



FOSS AND CALIFORNIA STANDARDS

The **Living Systems Module** supports the following Life Sciences Content Standards for grade 5.*

LIFE SCIENCES

LS2 *Plants and animals have structures for respiration, digestion, waste disposal, and transport of materials.*

As a basis for understanding this concept, students know

- LS2a many multicellular organisms have specialized structures to support the transport of materials.
- LS2b how blood circulates through the heart chambers, lungs, and body and how carbon dioxide (CO₂) and oxygen (O₂) are exchanged in the lungs and tissues.
- LS2c the sequential steps of digestion and the roles of teeth and the mouth, esophagus, stomach, small intestine, large intestine, and colon in the function of the digestive system.
- LS2d the role of the kidney in removing cellular waste from blood and converting it into urine, which is stored in the bladder.
- LS2e how sugar, water, and minerals are transported in a vascular plant.
- LS2f plants use carbon dioxide (CO₂) and energy from sunlight to build molecules of sugar and release oxygen.
- LS2g plant and animal cells break down sugar to obtain energy, a process resulting in carbon dioxide (CO₂) and water (respiration).

“Students in grade five...can...be shown how particular chemical reactions (e.g., photosynthesis and respiration) drive the physiological processes of living cells. They will add to what they have learned in previous grade levels about the external characteristics and adaptations of plants and animals and learn about some of the fundamental principles of physiology. They will learn about blood circulation and respiration in humans; digestion of food and collection and excretion of wastes in animals; the movement of water and minerals from the roots of plants to the leaves; and the transport of sugar generated during photosynthesis from the leaves to the other parts of the plant.”†

*Science Content Standards for California Public Schools: Kindergarten through Grade Twelve (Sacramento: California Department of Education, 2000).

†Science Framework for California Public Schools: Kindergarten through Grade Twelve (Sacramento: California Department of Education, 2003), page 66.

The **Living Systems Module** supports the following Investigation and Experimentation Content Standards for grade 5.*

INVESTIGATION AND EXPERIMENTATION


I&E6 *Scientific progress is made by asking meaningful questions and conducting careful investigations.*

As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will

- I&E6a classify objects (e.g., rocks, plants, leaves) in accordance with appropriate criteria.
- I&E6b develop a testable question.
- I&E6c plan and conduct a simple investigation based on a student-developed question and write instructions others can follow to carry out the procedure.
- I&E6d identify the dependent and controlled variables in an investigation.
- I&E6f select appropriate tools (e.g., thermometers, meter sticks, balances, and graduated cylinders) and make quantitative observations.
- I&E6g record data by using appropriate graphic representations (including charts, graphs, and labeled diagrams) and make inferences based on those data.
- I&E6h draw conclusions from scientific evidence and indicate whether further information is needed to support a specific conclusion.
- I&E6i write a report of an investigation that includes conducting tests, collecting data or examining evidence, and drawing conclusions.

**Science Content Standards for California Public Schools: Kindergarten through Grade Twelve* (Sacramento: California Department of Education, 2000).

†*Science Framework for California Public Schools: Kindergarten through Grade Twelve* (Sacramento: California Department of Education, 2003), page 66.



“The Science Content Standards and the Mathematics Content Standards also reinforce each other as students analyze, strategize, and solve problems, finding solutions to apply to new circumstances. Students in grade five will also develop testable questions and learn to plan their own investigations, selecting appropriate tools to make quantitative observations.”†

LIVING SYSTEMS MODULE MATRIX

SYNOPSIS

CA LIFE SCIENCES STANDARDS

CA I&E STANDARDS

1. LIVING CELLS

Students study four related human-body transport systems that provide all the cells water, food, gas exchange, and waste disposal. The structures and functions of the circulatory, respiratory, digestive, and excretory systems are explored through a variety of multimedia activities. Students observe and analyze an investigation on gastric juice in the stomach.

- LS2a Many multicellular organisms have specialized structures to support the transport of materials.
- LS2b Blood circulates through the heart chambers, lungs, and body, and carbon dioxide and oxygen are exchanged in the lungs and tissues.
- LS2c Teeth and the mouth, esophagus, stomach, small intestine, large intestine, and colon are part of the digestive system.
- LS2d The kidney removes cellular waste from blood and converts it into urine, which is stored in the bladder.

I&E6d Identify the variables in an investigation.

2. VASCULAR PLANTS

Students investigate the transport system in vascular plants and learn about the specialized structures, xylem and phloem tubes. Students design and conduct a scientific investigation and discover that leaves play an important role in the transport of water to cells in vascular plants. They use multimedia resources to gather information about plants. They collect and classify plant leaves, based on appropriate criteria.

- LS2a Many multicellular organisms have specialized structures to support the transport of materials.
- LS2e Sugar, water, and minerals are transported in a vascular plant.

- I&E6a Classify objects in accordance with appropriate criteria.
- I&E6b Develop a testable question.
- I&E6c Plan and conduct a simple investigation and write instructions.
- I&E6f Select tools and make quantitative observations.
- I&E6g Record data graphically and make inferences based on those data.
- I&E6h Draw conclusions and indicate whether further information is needed.
- I&E6i Write a report of an investigation.

3. SUGAR AND CELLS

Students analyze an experiment to determine the conditions under which plants produce food (photosynthesis). They design an investigation to determine what conditions are needed to activate an organism (yeast) and are introduced to the process by which plant and animal cells obtain energy from food (cellular respiration). They design and conduct an experiment to determine the sugar content of common foods.

- LS2f Plants use carbon dioxide and energy from sunlight to build molecules of sugar and release oxygen.
- LS2g Plant and animal cells break down sugar to obtain energy, a process resulting in carbon dioxide and water.

- I&E6b Develop a testable question.
- I&E6c Plan and conduct a simple investigation and write instructions.
- I&E6f Select tools and make quantitative observations.
- I&E6h Draw conclusions and indicate whether further information is needed.
- I&E6i Write a report of an investigation.

- Cells require water, food, gases, and waste removal to live.
- In humans, oxygen is transported to the blood and carbon dioxide is transported from the blood in the respiratory system.
- In the human circulatory system, blood transports resources to the cells and wastes from the cells.
- Cells use simple substances for energy and building blocks.
- The digestive system breaks down complex substances into simple substances, which move into the bloodstream.
- Kidneys filter wastes from blood and convert them into urine for excretion.
- The respiratory, circulatory, digestive, and excretory systems work together to ensure that cells receive the resources they need to live.

- Life happens in cells.
- Vascular plants have two transport systems, one to transport water and minerals from roots to leaves, and one to transport sugar from leaves to cells that need it.
- In vascular plants, water and minerals are transported to cells in xylem tubes; sugar is transported to cells in phloem tubes.
- Vascular bundles are arranged in predictable patterns of veins in the leaves of vascular plants.
- Scientists classify objects and information by organizing them into groups with similar attributes.

- Chlorophyll absorbs sunlight.
- Photosynthesis requires carbon dioxide, water, and light.
- Photosynthesis produces sugar and oxygen gas.
- Plant and animal cells break down sugar and oxygen into carbon dioxide and water to obtain energy (cellular respiration).
- Animals obtain six classes of nutrients from food: protein, carbohydrate, fat, minerals, vitamins, and water.
- The volume of gas produced by yeast is proportional to the amount of sugar present.

- *Living Cells*
- *Circulatory System*
- *The Disassembly Line*
- *Summary: Living Cells*
- Science Notebook: Students respond to written questions and explain their understanding of transport systems in humans.

- *Vascular Plants*
- *Classification*
- *Summary: Vascular Plants*
- Science Notebook: Students develop an experimental question, write a plan, organize data, and write findings and conclusions.

- *Making Food*
- *Photosynthesis*
- *Cellular Respiration*
- *Living with Diabetes*
- *Summary: Sugar and Cells*
- Science Notebook: Students develop an experimental question, write a plan, organize data, and write findings and conclusions.

Pretest

Embedded Assessment

- Science notebook

Benchmark Assessment

- I-Check 1

Embedded Assessment

- Science notebook
- Response sheet

Benchmark Assessment

- I-Check 2

Embedded Assessment

- Science notebook
- Response sheet

Benchmark Assessment

- I-Check 3

Posttest



FOSS AND CALIFORNIA STANDARDS

The **Mixtures and Solutions Module** supports the following Physical Sciences Content Standards for grade 5.*

PHYSICAL SCIENCES

PS1 *Elements and their combinations account for all the varied types of matter in the world.*

As a basis for understanding this concept, students know

- PS1a during chemical reactions the atoms in the reactants rearrange to form products with different properties.
- PS1b all matter is made of atoms, which may combine to form molecules.
- PS1c metals have properties in common, such as high electrical and thermal conductivity. Some metals, such as aluminum (Al), iron (Fe), nickel (Ni), copper (Cu), silver (Ag), and gold (Au), are pure elements; others, such as steel and brass, are composed of a combination of elemental metals.
- PS1d each element is made of one kind of atom and the elements are organized in the periodic table by their chemical properties.
- PS1e scientists have developed instruments that can create discrete images of atoms and molecules that show that the atoms and molecules often occur in well-ordered arrays.
- PS1f differences in chemical and physical properties of substances are used to separate mixtures and identify compounds.
- PS1g properties of solid, liquid, and gaseous substances, such as sugar ($C_6H_{12}O_6$), water (H_2O), helium (He), oxygen (O_2), nitrogen (N_2), and carbon dioxide (CO_2).
- PS1h living organisms and most materials are composed of just a few elements.
- PS1i the common properties of salts, such as sodium chloride (NaCl).

“In grade five the introduction to chemical reactions and the concept that atoms combine to form molecules require students to clearly distinguish between molecules and atoms and chemical compounds and mixtures. They will be introduced to the idea that the organization of atoms on the periodic table of the elements is related to similarities and trends in the chemical properties of the elements.”[†]

[†]*Science Framework for California Public Schools: Kindergarten through Grade Twelve (Sacramento: California Department of Education, 2003), page 66.*

**Science Content Standards for California Public Schools: Kindergarten through Grade Twelve (Sacramento: California Department of Education, 2000).*

The **Mixtures and Solutions Module** supports the following Investigation and Experimentation Content Standards for grade 5.*

INVESTIGATION AND EXPERIMENTATION

I&E6 *Scientific progress is made by asking meaningful questions and conducting careful investigations.*

As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will

- I&E6a classify objects (e.g., rocks, plants, leaves) in accordance with appropriate criteria.
- I&E6c plan and conduct a simple investigation based on a student-developed question and write instructions others can follow to carry out the procedure.
- I&E6f select appropriate tools (e.g., thermometers, meter sticks, balances, and graduated cylinders) and make quantitative observations.
- I&E6g record data by using appropriate graphic representations (including charts, graphs, and labeled diagrams) and make inferences based on those data.
- I&E6h draw conclusions from scientific evidence and indicate whether further information is needed to support a specific conclusion.
- I&E6i write a report of an investigation that includes conducting tests, collecting data or examining evidence, and drawing conclusions.

“The Science Content Standards and the Mathematics Content Standards also reinforce each other as students analyze, strategize, and solve problems, finding solutions to apply to new circumstances. Students in grade five will also develop testable questions and learn to plan their own investigations, selecting appropriate tools to make quantitative observations.”[†]

[†]*Science Framework for California Public Schools: Kindergarten through Grade Twelve (Sacramento: California Department of Education, 2003), page 66.*

**Science Content Standards for California Public Schools: Kindergarten through Grade Twelve* (Sacramento: California Department of Education, 2000).

MIXTURES AND SOLUTIONS MODULE MATRIX

SYNOPSIS

CA PHYSICAL SCIENCES STANDARDS

CA I&E STANDARDS

1. SEPARATING MIXTURES

Students make mixtures of water and solid materials (salt, gravel, and diatomaceous earth) and separate the mixtures with screens and filters. They find that water and salt make a special kind of mixture, a solution, that cannot be separated with a filter but only through evaporation.

- PS1f Differences in chemical and physical properties of substances are used to separate mixtures and identify compounds.
- PS1g Solid, liquid, and gaseous substances have properties.

- I&E6c Plan and conduct a simple investigation.
- I&E6f Select appropriate tools and make quantitative observations.

2. REACHING SATURATION

Students make a saturated solution by adding salt to water until no more salt will dissolve. They also make a saturated Epsom-salts solution. Using a balance, they compare the solubility of the two solid materials by comparing the mass of the salt and Epsom-salts dissolved in the saturated solutions. They use the property of solubility to identify an unknown material.

- PS1b All matter is made of atoms, which may combine to form molecules.
- PS1f Differences in chemical and physical properties of substances are used to separate mixtures and identify compounds.
- PS1g Solid, liquid, and gaseous substances have properties.
- PS1i Salts, such as sodium chloride, have common properties.

- I&E6f Select appropriate tools and make quantitative observations.
- I&E6h Draw conclusions and indicate whether further information is needed.
- I&E6i Write a report of an investigation.

3. FIZZ QUIZ

Students systematically mix combinations of solid materials (calcium chloride, baking soda, and citric acid) with water and observe changes that occur. The changes (formation of a gas and a white precipitate) are identified as chemical reactions. Students investigate these reactions and the materials they produce.

- PS1a During chemical reactions the atoms in the reactants rearrange to form products with different properties.
- PS1b All matter is made of atoms, which may combine to form molecules.
- PS1d Each element is made of one kind of atom, and the elements are organized in the periodic table by their chemical properties.
- PS1f Differences in chemical and physical properties of substances are used to separate mixtures and identify compounds.

- I&E6f Select appropriate tools and make quantitative observations.
- I&E6g Record data in graphic representations and make inferences based on those data.
- I&E6h Draw conclusions and indicate whether further information is needed.
- I&E6i Write a report of an investigation.

4. ELEMENTS

Students are introduced to the periodic table as a graphic display of the elements showing increasing atomic number in rows and similar chemical properties in columns. They learn about metals and alloys and that most matter on Earth is made from a small number of elements.

- PS1c Metals have high electrical and thermal conductivity. Some metals are pure elements; others are combinations of elemental metals.
- PS1d Each element is made of one kind of atom, and the elements are organized in the periodic table by their chemical properties.
- PS1e Scientists have developed instruments that can create images that show that atoms and molecules often occur in well-ordered arrays.
- PS1h Living organisms and most materials are composed of just a few elements.

- A mixture combines two or more materials that retain their own properties.
- A solution forms when a material dissolves in a liquid (solvent) and cannot be retrieved with a filter.
- All mixtures can be separated based on the properties of the constituent substances.
- Evaporation can separate a liquid from a solid in a solution.
- Crystal form can be used to identify substances.

- Solubility is the property that substances have of dissolving in solvents. Solubility is different for different materials and can change with temperature and solvent.
- Solubility can be used to differentiate and identify substances.
- A solution is saturated when a solvent has dissolved as much solute as possible.
- Decompression sickness is caused by supersaturation of the gas nitrogen in blood.

- When a change results from mixing two or more materials, that change is a chemical reaction, which can be represented with chemical formulas and chemical equations.
- Atoms are the fundamental building blocks of matter; all substances are composed of atoms.
- Atoms in reactants rearrange during reactions to form new substances.
- Atoms combine to form molecules. Molecules are the fundamental units of substances.

- Earth has 90 naturally occurring elements, each defined by a unique atom.
- Most matter on Earth is made from only a few elements.
- Most elements on Earth are metals; metals share properties of malleability and conduction of heat and electricity.
- The periodic table provides information about the composition of an element's atom and the element's chemical properties.
- Atoms and molecules can be imaged with scanning tunneling microscopes.

- *Mixtures*
- *Taking Mixtures Apart*
- *Summary: Separating Mixtures*
- Science Notebook: Students record how they assembled mixtures and the methods used to separate mixtures.

- *Solutions Up Close*
- *The Bends*
- *Summary: Reaching Saturation*
- Science Notebook: Students follow a procedure and record results. They use solubility data to determine the identity of a mystery substance.

- *When Substances Change*
- *Chemical Formulas*
- *Equations*
- *Summary: Fizz Quiz*
- Science Notebook: Students record reaction observations and rationale for identification of products. They complete chemical equations to demonstrate production of new substances and conservation of atoms.

- *Organizing the Elements*
- *The Periodic Table of the Elements*
- *Metals*
- *Earth Elements*
- *New Technologies*
- *Ask a Chemist*
- *Summary: Elements*
- Science Notebook: Students describe metals and record the occurrence of elements in ordinary materials.

Pretest

Embedded Assessment

- Science Notebook
- Response sheet
- Teacher observation

Benchmark Assessment

- I-Check 1

Embedded Assessment

- Teacher observation
- Response sheet

Benchmark Assessment

- I-Check 2

Embedded Assessment

- Science Notebook
- Response sheet

Benchmark Assessment

- I-Check 3

Embedded Assessment

- Teacher observation
- Science Notebook

Benchmark Assessment

- I-Check 4

Posttest

FOSS AND CALIFORNIA STANDARDS

The **Water Planet Module** supports the following Earth Sciences Content Standards for grade 5.*

EARTH SCIENCES

ES3 *Water on Earth moves between the oceans and land through the processes of evaporation and condensation.*

As a basis for understanding this concept, students know

- ES3a most of Earth's water is present as salt water in the oceans, which cover most of Earth's surface.
- ES3b when liquid water evaporates, it turns into water vapor in the air and can reappear as a liquid when cooled or as a solid if cooled below the freezing point of water.
- ES3c water vapor in the air moves from one place to another and can form fog or clouds, which are tiny droplets of water or ice, and can fall to Earth as rain, hail, sleet, or snow.
- ES3d that the amount of fresh water located in rivers, lakes, underground sources, and glaciers is limited and that its availability can be extended by recycling and decreasing the use of water.
- ES3e the origin of the water used by their local communities.

ES4 *Energy from the Sun heats Earth unevenly, causing air movements that result in changing weather patterns.*

As a basis for understanding this concept, students know

- ES4a uneven heating of Earth causes air movements (convection currents).
- ES4b the influence that the ocean has on the weather and the role that the water cycle plays in weather patterns.
- ES4c the causes and effects of different types of severe weather.
- ES4d how to use weather maps and data to predict local weather and know that weather forecasts depend on many variables.
- ES4e that the Earth's atmosphere exerts a pressure that decreases with distance above Earth's surface and that at any point it exerts this pressure equally in all directions.

**Science Content Standards for California Public Schools: Kindergarten through Grade Twelve (Sacramento: California Department of Education, 2000).*

ES5 *The solar system consists of planets and other bodies that orbit the Sun in predictable paths.*

As a basis for understanding this concept, students know

- ES5a the Sun, an average star, is the central and largest body in the solar system and is composed primarily of hydrogen and helium.
- ES5b the solar system includes the planet Earth, the Moon, the Sun, eight other planets and their satellites, and smaller objects, such as asteroids and comets.
- ES5c the path of a planet around the Sun is due to the gravitational attraction between the Sun and the planet.

The **Water Planet Module** supports the following Investigation and Experimentation Content Standards for grade 5.*

INVESTIGATION AND EXPERIMENTATION

I&E6 *Scientific progress is made by asking meaningful questions and conducting careful investigations.*

As a basis for understanding this concept and addressing the content in the other three strands, students should develop their own questions and perform investigations. Students will

- I&E6a classify objects (e.g., rocks, plants, leaves) in accordance with appropriate criteria.
- I&E6b develop a testable question.
- I&E6c plan and conduct a simple investigation based on a student-developed question and write instructions others can follow to carry out the procedure.
- I&E6d identify the dependent and controlled variables in an investigation.
- I&E6e identify a single independent variable in a scientific investigation and explain how this variable can be used to collect information to answer a question about the results of the experiment.
- I&E6f select appropriate tools (e.g., thermometers, meter sticks, balances, and graduated cylinders) and make quantitative observations.
- I&E6g record data by using appropriate graphic representations (including charts, graphs, and labeled diagrams) and make inferences based on those data.
- I&E6h draw conclusions from scientific evidence and indicate whether further information is needed to support a specific conclusion.
- I&E6i write a report of an investigation that includes conducting tests, collecting data or examining evidence, and drawing conclusions.

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WATER PLANET MODULE MATRIX

SYNOPSIS

CA EARTH SCIENCES STANDARDS

CA I&E STANDARDS

1. SOLAR SYSTEM

Students use solar system cards to organize the Sun and other bodies into a representation of the system and categorize the bodies in different ways, based on their properties. Students learn how gravity keeps planets in orbit.

- ES5a The Sun is the central and largest body in the solar system and is composed primarily of hydrogen and helium.
- ES5b The solar system includes the planet Earth, the Moon, the Sun, eight other planets and their satellites, and smaller objects.
- ES5c The path of a planet around the Sun is due to the gravitational attraction between the Sun and the planet.

- I&E6a Classify objects in accordance with appropriate criteria.
- I&E6g Record data graphically and make inferences based on those data.

2. SWINGERS

Students experiment with pendulums to learn the basics of controlled experimentation, and learn to identify independent, dependent, and controlled variables. They represent data with a two-coordinate graph.

- I&E6d Identify the variables in an investigation.
- I&E6e Identify a single independent variable and explain how to use it to answer a question.
- I&E6g Record data graphically and make inferences based on those data.

3. WATER VAPOR

Students experiment with water to determine how temperature and surface area affect evaporation. They also investigate the conditions that produce liquid condensation and frost.

- ES3b When liquid water evaporates, it turns into water vapor in the air and can reappear as a liquid when cooled or as a solid if cooled below the freezing point of water.

- I&E6d Identify the variables in an investigation.
- I&E6e Identify a single independent variable and explain how to use it to answer a question.
- I&E6f Select appropriate tools and make quantitative observations.
- I&E6g Record data graphically and make inferences based on those data.

4. HEATING EARTH

Students learn about uneven heating by monitoring the temperature of water and soil in the sunshine. They discover how uneven heating can cause convection currents. Students use syringes to investigate air pressure.

- ES4a Uneven heating of Earth causes convection currents.
- ES4e Earth's atmosphere exerts a pressure that decreases with distance above Earth's surface, and it exerts this pressure equally in all directions.

- I&E6c Plan and conduct a simple investigation and write instructions.
- I&E6d Identify the variables in an investigation.
- I&E6f Select appropriate tools and make quantitative observations.
- I&E6g Record data graphically and make inferences based on those data.
- I&E6h Draw conclusions from scientific evidence and indicate whether further information is needed to support a specific conclusion.

5. WEATHER

Students inventory Earth's water and learn that the water cycle redistributes water worldwide. They investigate weather, learning the causes and effects of severe weather, and learn how to make weather maps and use them to forecast weather.

- ES3a Most of Earth's water is present as salt water in the oceans.
- ES3c Water vapor in the air moves from one place to another, can form fog or clouds, and can fall to Earth as rain, hail, sleet, or snow.
- ES3d The amount of fresh water is limited; its availability can be extended by recycling and decreasing its use.
- ES3e Students know the origin of the water used by their local communities.
- ES4b The ocean influences the weather and the water cycle plays a role in weather patterns.
- ES4c Severe weather has different causes and effects.
- ES4d Use weather maps and data to predict local weather. Weather forecasts depend on many variables.

CONCEPTS

- The solar system comprises nine planets and various other bodies orbiting the Sun, a typical star composed mostly of hydrogen and helium.
- Solar-system bodies can be put into categories, such as gas giants, terrestrial planets, and satellites.
- Gravity is a pulling force that constantly changes the direction of travel of planets to maintain them in orbits around the Sun.

- A pendulum is a mass that is free to swing around a point.
- A variable is anything that you can change in an experiment that might affect the outcome.
- In a controlled experiment the independent variable is changed in order to determine how that variable affects the outcome of the experiment. All other variables are controlled.

- Evaporation is the process by which liquid water changes into water vapor, a gas.
- Temperature and surface area affect the rate of evaporation.
- Condensation occurs when water vapor touches a cool surface and changes into liquid.
- Evaporation and condensation contribute to the movement of water through the water cycle.

- The different energy-absorbing properties of earth materials can lead to uneven heating of Earth's surface.
- Cold fluids are denser than warm fluids.
- Convection currents result from uneven heating of Earth's surface.
- Compressed air exerts pressure equally in all directions.
- Earth's atmospheric pressure decreases with distance above Earth's surface.

- Most of Earth's water (97%) is salt water.
- Weather is the condition of the atmosphere at a given place and time: the amount of heat, moisture, pressure, and movement.
- Solar energy drives weather.
- Severe weather occurs when one or more variables is extreme, resulting in conditions that are dangerous or destructive.
- Weather maps display weather conditions and can be used to forecast weather.

READING AND WRITING

- *A Tour of the Solar System*
- *Ramon E. Lopez*
- *Why Doesn't Earth Fly Off into Space?*
- *Mae Jemison: Astronaut*
- *Summary: Solar System*
- Science Notebook: Students record and organize information about the solar system.

- *Galileo*
- *Graphing Data*
- *Summary: Swingers*
- Science Notebook: Students record, organize, and display pendulum data using conventional graphing language and methods.

- *Drying Up*
- *Evaporation*
- *Surface-Area Experiment*
- *Condensation*
- *Summary: Water Vapor*
- Science Notebook: Students record and analyze evaporation and condensation data.

- *Uneven Heating*
- *Wind!*
- *The Pressure Is On!*
- *Summary: Heating Earth*
- Science Notebook: Students write an experimental plan, record data, and analyze and display those data. They make labeled diagrams of convection currents and write explanations of the observable effects of atmospheric pressure.

- *Where Is Earth's Water?*
- *Earth's Water*
- *The Water Cycle*
- *Severe Weather*
- *Weather Maps*
- *California Water Map*
- *Summary: Weather*
- Science Notebook: Students write causes and effects of severe weather.

ASSESSMENT

Pretest

Embedded Assessment

- Science notebook

Benchmark Assessment

- I-Check 1

Embedded Assessment

- Teacher observation
- Response sheet

Benchmark Assessment

- I-Check 2

Embedded Assessment

- Response sheet
- Science notebook

Benchmark Assessment

- I-Check 3

Embedded Assessment

- Science notebook
- Response sheet

Benchmark Assessment

- I-Check 4

Embedded Assessment

- Quick write
- Science notebook

Benchmark Assessment

- I-Check 5

Posttest