Science Challenge Reader	Pages 55-63 Page 98 Page 10 Page 80 Page 4
PO 5. Describe ways scientists explore the Earth's atmosphere and bodies of water.	Oceans Reader Weather Forecasting Reader	Pages 14-15 Pages 2-6, 14

Concept 2: Objects in the Sky

<i>PERFORMANCE OBJECTIVES</i> <i>Students will:</i>	<i>DSM ACTIVITY</i>	<i>PAGE NUMBER (S)</i>
Grade 1		
PO 1. Identify evidence that the Sun is the natural source of heat and light on the Earth (e.g. warm surfaces, shadows, shade).	Sunshine and Shadows Activity 1 Reader Finding the Moon Activity 1 Reader	Pages 3-13 Page 2 Pages 13-19 Page 2
PO 2. Compare celestial objects (e.g. Sun, Moon, stars) and transient objects in the sky (e.g. clouds, birds, airplanes, contrails).	Finding the Moon Activity 1-4 Reader	Pages 13-49 Pages 2-3
PO 3. Describe observable changes that occur in the sky, (e.g., clouds forming and moving, the position of the Moon).	Finding the Moon Activity 3, 4, 9, 10 Reader Sunshine and Shadows Activity 6 and 7 Reader	Pages 27-46, 77-91 Pages 2-3 Pages 49-63 Pages 8-9
Grade 4		
PO 1. Identify the earth processes that cause erosion.	Earth Movements Reader This objective is addressed more fully in the grade 5 module <u>Erosion</u> .	Pages 12-13
PO 2. Identify the earth events that cause changes in atmospheric conditions (e.g., volcanic eruptions, forest fires).	Earth Movements Reader	Page 10
PO 3. Describe how currents and wind cause erosion and land changes.	Earth Movements Reader This objective is addressed more fully in the grade 5 module <u>Erosion</u> .	Pages 11-13
PO 4. Compare rapid and slow processes that change the Earth's surface, including: <ul style="list-style-type: none"> • Rapid – earthquakes, volcanoes, floods • Slow – wind, weathering. 	Earth Movements Reader	Pages 9-13
PO 5. Describe the role that water plays in the following processes that alter earth surface features: <ul style="list-style-type: none"> • Erosion • Deposition • Weathering. 	Earth Movements Reader This objective is addressed more fully in the grade 5 module <u>Erosion</u> .	Pages 12-13

PO 6. Analyze evidence that indicates life and environmental conditions have changed (e.g. tree rings, fish fossils in desert regions, ice cores).	Dinosaurs and Fossils Activity 1, Science Challenge Activity 2, Science Challenge Activity 8, Science Challenge	Page 19 Page 28 Page 66
Grade 5		
PO 1. Describe how the moon's appearance changes during a four-week lunar cycle.	This objective is addressed in the grade 6 module, <u>Earth, Moon and Sun</u> .	
PO 2. Describe how Earth's rotation results in day and night at any particular location.	This objective is addressed in the grade 4 module, <u>Solar System</u> and grade 6 module, <u>Earth, Moon and Sun</u> .	
PO 3. Distinguish between revolution and rotation.	This objective is addressed in the grade 4 module, <u>Solar System</u> and grade 6 module, <u>Earth, Moon and Sun</u> .	
PO 4. Describe the role of gravity as an attractive force between celestial objects.	This objective is addressed in the grade 4 module, <u>Solar System</u> and grade 6 module, <u>Earth, Moon and Sun</u> .	
Grade 6		
PO 1. Describe how water is cycled in nature.	Oceans Activity 5 Reader Weather Forecasting Reader	Pages 55-63 Page 10 Page 4
PO 2. Identify the distribution of water: <ul style="list-style-type: none"> • Atmosphere • Lithosphere • Hydrosphere. 	Oceans Activity 1 Reader	Pages 13-22 2, 10
PO 3. Analyze the effects that bodies of water have on the climate of a region.	Oceans Reader Weather Forecasting Reader	Page 10 Page 9
PO 4. Analyze the following factors that affect climate: <ul style="list-style-type: none"> • Ocean currents • Elevation • Location. 	Oceans Reader Weather Forecasting Activity 1, Science Extension Reader	Page 10 Page 18 Page 9
PO 5. Analyze the impact on large-scale weather systems on the local weather.	Weather Forecasting Activity 7	Pages 55-61
PO 6. Create a weather system model that includes: <ul style="list-style-type: none"> • The Sun • The atmosphere • Bodies of water. 	Weather Forecasting Activity 9	Pages 69-74
Grade 7		
PO 1. Explain the rock cycle.	Earth Processes Activity 6	Pages 47-53

PO 2. Distinguish the components and characteristics of the rock cycle for the following types of rocks: <ul style="list-style-type: none"> • Igneous • Metamorphic • Sedimentary. 	Earth Processes Activity 4-6	Pages 31-53
PO 3. Analyze the evidence that lithospheric plate movements occur.	Earth Processes Activity 1, 7-14	Pages 12-14, 89-112
PO 4. Explain lithospheric plate movement as a result of convection.	Earth Processes Activity 12-13	Pages 89-103
PO 5. Relate plate boundary movements to their resulting landforms, including: <ul style="list-style-type: none"> • Mountains • Faults • Rift valleys • Trenches • Volcanoes. 	Earth Processes Activity 7, 10, 13-14	Pages 55-60, 77-82, 95-112
PO 6. Describe how earthquakes are measured.	Earth Processes Activity 9	Pages 69-75

Concept 3: Changes in the Earth and Sky/ Earth in the Solar System

<i>PERFORMANCE OBJECTIVES</i> <i>Students will:</i>	<i>DSM ACTIVITY</i>	<i>PAGE NUMBER (S)</i>
Kindergarten		
PO 1. Identify the following aspects of weather: <ul style="list-style-type: none"> • Temperature • Wind • Precipitation • Storms 	This objective is addressed in the grade 2 module, <u>Weather Watching</u> .	
PO 2. Describe observable changes in weather.	This objective is addressed in the grade 2 module, <u>Weather Watching</u> .	
PO 3. Give examples of how the weather affects our daily activities.	This objective is addressed in the grade 2 module, <u>Weather Watching</u> .	
Grade 1		
PO 1. Identify the following characteristics of seasonal weather patterns: <ul style="list-style-type: none"> • Temperature • Type of precipitation • Wind. 	This objective is addressed in the grade 2 module, <u>Weather Watching</u> .	
PO 2. Analyze how the weather affects daily activities.	This objective is addressed in the grade 2 module, <u>Weather Watching</u> .	

Grade 2		
PO 1. Measure weather conditions (e.g. temperature, precipitation)	Weather Watching Activity 2 –7 Reader	Pages 21-68 Pages 6-7
PO 2. Record weather conditions (e.g. temperature, precipitation)	Weather Watching Activity 2 –7	Pages 21-68
PO 3. Identify the following types of clouds: <ul style="list-style-type: none"> • Cumulus • Stratus • Cirrus. 	Weather Watching Activity 6	Pages 51-59
PO 4. Analyze the relationship between clouds, temperature, and weather patterns.	Weather Watching Activity 6	Pages 51-59
Grade 4		
PO 1. Identify the sources of water within an environment (e.g., ground water, surface water, atmospheric water, glaciers).	Water Cycles Activity 1-3 Reader Weather Instruments Activity 9, 11	Pages 13-37 Pages 2-7 Pages 75-80, 89-96
PO 2. Describe the distribution of water on the Earth's surface.	Water Cycles Activity 1 Reader	Pages 13-21 Pages 2-4
PO 3. Differentiate between weather and climate as they relate to the southwestern United States.		
PO 4. Measure changes in weather (e.g. precipitation, wind speed, barometric pressure).	Weather Instruments Activity 1-6, 10-11	Pages 13-57, 81-96
PO 5. Interpret the symbols on a weather map or chart to identify the following: <ul style="list-style-type: none"> • Temperatures • Fronts • Precipitation. 		
PO 6. Compare weather conditions in various locations (e.g., regions of Arizona, various U.S. cities, coastal vs. interior geographical regions).		
Grade 5		
PO 1. Identify the known planets of our solar system.	This objective is addressed in the grade 4 module, <u>Solar System</u> and grade 6 module, <u>Earth Moon and Sun</u> .	
PO 2. Describe the distinguishing characteristics of the known planets of our solar system.	This objective is addressed in the grade 4 module, <u>Solar System</u> and grade 6 module, <u>Earth Moon and Sun</u> .	
PO 3. Describe various objects in the sky (e.g. asteroids,	This objective is addressed in the grade 4 module, <u>Solar</u>	

comets, stars, meteors/shooting stars).	<u>System</u> and grade 6 modules, <u>Earth Moon and Sun</u> and <u>Astronomy</u> .	
PO 4. Describe the change in position and motion of the following objects in the sky over time: <ul style="list-style-type: none"> • Real motion – Moon, planets • Apparent motion (due to the motion of the Earth) – Sun, Moon, and stars 	This objective is addressed in the grade 4 module, <u>Solar System</u> and grade 6 modules, <u>Earth Moon and Sun</u> and <u>Astronomy</u> .	
PO 5. Explain the apparent motion of the Sun and stars.	This objective is addressed in the grade 6 module, <u>Astronomy</u> .	
PO 6. Describe efforts to explore space (e.g. Apollo missions, space shuttles, Hubble space telescope, space probes).	This objective is addressed in the grade 4 module, <u>Solar System</u> and grade 6 modules, <u>Earth, Moon and Sun</u> and <u>Astronomy</u> .	
Grade 7		
PO 1. Explain the phases of the Moon in terms of relative positions of the Earth, Sun and Moon.	Earth, Moon and Sun Activity 10	Pages 79-86
PO 2. Construct a model for the relative positions of the Earth, Sun, and Moon as they relate to corresponding eclipses.	Earth, Moon and Sun Activity 11	Pages 87-93
PO 3. Explain the interrelationship between the Earth's tides and the moon.	Earth, Moon and Sun Activity 12	Pages 95-103
PO 4. Explain the seasons in the Northern and Southern Hemispheres in terms of the tilt of the Earth's axis relative to the Earth's revolution around the Sun.	Earth, Moon and Sun Activity 9 Astronomy Activity 5	Pages 69-78 Pages 43-53
PO 5. Identify the following major constellations visible (seasonally) from the Northern Hemisphere: <ul style="list-style-type: none"> • Orion • Ursa Major (Great Bear) • Cygnus • Scorpius • Cassiopeia 	Astronomy Activity 7	Pages 61-68
PO 6. Explain the relationship among common objects in the solar system, galaxy, and universe.	Astronomy Activity 1-6, 10, 11	Pages 7-60, 85-99

