

CEDAR RAPIDS COMMUNITY SCHOOL DISTRICT

Science Standards and Student Expectations

Kindergarten

Standard A: Science as Inquiry

Students develop an understanding of scientific inquiry as they combine processes and scientific knowledge with scientific reasoning and critical thinking.

K.A.1 Ask questions about objects, organisms, and events in the environment.

K.A.2 Use equipment and tools to gather data.

K.A.3 Use observations to accurately describe and compare.

Standard B: History and Nature of Science

Students develop an understanding that science is a process that models the real world and changes as new evidence is found. Emphasis is placed on scientific investigations and design through experimentation, communication and evaluation.

K.B.1 Use questioning and communication skills as part of science process.

K.B.2 Work both as a team and individually to share ideas and conclusions

K.B.3 Understand many people choose a career in science.

Standard C: Life & Environmental Science

Students develop an understanding of the characteristics, structures, and functions of living organisms, the processes of life, and how living organisms interact with each other and their environments.

K.C.1 Recognize that some things are living and some are non-living.

K.C.2 Identify how living things, including you, use your senses.

Standard D: Earth and Space Science

Students develop an understanding of the basic features and processes of the earth, the composition and structure of the universe, and their interactions.

K.D.1 Observe weather changes from day to day and season to season.

K.D.2 Observe that some events in nature have repeating patterns, such as weather.

Standard E: Physical Science

Students develop an understanding of the structures and properties of matter, motion and force, energy types and sources, and their changes.

K.E.1 Understand objects have many observable properties.

K.E.2 Use magnifiers to see things that cannot be observed without them.

K.E.3 Observe and classify how things move.

Standard F: Science Connections

Students develop an understanding of the interrelationships among science, technology, and society.

K.F.1 Distinguish between natural objects and objects made by humans.

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Grade 1 Science

Standard A: Science as Inquiry

Students develop an understanding of scientific inquiry as they combine processes and scientific knowledge with scientific reasoning and critical thinking.

- 1.A.1 Ask questions about objects, organisms, and events in the environment.
- 1.A.2 Plan and conduct simple investigations.
- 1.A.3 Use equipment and tools to gather data.
- 1.A.4 Use data to construct a reasonable explanation.
- 1.A.5 Communication investigations and explanations.

Standard B: History and Nature of Science

Students develop an understanding that science is a process that models the real world and changes as new evidence is found. Emphasis is placed on scientific investigations and design through experimentation, communication and evaluation.

- 1.B.1 Recognize that questioning and communication are important to the process of science.
- 1.B.2 Use a notebook to describe, compare and understand science.
- 1.B.3 Understand many people choose careers in science.

Standard C: Life & Environmental Science

Students develop an understanding of the characteristics, structures, and functions of living organisms, the processes of life, and how living organisms interact with each other and their environments.

- 1.C.1 Understand that living things have basic needs.
- 1.C.2 Understand that plants and animals have life cycles.
- 1.C.3 Identify plants and animals that closely resemble their parents.
- 1.C.4 Recognize that all animals depend on plants.
- 1.C.5 Explain how plants and animals have special external features that help them thrive in different places.
- 1.C.6 Compare changes to the environment of a living organism that can be helpful and/or harmful.

Standard D: Earth and Space Science

Students develop an understanding of the basic features and processes of the earth, the composition and structure of the universe, and their interactions.

- 1.D.1 Observe and test properties of earth materials.
- 1.D.2 Observe and record daily and seasonal weather changes.

Standard E: Physical Science

Students develop an understanding of the structures and properties of matter, motion and force, energy types and sources, and their changes.

- 1.E.1 Compare observable and measurable properties of objects.
- 1.E.2 Describe the position and motion of objects.
- 1.E.3. Recognize the sun supplies heat and light to the earth.

Standard F: Science Connections

Students develop an understanding of the interrelationships among science, technology, and society.

- 1.F.1 Distinguish between natural objects and objects made by humans or machines.
- 1.F.2 Recognize and discuss how some changes occur slowly and others rapidly.
- 1.F.3 Understand people are always inventing new ways and tools to solve problems.

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Grade 2 Science

Standard A: Science as Inquiry

Students develop an understanding of scientific inquiry as they combine processes and scientific knowledge with scientific reasoning and critical thinking.

- 2.A.1** Ask questions about objects, organisms, and events in the environment.
- 2.A.2** Plan and conduct simple investigations.
- 2.A.3** Use equipment and tools to gather data.
- 2.A.4** Use data to construct a reasonable explanation.
- 2.A.5** Communicate investigations and explanations to class.

Standard B: History and Nature of Science

Students develop an understanding that science is a process that models the real world and changes as new evidence is found. Emphasis is placed on scientific investigations and design through experimentation, communication and evaluation.

- 2.B.1** Recognize that questioning and communication are important to the process of science.
- 2.B.2** Use a notebook to describe, compare and understand science.
- 2.B.3** Recognize that when science investigation is done the same way, we expect to get similar results.
- 2.B.4** Understand many people choose a career in science.

Standard C: Life & Environmental Science

Students develop an understanding of the characteristics, structures, and functions of living organisms, the processes of life, and how living organisms interact with each other and their environments.

- 2.C.1** Understand that living things have basic needs: animals and plants need air, water, nutrients, light, and food
- 2.C.2** Recognize that plants and animals have life cycles
- 2.C.3** Describe how people, animals and plants live together in communities or habitats
- 2.C.4** Illustrate that plants make their own food and how animals depend on plants for basic needs
- 2.C.5** Explain how plants and animals have special external features that help them thrive in different places
- 2.C.6** Discuss how changes to the environment of a living organism can be helpful and/or harmful

Standard D: Earth and Space Science

Students develop an understanding of the basic features and processes of the earth, the composition and structure of the universe, and their interactions.

- 2.D.1** Record cyclical changes in the observations of the sun, moon, and the earth
- 2.D.2** Observe and measure how the sun warms the land, air, and water

Standard E: Physical Science

Students develop an understanding of the structures and properties of matter, motion and force, energy types and sources, and their changes.

- 2.E.1** Use tools to measure observable properties of objects
- 2.E.2** Describe an object's motion by tracing its position over time
- 2.E.3** Change an object's position or motion by pushing or pulling

Standard F: Science Connections

Students develop an understanding of the interrelationships among science, technology, and society.

- 2.F.1** Differentiate between natural and machine-made things
- 2.F.2** Observe changes in environments can be natural or influenced by humans. Some changes can be helpful and/or harmful
- 2.F.3** Understand that some changes occur slowly and others rapidly
- 2.F.4** Understand people are always inventing new ways and tools to solve problems

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Grade 3 Science

Standard A: Science as Inquiry

Students develop an understanding of scientific inquiry as they combine processes and scientific knowledge with scientific reasoning and critical thinking.

- 3.A.1** Generate questions that can be answered through scientific investigation
- 3.A.2** Locate and use resources to help with investigations
- 3.A.3** Plan and safely conduct scientific investigations
- 3.A.4** Use appropriate tools and technology to gather, process, and analyze data
- 3.A.5** Use evidence to communicate a reasonable explanation

Standard B: Nature and History of Science

Students develop an understanding that science is a process that models the real world and changes as new evidence is found. Emphasis is placed on scientific investigations and design through experimentation, communication and evaluation.

- 3.B.1** Recognize that questioning and open communication are important to the process of science
- 3.B.2** Use a science notebook to describe, compare, and understand science
- 3.B.3** Recognize that when a science investigation is done the same way, we expect to get similar results
- 3.B.4** Understand that many people have contributed scientific knowledge over time
- 3.B.5** Understand that many people choose a career in science

Standard C: Life & Environmental Science

Students develop an understanding of the characteristics, structures, and functions of living organisms, the processes of life, and how living organisms interact with each other and their environments.

- 3.C.1** Understand that organisms have basic needs
- 3.C.2** Observe and describe the life cycle of organisms
- 3.C.3** Use similarities and differences to classify living organisms
- 3.C.4** Illustrate that plants make their own food and how animals depend on plants for basic needs
- 3.C.5** Identify parts of the digestion system

Standard D: Earth and Space Science

Students develop an understanding of the basic features and processes of the earth, the composition and structure of the universe, and their interactions.

- 3.D.1** Describe how water on Earth cycles
- 3.D.2** Explore the properties of water
- 3.D.3** Understand air is a substance that surrounds us, takes up space, and movement is felt as wind

Standard E: Physical Science

Students develop an understanding of the structures and properties of matter, motion and force, energy types and sources, and their changes.

- 3.E.1** Illustrate how materials can exist in different states as solid, liquid, and gas
- 3.E.2** Observe when warmer things are put with cooler ones, the warm ones lose heat and the cool ones gain it until they are all at the same temperature
- 3.E.3** Investigate the properties of sound
- 3.E.4** Observe and produce sound using vibrating objects

Standard F: Science Connections

Students develop an understanding of the interrelationships among science, technology, and society.

- 3.F.1** Observe changes in environments can be natural or influenced by social conditions. Changes can be helpful and/or harmful
- 3.F.2** Use tools to do things better, more easily, and accomplish something that could not otherwise be done
- 3.F.3** Understand people are always inventing new ways and tools to solve problems

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Grade 4 Science

Standard A: Science as Inquiry

Students develop an understanding of scientific inquiry as they combine processes and scientific knowledge with scientific reasoning and critical thinking.

- 4.A.1 Generate questions that can be answered through scientific investigation
- 4.A.2 Locate and use resources to help with investigations
- 4.A.3 Plan and safely conduct scientific investigations
- 4.A.4 Use appropriate tools and technology to gather, process, and analyze data
- 4.A.5 Use evidence to communicate a reasonable explanation

Standard B: Nature and History of Science

Students develop an understanding that science is a process that models the real world and changes as new evidence is found. Emphasis is placed on scientific investigations and design through experimentation, communication and evaluation.

- 4.B.1 Recognize that questioning and open communication are important to the process of science
- 4.B.2 Use a science notebook to describe, compare, and understand science
- 4.B.3 Recognize that when a science investigation is done the same way, we expect to get similar results
- 4.B.4 Understand that many people have contributed scientific knowledge over time
- 4.B.5 Understand that many people choose a career in science

Standard C: Life & Environmental Science

Students develop an understanding of the characteristics, structures, and functions of living organisms, the processes of life, and how living organisms interact with each other and their environments.

- 4.C.1 Understand the function of the skeletal and muscular systems and how they work together
- 4.C.2 Describe how fossils and rocks give a picture of the history of earth
- 4.C.3. Investigate properties of earth materials

Standard D: Earth and Space Science

Students develop an understanding of the basic features and processes of the earth, the composition and structure of the universe, and their interactions.

- 4.D.1 Identify physical properties of rocks and minerals and explain how minerals can be tested for these properties
- 4.D.2 Identify the three categories of rocks and how they are formed
- 4.D.3 Understand the mass of the whole object is the same as the sum of the parts
- 4.D.4 Examine materials that are composed of parts too small to be seen without magnification

Standard E: Physical Science

Students develop an understanding of the structures and properties of matter, motion and force, energy types and sources, and their changes.

- 4.E.1 Demonstrate how magnets attract and repel each other and certain kinds of materials
- 4.E.2 Understand the earth's gravity pulls any object toward it without touching it
- 4.E.3 Use force and motion to move an object
- 4.E.4 Explore properties of electricity and build an electric circuit

Standard F: Science Connections

Students develop an understanding of the interrelationships among science, technology, and society.

- 4.F.1 Changes in environments can be natural or influenced by social conditions. Changes can be helpful and/or harmful
- 4.F.2 Use tools to do things better, more easily, and accomplish something that could not otherwise be done
- 4.F.3 Understand people are always inventing new ways and tools to solve problems

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Grade 5 Science

Standard A: Science as Inquiry

Students develop an understanding of scientific inquiry as they combine processes and scientific knowledge with scientific reasoning and critical thinking.

- 5.A.1** Generate questions that can be answered through scientific investigation
- 5.A.2** Locate and use resources to help with investigations
- 5.A.3** Plan and safely conduct scientific investigations
- 5.A.4** Use appropriate tools and technology to gather, process, and analyze data
- 5.A.5** Use evidence to communicate a reasonable explanation
- 5.A.6** Compare and contrast individual and class evidence and explanations

Standard B: Nature and History of Science

Students develop an understanding that science is a process that models the real world and changes as new evidence is found. Emphasis is placed on scientific investigations and design through experimentation, communication and evaluation.

- 5.B.1** Recognize that questioning and open communication are important to the process of science
- 5.B.2** Use a science notebook to describe, compare, and understand science
- 5.B.3** Recognize that when a science investigation is done the same way, we expect to get similar results
- 5.B.4** Understand that many people have contributed scientific knowledge over time
- 5.B.5** Understand that many people choose a career in science

Standard C: Life & Environmental Science

Students develop an understanding of the characteristics, structures, and functions of living organisms, the processes of life, and how living organisms interact with each other and their environments.

- 5.C.1** Investigate to determine best growing conditions for living organisms
- 5.C.2** Identify changes to the environment of a living organism that can be beneficial and/or harmful
- 5.C.3** Identify sources of energy that help organisms live and grow
- 5.C.4** Compare similarities and differences of major biomes

Standard D: Earth and Space Science

Students develop an understanding of the basic features and processes of the earth, the composition and structure of the universe, and their interactions.

- 5.D.1** Observe and collect data on changes that affect an earth system

Standard E: Physical Science

Students develop an understanding of the structures and properties of matter, motion and force, energy types and sources, and their changes.

- 5.E.1** Observe that materials have specific properties
- 5.E.2** Observe and compare physical and chemical changes
- 5.E.3** Examine and determine properties of matter
- 5.E.4** Measure and graph the motion of objects

Standard F: Science Connections

Students develop an understanding of the interrelationships among science, technology, and society

- 5.F.1** Changes in environments can be natural or influenced by social conditions. Changes can be helpful and/or harmful
- 5.F.2** Understand people are always inventing new ways and tools to solve problems

Grade 6 Science

Standard A: Science as Inquiry

Students develop an understanding of scientific inquiry as they combine processes and scientific knowledge with scientific reasoning and critical thinking.

6.A.1 Ask questions that can be answered through scientific investigation, modeling, or research

6.A.2 Identify data and locate sources of information to answer the questions being investigated

6.A.3 Design and safely conduct scientific investigations that provide reliable quantitative or qualitative data, as appropriate, to answer their questions

6.A.4 Use appropriate tools and techniques to gather, analyze, and interpret data

6.A.5 Use accepted scientific knowledge, models, and theories to explain their results and to raise further questions about their investigations

6.A.6 Think critically and logically to develop the relationship between evidence and explanation and to make further predictions

Standard B: History and Nature of Science

Students develop an understanding that science is a process that models the real world and changes as new evidence is found. Emphasis is placed on scientific investigations and design through experimentation, communication and evaluation.

6.B.1 Recognize that an experiment must be repeated many times and yield consistent results before the results can be accepted as correct

6.B.2 Describe how scientific knowledge and concepts have and continue to change over time

6.B.3 Recognize that questioning, response to criticism, and open communication are integral to the process of science

6.B.4 Recognize that scientific endeavors are influenced by human capacities and qualities

6.B.5 Understand that scientific knowledge changes over time and almost always builds on earlier knowledge and technological advances

6.B.6 Recognize that diverse cultures have contributed scientific knowledge and technology

6.B.7 Knows that throughout history many scientific innovators have had difficulty breaking through accepted ideas of their time to reach conclusions that are now considered to be common knowledge

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Standard C: Life & Environmental Science

Students develop an understanding of the characteristics, structures, and functions of living organisms, the processes of life, and how living organisms interact with each other and their environments.

6.C.1 Investigate and explain how all organisms obtain and use resources to grow and maintain stable internal conditions

6.C.2 Investigate and relate how an organism senses change in its internal or external environment and attempts to respond to keep internal conditions in a required range.

6.C.3 Differentiate between the internal body systems and how they work together

Standard D: Earth and Space Science

Students develop an understanding of the basic features and processes of the earth, the composition and structure of the universe, and their interactions.

6.D.1 Investigate and understand that the sun is a major source of energy for phenomena in the atmosphere and on the earth's surface

6.D.2 Investigate and describe gravity's relationship to the solar system

6.D.3 Investigate and list the components of the solar system, galaxies, and universe

6.D.4 Compare and contrast properties of objects in the solar system to those on earth

6.D.5 Explain how the effect of the tilt of the earth's axis is related to the seasons

6.D.6 Describe the relationship between the motion of solar system objects in terms of the concepts of day, year, seasons, eclipses, and phases of the moon

Standard E: Physical Science

Students develop an understanding of structures and properties of matter; motion and force; energy types and sources; and their changes.

6.E.1 Observe, describe, and measure physical and chemical properties of matter

6.E.2 Use risks and benefits to determine best method such as: recycle, renew, burn, or landfills, to dispose of waste materials

Standard F: Science Connections

Students develop an understanding of the interrelationships among science, technology, and society.

6.F.1 Recognize ways in which science and society influence one another

6.F.2 Recognize that technological advances can offer positive solutions, however there are often limitations and/or trade-off in safety, cost, and efficiency

6.F.3 Work together within and across disciplines

6.F.4 Recognize that the knowledge and technology that results from scientific endeavors will eventually become available to society

6.F.5 Understands the effects of population on resources and the environment both locally and globally

6.F.6 Investigate and describe issues that are associated with natural hazards

6.F.7 Investigate and describe human activities, such as urban growth, land use, and waste disposal, which can accelerate many natural changes

6.F.8 Describe how perceptions of risks and benefits influence personal and social decisions

6.F.9 Use critical thinking in analyzing natural, chemical, and biological hazards

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Grade 7 Science

Standard A: Science as Inquiry

Students develop an understanding of scientific inquiry as they combine processes and scientific knowledge with scientific reasoning and critical thinking.

- 7.A.1** Ask questions that can be answered through scientific investigation, modeling, or research
- 7.A.2** Identify data and locate sources of information to answer the questions being investigated
- 7.A.3** Design and safely conduct scientific investigations that provide reliable quantitative or qualitative data, as appropriate, to answer their questions
- 7.A.4** Use appropriate tools and techniques to gather, analyze, and interpret data
- 7.A.5** Use accepted scientific knowledge, models, and theories to explain their results and to raise further questions about their investigations
- 7.A.6** Think critically and logically to develop the relationship between evidence and explanation and to make further predictions

Standard B: History and Nature of Science

Students develop an understanding that science is a process that models the real world and changes as new evidence is found. Emphasis is placed on scientific investigations and design through experimentation, communication and evaluation.

- 7.B.1** Recognize that an experiment must be repeated many times and yield consistent results before the results can be accepted as correct
- 7.B.2** Describe how scientific knowledge and concepts have and continue to change over time
- 7.B.3** Recognize that questioning, response to criticism, and open communication are integral to the process of science
- 7.B.4** Recognize that scientific endeavors are influenced by human capacities and qualities
- 7.B.5** Understand that scientific knowledge changes over time and almost always builds on earlier knowledge and technological advances
- 7.B.6** Recognize that diverse cultures have contributed scientific knowledge and technology
- 7.B.7** Knows that throughout history many scientific innovators have had difficulty breaking through accepted ideas of their time to reach conclusions that are now considered to be common knowledge

Standard C: Life & Environmental Science

Students develop an understanding of the characteristics, structures, and functions of living organisms, the processes of life, and how living organisms interact with each other and their environments.

- 7.C.1** Explain the roles and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web
- 7.C.2** Describe how producers use the energy from the sun, carbon dioxide, and water through the process of photosynthesis to make sugar. This energy is stored by the plant or transferred to other organisms in food webs.
- 7.C.3** Describe and give examples of populations, community, ecosystems, biome, and biosphere
- 7.C.4** Investigate and explain how behavior is a response to internal and external stimuli
- 7.C.5** Explain how abiotic factors; such as light, water, and temperature and biotic factors; such as health and disease, determine the growth and survival of populations in ecosystems.

Standard D: Earth and Space Science

Students develop an understanding of the basic features and processes of the earth, the composition and structure of the universe, and their interactions.

- 7.D.1** Investigate and describe the layers of the solid earth
- 7.D.2** Compare and contrast soil compositions and textures
- 7.D.3** Describe how the movement of tectonic plates cause both slow changes like mountains and ocean trenches, and rapid changes such as volcanoes and earthquakes
- 7.D.4** Describe and give examples of ways landforms result from a combination of constructive and destructive forces
- 7.D.5** Investigate and understand past and present earth processes

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7.D.6 Investigate and use the fossil record to provide evidence and explain how environmental conditions have changed

Standard E: Physical Science

Students develop an understanding of structures and properties of matter; motion and force; energy types and sources; and their changes.

7.E.1 Investigate, describe, and represent the motion of an object by its position, direction, and speed

7.E.2 Investigate and demonstrate that the speed and/or direction of an object changes when a force is applied to that object

7.E.3 Demonstrate that objects not acted on by an outside force will continue moving at a constant speed and straight line.

Standard F: Science Connections

Students develop an understanding of the interrelationships among science, technology, and society.

7.F.1 Recognize ways in which science and society influence one another

7.F.2 Recognize that technological advances can offer positive solutions, however there are often limitations and/or trade-off in safety, cost, and efficiency

7.F.3 Work together within and across disciplines

7.F.4 Recognize that the knowledge and technology that results from scientific endeavors will eventually become available to society

7.F.5 Understands the effects of population on resources and the environment both locally and globally

7.F.6 Investigate and describe issues that are associated with natural hazards

7.F.7 Investigate and describe human activities, such as urban growth, land use, and waste disposal, which can accelerate many natural changes

7.F.8 Describe how perceptions of risks and benefits influence personal and social decisions

7.F.9 Use critical thinking in analyzing natural, chemical, and biological hazards

CEDAR RAPIDS COMMUNITY SCHOOL DISTRICT

Grade 8 Science

Standard A: Science as Inquiry

Students develop an understanding of scientific inquiry as they combine processes and scientific knowledge with scientific reasoning and critical thinking.

- 8.A.1** Ask questions that can be answered through scientific investigation, modeling, or research
- 8.A.2** Identify data and locate sources of information to answer the questions being investigated
- 8.A.3** Design and safely conduct scientific investigations that provide reliable quantitative or qualitative data, as appropriate, to answer their questions
- 8.A.4** Use appropriate tools and techniques to gather, analyze, and interpret data
- 8.A.5** Use accepted scientific knowledge, models, and theories to explain their results and to raise further questions about their investigations
- 8.A.6** Think critically and logically to develop the relationship between evidence and explanation and to make further predictions

Standard B: History and Nature of Science

Students develop an understanding that science is a process that models the real world and changes as new evidence is found. Emphasis is placed on scientific investigations and design through experimentation, communication and evaluation.

- 8.B.1** Recognize that an experiment must be repeated many times and yield consistent results before the results can be accepted as correct
- 8.B.2** Describe how scientific knowledge and concepts have and continue to change over time
- 8.B.3** Recognize that questioning, response to criticism, and open communication are integral to the process of science
- 8.B.4** Recognize that scientific endeavors are influenced by human capacities and qualities
- 8.B.5** Understand that scientific knowledge changes over time and almost always builds on earlier knowledge and technological advances
- 8.B.6** Recognize that diverse cultures have contributed scientific knowledge and technology
- 8.B.7** Knows that throughout history many scientific innovators have had difficulty breaking through accepted ideas of their time to reach conclusions that are now considered to be common knowledge

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Standard C: Life & Environmental Science

Students develop an understanding of the characteristics, structures, and functions of living organisms, the processes of life, and how living organisms interact with each other and their environments.

- 8.C.1** Recognizes that cells are the fundamental unit of life
- 8.C.2** Compare and contrast animal and plant cells
- 8.C.3** Understand the levels of organization and their structure and function in living systems
- 8.C.4** Investigate and determine how cells sustain life
- 8.C.5** Compare and contrast the structures and functions of bacteria, protists, and viruses
- 8.C.6** Model how hereditary information is transferred from one generation to another
- 8.C.7** Identify factors that influence genetic traits.

Standard D: Earth and Space Science

Students develop an understanding of the basic features and processes of the earth, the composition and structure of the universe, and their interactions.

- 8.D.1** Differentiate among radiation, conduction, and convection and identify how they transfer heat in the earth's system
- 8.D.2** Use model or diagram to explain the uneven heating and cooling of the earth's surfaces
- 8.D.3** Diagram the cycling of water in the atmosphere and explain how it influences climatic patterns
- 8.D.4** Examine how heat energy carried by ocean currents has a strong influence on climate around the world
- 8.D.5** Explain the relationship between energy from the sun, global patterns of atmospheric movement, and temperature differences among water, land, and atmosphere

Standard E: Physical Science

Students develop an understanding of structures and properties of matter; motion and force; energy types and sources; and their changes.

- 8.E.1** Recognize the heat is a form of energy and temperature change results from adding or removing heat from a system
- 8.E.2** Differentiate between potential and kinetic energy
- 8.E.3** Investigate, explain, and give examples of forms of energy such as; heat, light, chemical, sound, electrical, nuclear, and atomic energy
- 8.E.4** Investigate, explain, and give examples of how energy is transformed and transferred
- 8.E.5** Evaluate the risks and benefits of different sources of power

Standard F: Science Connections

Students develop an understanding of the interrelationships among science, technology, and society.

- 8.F.1** Recognize ways in which science and society influence one another
- 8.F.2** Recognize that technological advances can offer positive solutions, however there are often limitations and/or trade-off in safety, cost, and efficiency
- 8.F.3** Work together within and across disciplines
- 8.F.4** Recognize that the knowledge and technology that results from scientific endeavors will eventually become available to society
- 8.F.5** Understands the effects of population on resources and the environment both locally and globally
- 8.F.6** Investigate and describe issues that are associated with natural hazards which can accelerate many natural changes
- 8.F.8** Describe how perceptions of risks and benefits influence personal and social decisions
- 8.F.9** Use critical thinking in analyzing natural, chemical, and biological hazards

