



**KENOSHA UNIFIED SCHOOL DISTRICT NO. 1
CURRICULUM AND INSTRUCTIONAL SERVICES
STANDARDS AND BENCHMARKS
SCIENCE**

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
STANDARD A: SCIENCE CONNECTIONS—STUDENTS WILL UNDERSTAND AND DESCRIBE THE UNIFYING CONCEPTS AND PROCESSES AMONG SCIENCE TOPICS WHICH LEAD TO CONNECTIONS BETWEEN PHYSICAL SCIENCE, EARTH/SPACE SCIENCE, AND LIFE SCIENCE.							
A-1: Systems	<p>Most things are made of parts, and some things may not work if parts are missing.</p> <p>When parts are put together, they can do things that they couldn't do alone.</p> <p>A-1.k</p>	<p>Most things are made of parts, and some things may not work if parts are missing.</p> <p>When parts are put together, they can do things that they couldn't do alone.</p> <p>A-1.1</p>	<p>Most things are made of parts, and some things may not work if parts are missing.</p> <p>When parts are put together, they can do things that they couldn't do alone.</p> <p>A-1.2</p>	<p>In something that consists of many parts, the parts usually influence one another. Something may not work as well (or at all) if a part of it is missing, broken, worn out, mismatched, or misconnected.</p> <p>A-1.3</p>	<p>In something that consists of many parts, the parts usually influence one another. Something may not work as well (or at all) if a part of it is missing, broken, worn out, mismatched, or misconnected.</p> <p>A-1.4</p>	<p>In something that consists of many parts, the parts usually influence one another. Something may not work as well (or at all) if a part of it is missing, broken, worn out, mismatched, or misconnected.</p> <p>A-1.5</p>	<p><i>A system can include processes as well as things.</i></p> <p><i>Any system is usually connected to other systems, both internally and externally.</i></p> <p>A-1.6</p>
A-2: Models	<p>A model of something is different from the real thing but can be used to learn something about the real thing.</p>	<p>A model of something is different from the real thing but can be used to learn something about the real thing.</p>	<p>A model of something is different from the real thing but can be used to learn something about the real thing.</p>	<p>Seeing how a model works after changes are made to it may suggest how the real thing would work if the same were done to it.</p> <p>Geometric figures, sketches, number lines, maps, and stories can be used to represent objects, events, and processes in the real</p>	<p><i>Seeing how a model works after changes are made to it may suggest how the real thing would work if the same were done to it.</i></p> <p><i>Geometric figures, sketches, number lines, maps, and stories can be used to represent objects, events, and processes in the real</i></p>	<p><i>Seeing how a model works after changes are made to it may suggest how the real thing would work if the same were done to it.</i></p> <p><i>Geometric figures, sketches, number lines, maps, and stories can be used to represent objects, events, and processes in the real</i></p>	<p><i>Models are often used to think about processes that are not easily observed.</i></p> <p>Different models can be used to represent the same thing.</p>

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
				world, although such representations can never be exact in every detail.	<i>world, although such representations can never be exact in every detail.</i>	<i>world, although such representations can never be exact in every detail.</i>	
	A-2.k	A-2.1	A-2.2	A-2.3	<i>A-2.4</i>	<i>A-2.5</i>	<i>A-2.6</i>
A-3: Change and Constancy	<p><i>Things change in some ways and stay the same in some ways.</i></p> <p><i>People can keep track of change.</i></p> <p><i>Things can change in different ways, such as in size, weight, color, and movement. Some small changes can be detected by taking measurements.</i></p> <p><i>Some changes are so slow or so fast that they are hard to see.</i></p>	<p><i>Things change in some ways and stay the same in some ways.</i></p> <p><i>People can keep track of change.</i></p> <p><i>Things can change in different ways, such as in size, weight, color, and movement. Some small changes can be detected by taking measurements.</i></p> <p><i>Some changes are so slow or so fast that they are hard to see.</i></p>	<p><i>Things change in some ways and stay the same in some ways.</i></p> <p><i>People can keep track of change.</i></p> <p><i>Things can change in different ways, such as in size, weight, color, and movement. Some small changes can be detected by taking measurements.</i></p> <p><i>Some changes are so slow or so fast that they are hard to see.</i></p>	<p><i>Some features of things may stay the same, even when other features change.</i></p> <p><i>Things change in steady, repetitive, or irregular ways—or sometimes in more than one way at the same time. Often, the best way to tell which kinds of change are happening is to make a table or graph of measurements.</i></p>	<p><i>Some features of things may stay the same even when other features change.</i></p> <p><i>Things change in steady, repetitive, or irregular ways—or sometimes in more than one way at the same time. Often, the best way to tell which kinds of change are happening is to make a table or graph of measurements.</i></p>	<p><i>Some features of things may stay the same even when other features change.</i></p> <p><i>Things change in steady, repetitive, or irregular ways—or sometimes in more than one way at the same time. Often, the best way to tell which kinds of change are happening is to make a table or graph of measurements.</i></p>	<p><i>Physical and biological systems tend to change until they become stable and then remain that way unless their surroundings change.</i></p>
	<i>A-3.k</i>	<i>A-3.1</i>	<i>A-3.2</i>	<i>A-3.3</i>	<i>A-3.4</i>	<i>A-3.5</i>	<i>A-3.6</i>
A-4: Scale	Things in nature and things people make have very different sizes, weights, ages, and speeds.	Things in nature and things people make have very different sizes, weights, ages, and speeds.	Things in nature and things people make have very different sizes, weights, ages, and speeds.	Almost anything has limits on how big or small it can be. Finding out what	Almost anything has limits on how big or small it can be. Finding out what	Almost anything has limits on how big or small it can be. Finding out what	As the complexity of any system increases, gaining an understanding of it depends

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
				the biggest and the smallest possible values of something are often as revealing as knowing what the usual value is.	the biggest and the smallest possible values of something are often as revealing as knowing what the usual value is.	the biggest and the smallest possible values of something are often as revealing as knowing what the usual value is.	increasingly on summaries, such as averages and ranges, and on descriptions of typical examples of that system.
	A-4.k	A-4.1	A-4.2	A-4.3	A-4.4	A-4.5	A-4.6
A-5: Connections		The general domains of science, which are physical, earth, and life, are connected.	The general domains of science, which are physical, earth, and life, are connected.	The general domains of science, which are physical, earth, and life, are connected.	The study of earth and space science, life and environmental science, and physical science are interconnected by unifying themes.	The study of earth and space science, life and environmental science, and physical science are interconnected by unifying themes.	The study of earth and space science, life and environmental science, and physical science are interconnected by unifying themes.
		A-5.1	A-5.2	A-5.3	A-5.4	A-5.5	A-5.6
STANDARD B: NATURE OF SCIENCE—STUDENTS WILL UNDERSTAND THAT THE STUDY OF SCIENCE IS ONGOING, AND THEORIES AND CONCEPTS IN SCIENCE CHANGE OVER TIME AS NEW EVIDENCE IS FOUND. SCIENTIFIC EXPLANATIONS MUST ADHERE TO CRITERIA SUCH AS: A PROPOSED EXPLANATION MUST BE LOGICALLY CONSISTENT, IT MUST ABIDE BY THE RULES OF EVIDENCE, IT MUST BE OPEN TO QUESTIONS AND POSSIBLE MODIFICATION, AND IT MUST BE BASED ON HISTORICAL AND CURRENT SCIENTIFIC KNOWLEDGE.							
B-1: Science is a Human Endeavor, and There are Many Commonly Known Careers in Science.	<i>Men and women from many cultures have contributed to science and technology throughout history, but much more remains to be understood. Science will never be finished.</i>	<i>Men and women from many cultures have contributed to science and technology throughout history, but much more remains to be understood. Science will never be finished.</i>	<i>Men and women from many cultures have contributed to science and technology throughout history, but much more remains to be understood. Science will never be finished.</i>	<i>Men and women from many cultures have contributed to science and technology throughout history, but much more remains to be understood. Science will never be finished.</i>	<i>Men and women from many cultures have contributed to science and technology throughout history, but much more remains to be understood. Science will never be finished.</i>	<i>Men and women from many cultures have contributed to science and technology throughout history, but much more remains to be understood. Science will never be finished.</i>	<i>Women and men of various social and ethnic backgrounds engage in the activities of science, engineering, and related fields. Many people choose science as a career and devote their lives to studying it.</i>

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
	<i>Many people choose science as a career and devote their lives to studying it.</i>	<i>Many people choose science as a career and devote their lives to studying it.</i> In science it is helpful to work with a team and share findings with others.	<i>Many people choose science as a career and devote their lives to studying it.</i> In science it is helpful to work with a team and share findings with others.	<i>Many people choose science as a career and devote their lives to studying it.</i> In science it is helpful to work with a team and share findings with others.	<i>Many people choose science as a career and devote their lives to studying it.</i> In science it is helpful to work with a team and share findings with others.	<i>Many people choose science as a career and devote their lives to studying it.</i> In science it is helpful to work with a team and share findings with others.	Some scientists work alone and some in teams, but all communicate extensively with others.
	<i>B-1.k</i>	<i>B-1.1</i>	<i>B-1.2</i>	<i>B-1.3</i>	B-1.4	B-1.5	B-1.6
B-2: Nature of Scientific Process and Knowledge	<i>Science is based on questions.</i> <i>The job of a scientist is to construct ideas and explanations.</i> Scientific knowledge may change when new things are learned. Scientists make the results of their investigations public.	<i>Science is based on questions.</i> <i>The job of a scientist is to construct ideas and explanations.</i> Scientific knowledge may change when new things are learned. Scientists make the results of their investigations public. Scientists use different kinds of investigations depending on the questions they	<i>Science is based on questions.</i> <i>The job of a scientist is to construct ideas and explanations.</i> Scientific knowledge may change when new things are learned. Science experiments will usually work the same way when repeated under similar conditions. <i>Scientists make the results of their investiga-</i>	<i>Science is based on questions.</i> <i>The job of a scientist is to construct ideas and explanations.</i> <i>Scientific knowledge may change when new things are learned.</i> Science experiments will usually work the same way when repeated under similar conditions. <i>Scientists make the results of their investiga-</i>	<i>Science is based on questions.</i> <i>The job of a scientist is to construct ideas and explanations.</i> <i>Scientific knowledge may change when new things are learned.</i> <i>Science experiments will usually work the same way when repeated under similar conditions.</i> <i>Scientists make the results of their investiga-</i>	<i>Science is based on questions.</i> <i>The job of a scientist is to construct ideas and explanations.</i> <i>Scientific knowledge may change when new things are learned.</i> <i>Science experiments will usually work the same way when repeated under similar conditions.</i> <i>Scientists make the results of their investiga-</i>	<i>Scientists formulate and test their explanations of nature using observations and experiments.</i> <i>It is part of scientific inquiry to evaluate the results of scientific investigations, experiments, observations, theoretical models, and the explanations proposed by other scientists.</i> It is common for scientists to differ with one another about the inter-

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
		are trying to answer.	<i>tions public</i> ; they describe the investigations in ways that enable others to repeat the investigations. Scientists use different kinds of investigations depending on the questions they are trying to answer.	<i>tions public</i> ; they describe the investigations in ways that enable others to repeat the investigations. Scientists use different kinds of investigations depending on the questions they are trying to answer.	<i>tions public; they describe the investigations in ways that enable others to repeat the investigations.</i> Scientists use different kinds of investigations depending on the questions they are trying to answer.	<i>tions public; they describe the investigations in ways that enable others to repeat the investigations.</i> <i>Scientists use different kinds of investigations depending on the questions they are trying to answer.</i>	pretation of the evidence or theory being considered.
	B-2.k	B-2.1	B-2.2	B-2.3	B-2.4	B-2.5	B-2.6
B-3: History of Science							<i>Many individuals have contributed to the traditions of science. Studying some of these individuals provides further understanding of scientific inquiry, science as a human endeavor, the nature of science, and the relationships between science and society.</i> B-3.6
STANDARD C: SCIENCE INQUIRY—STUDENTS WILL INVESTIGATE QUESTIONS USING SCIENTIFIC METHODS AND TOOLS, REVISE THEIR PERSONAL UNDERSTANDING TO ACCOMMODATE KNOWLEDGE, AND COMMUNICATE THOSE UNDERSTANDINGS TO OTHERS.							

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
C-1: Ask Questions about Objects, Organisms, and Events in the Everyday World.	<i>Ask questions and attempt reasonable answers based on observations and simple investigations.</i>	<i>Ask questions and attempt reasonable answers based on observations and simple investigations</i>	<i>Ask testable questions and attempt reasonable answers based on observations and investigations.</i>	<i>Ask testable questions using scientific vocabulary and attempt reasonable answers based on observations and investigations.</i>	<i>Identify, formulate and clarify questions that can be answered through scientific investigations using appropriate equipment and resources.</i>	<i>Identify, formulate and clarify questions that can be answered through scientific investigations using appropriate equipment and resources.</i>	<i>Identify, formulate, and clarify questions that can be answered through scientific investigations using appropriate equipment and resources.</i>
	<i>C-1.k</i>	<i>C-1.1</i>	<i>C-1.2</i>	<i>C-1.3</i>	<i>C-1.4</i>	<i>C-1.5</i>	<i>C-1.6</i>
C-2: Make Connections to Prior Knowledge.	<i>Use prior knowledge to make predictions and help answer the question being investigated.</i>	<i>Use prior knowledge to make predictions and help answer the question being investigated.</i>	<i>Use prior knowledge to make predictions and help answer the question being investigated.</i>	<i>Use prior knowledge to make predictions and help answer the question being investigated.</i>	<i>Use prior knowledge and investigations to make predictions and help answer the question being investigated.</i>	<i>Use prior knowledge and investigations to make predictions and help answer the question being investigated.</i>	<i>Use prior knowledge of scientific facts, concepts, and investigations to make predictions and help answer the question being investigated.</i>
	<i>C-2.k</i>	<i>C-2.1</i>	<i>C-2.2</i>	<i>C-2.3</i>	<i>C-2.4</i>	<i>C-2.5</i>	<i>C-2.6</i>
C-3: Gather Background Knowledge Related to the Questions Being Investigated.	<i>Locate and access data and scientific knowledge in age-appropriate information sources and reference materials. (See English/ Language Arts and Information and Technology Literacy Standards.)</i>	<i>Locate and access data and scientific knowledge in age- appropriate information sources and reference materials. (See English/ Language Arts and Information and Technology Literacy Standards.)</i>	<i>Locate and access data and scientific knowledge in age- appropriate information sources and reference materials. (See English/ Language Arts and Information and Technology Literacy Standards.)</i>	<i>Locate and access data and scientific knowledge in age- appropriate information sources and reference materials. (See English/ Language Arts and Information and Technology Literacy Standards.)</i>	<i>Locate and access data and scientific knowledge in age- appropriate information sources and reference materials. (See English/ Language Arts and Information and Technology Literacy Standards.)</i>	<i>Locate and access data and scientific knowledge in age-appropriate information sources and reference materials. (See English/ Language Arts and Information and Technology Literacy Standards.)</i>	<i>Locate and access data and scientific knowledge in age- appropriate information sources and reference materials. (See English/ Language Arts and Information and Technology Literacy Standards.)</i>

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
	<i>C-3.k</i>	<i>C-3.1</i>	<i>C-3.2</i>	<i>C-3.3</i>	<i>C-3.4</i>	<i>C-3.5</i>	<i>C-3.6</i>
C-4: Design and Conduct Responsible and Safe Investigations to Help Answer Questions.	<i>Demonstrate knowledge of age-appropriate safe laboratory procedures.</i> <i>Participate in teacher-directed activities.</i>	<i>Demonstrate knowledge of age-appropriate safe laboratory procedures.</i> <i>Participate in teacher-directed activities, and conduct simple investigations.</i>	<i>Demonstrate knowledge of age-appropriate safe laboratory procedures.</i> <i>Participate in teacher-directed activities, and conduct simple investigations.</i>	<i>Demonstrate knowledge of age-appropriate safe laboratory procedures.</i> <i>Participate in guided inquiry to plan and conduct investigations, predict results, and build explanations.</i>	<i>Demonstrate knowledge of age-appropriate safe laboratory procedures.</i> <i>Participate in guided inquiry to plan and conduct investigations, predict results, and build explanations.</i>	<i>Demonstrate knowledge of age-appropriate safe laboratory procedures.</i> <i>Design, plan, and conduct investigations that involve logical data collection, accurate measurements, and identifying, controlling, and changing variables.</i>	<i>Demonstrate knowledge of age-appropriate safe laboratory procedures.</i> <i>Design, plan, and conduct investigations that involve the identification of independent (manipulated) and dependent (responding) and controlled variables and determining which is the most logical data to collect.</i>
	<i>C-4.k</i>	<i>C-4.1</i>	<i>C-4.2</i>	<i>C-4.3</i>	<i>C-4.4</i>	<i>C-4.5</i>	<i>C-4.6</i>
C-5: Safely Use Appropriate Senses, Equipment and Tools to Make Observations and Gather Data.	<i>Use simple equipment to make observations and describe objects, events, and organisms; and compare them in terms of number, shape, texture, size and color.</i>	<i>Use simple equipment to make observations and describe similarities and differences in objects, events, and organisms in terms of number, shape, texture, size, weight, color, and motion.</i>	<i>Use simple equipment to make observations and describe similarities and differences in objects, events, and organisms, in terms of number, shape, texture, size, weight, color, and motion.</i>	<i>Use a variety of metric measuring tools such as meter tapes, graduated cylinders and syringes, balances, and thermometers.</i> <i>Identify when to use an appropriate standard metric unit of</i>	<i>Determine which metric measuring tool is the most appropriate to use for data gathering when answering a question or planning an investigation, and use the measuring tool appropriately.</i>	<i>Determine which metric measuring tool is the most appropriate to use for data gathering when answering a question or planning an investigation, and use the measuring tool appropriately.</i>	<i>Select and use appropriate tools and equipment to make accurate observations and SI measurements for the purpose of scientific investigation.</i>

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
		<i>Use appropriate standard and nonstandard measuring tools.</i>	<i>Use appropriate standard and nonstandard measuring tools.</i>	<i>length, liquid capacity, mass, time, and temperature. (See Math D-3.)</i>	<i>Identify when to use an appropriate standard metric unit of length, liquid capacity, mass, time, and temperature. (See Math D-3.)</i>	<i>Identify when to use an appropriate standard metric unit of length, liquid capacity, mass, time, and temperature. (See Math D-3.)</i>	
	<i>C-5.k</i>	<i>C-5.1</i>	<i>C-5.2</i>	<i>C-5.3</i>	<i>C-5.4</i>	<i>C-5.5</i>	<i>C-5.6</i>
C-6: Collecting and Representing Qualitative and Quantitative Data (See Math Standard E.)	<i>Communicate observations with words and pictures.</i> <i>Make a simple bar graph, pictograph, table, or chart with real objects to help tell about observations.</i>	<i>Communicate, compare, and classify observations with words and pictures.</i> <i>Make a simple bar graph, pictograph, table, or chart to help tell about observations.</i>	<i>Communicate, compare, and classify observations and results in a journal, record sheet, response sheet, calendar, or by using media and technology appropriate to purpose and content.</i> <i>Create and interpret bar graphs, pictographs, tables, and charts to display data.</i>	<i>Communicate, compare, and classify observations and results in a journal, record sheet, response sheet, calendar, or by using media and technology appropriate to purpose and content.</i> <i>Create and interpret bar graphs, pictographs, tables, and charts to display data.</i>	<i>Collect, compare, and organize observations and results in a journal, record sheet, response sheet, calendar, or by using media and technology appropriate to purpose and content.</i> <i>Create and interpret bar graphs, line graphs, tables, and charts to organize and analyze data.</i>	<i>Collect, compare, and organize observations and results in a journal, record sheet, response sheet, calendar, or by using media and technology appropriate to purpose and content.</i> <i>Create and interpret bar graphs, line graphs, tables, and charts to organize and analyze data.</i>	<i>Collect and organize qualitative and quantitative data in a journal, lab report, record sheet, or by using media and technology appropriate to purpose and content.</i> <i>Create and interpret appropriate types of graphs (bar graphs, line graphs, pie graphs).</i>
	<i>C-6.k</i>	<i>C-6.1</i>	<i>C-6.2</i>	<i>C-6.3</i>	<i>C-6.4</i>	<i>C-6.5</i>	<i>C-6.6</i>

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
C-7: Summarizing, Synthesizing, Inferring, and Building Explanations	<i>Explain observations and describe what is displayed on a bar graph, table, or chart. (See Math Standard E-2.k.)</i>	<i>Compare observations with previously studied evidence, models or explanations. Interpret and describe data from a bar graph, table, or chart. (See Math Standard E.)</i>	<i>Compare observations with previously studied evidence, models, or explanations. Use patterns, evidence, and observations to build explanations and ask new questions. <i>Interpret bar graphs, pictographs, tables, and charts.</i></i>	<i>Use patterns, evidence, and observations to build explanations, relate them to the scientific concepts being learned, and ask new questions. <i>Interpret bar graphs, pictographs, tables and charts.</i></i>	<i>Analyze, interpret, and summarize data to determine patterns and representative values, and the data's usefulness for building explanations and asking new questions. <i>Compare results and explanations to known science concepts, models, or theories. <i>Interpret bar graphs, line graphs, tables, and charts.</i></i></i>	<i>Analyze, interpret, and summarize data to determine patterns and representative values, cause and effect, and the data's usefulness for building explanations and asking new questions. <i>Compare results and explanations to known science concepts, models, or theories. <i>Interpret bar graphs, line graphs, tables, and charts to look for errors and make predictions.</i></i></i>	<i>Analyze and interpret qualitative and quantitative data for experimental errors; and use them to build explanations, develop models, and raise further questions. <i>Use the explanations and models found in science to develop likely explanations for the results of the investigation.</i></i>
	C-7.k	C-7.1	C-7.2	C-7.3	C-7.4	C-7.5	C-7.6
C-8: Communicating Results	<i>Complete appropriate lab report or response sheet. <i>Communicate observations verbally, by drawing, or through simple</i></i>	<i>Report the results of scientific investigations by using precise vocabulary to complete an appropriate lab report, journal, or response</i>	<i>Report the results of scientific investigations by using precise vocabulary to complete an appropriate lab report, journal, or response sheet</i>	<i>Report the results of scientific investigations by using precise vocabulary to complete an appropriate lab report, journal, or response sheet</i>	<i>Report the results of scientific investigations by using precise vocabulary to complete an appropriate lab report, journal, or response sheet</i>	<i>Report the results of scientific investigations by using precise vocabulary to complete an appropriate lab report, journal, or response sheet</i>	<i>Complete a lab report or journal. <i>Share, defend, and revise results, explanations, and procedures using media and technology</i></i>

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
	<i>writing.</i>	<i>sheet.</i>	<i>or by using media and technology appropriate to purpose and content.</i>	<i>or by using media and technology appropriate to purpose and content.</i>	<i>or by using media and technology appropriate to purpose and content.</i> <i>Explain the validity of the experimental design and results, and revise methods and explanations.</i>	<i>or by using media and technology appropriate to purpose and content.</i> <i>Receive critical response from peers, defend the validity of the experimental design and results, and revise methods and explanations.</i>	<i>appropriate to purpose and content.</i>
	<i>C-8.k</i>	<i>C-8.1</i>	<i>C-8.2</i>	<i>C-8.3</i>	<i>C-8.4</i>	<i>C-8.5</i>	<i>C-8.6</i>
STANDARD D: PHYSICAL SCIENCE —STUDENTS WILL DEMONSTRATE AN UNDERSTANDING OF THE PHYSICAL AND CHEMICAL PROPERTIES OF MATTER, THE FORMS AND PROPERTIES OF ENERGY, AND THE WAYS IN WHICH MATTER AND ENERGY INTERACT.							
D-1: Properties of Matter	<i>Objects and materials have many observable and measurable properties such as color, size, shape, texture, weight, etc.</i> <i>Objects and materials can be sorted and ordered in terms of their properties.</i>	<i>Objects and materials have many observable and measurable properties such as color, size, shape, weight, texture, hardness, flexibility, composition, etc.</i> <i>Objects and materials can be sorted and ordered in terms of their properties.</i>	<i>Objects and materials have many observable and measurable properties such as color, size, shape, weight, texture, hardness, flexibility, reactivity with other materials, etc.</i> <i>Objects and materials can be sorted and ordered in terms of their properties.</i>	<i>Objects and materials have many observable and measurable properties such as color, size, shape, mass, weight, texture, hardness, flexibility, reactivity with other materials, etc.</i> <i>Objects and materials can be sorted and ordered in terms of their properties.</i>	<i>Objects and materials have many observable and measurable properties such as color, size, shape, mass, weight, texture, hardness, flexibility, reactivity with other materials, etc.</i> <i>Objects and materials can be sorted and ordered in terms of their properties.</i>	<i>Objects and materials have many observable and measurable properties such as color, size, shape, mass, weight, texture, hardness, flexibility, reactivity with other materials, etc.</i> <i>Objects and materials can be sorted and ordered in terms of their properties.</i>	

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
			Solids, liquids, and gases have different properties.	Solids, liquids, and gases have different properties.	Solids, liquids, and gases have different properties.	<i>Solids, liquids, and gases have different properties.</i>	
	D-1.k	<i>D-1.1</i>	<i>D-1.2</i>	<i>D-1.3</i>	<i>D-1.4</i>	<i>D-1.5</i>	
D-2: Structure of Matter	Most objects and living things are made of parts and the parts are made of one or more materials.	Most objects and living things are made of parts and the parts are made of one or more materials which scientists refer to as matter.	All things are made of matter, which can exist as solids, liquids, or gases and some materials are mixtures of different types of matter. Air is a gas that surrounds us and takes up space. Living things are made of matter and have properties.	All things are made of matter, which can exist as solids, liquids, or gases and some materials are mixtures of different types of matter. Air is a gas that surrounds us and takes up space. <i>Living things are made of matter and have properties.</i>	<i>All things are made of matter, which can exist as solids, liquids, or gases and some materials are mixtures of different types of matter.</i> Air is a gas that surrounds us and takes up space. Materials may be composed of parts that are too small to be seen without magnification.	<i>All things are made of matter, which can exist as solids, liquids, or gases and some materials are mixtures of different types of matter.</i> Air is a gas that surrounds us and takes up space. <i>Living things are made of matter and have properties.</i> <i>Materials may be composed of parts that are too small to be seen without magnification.</i>	
	D-2.k	<i>D-2.1</i>	<i>D-2.2</i>	<i>D-2.3</i>	<i>D-2.4</i>	<i>D-2.5</i>	
D-3: Physical, Chemical and Nuclear Changes in Matter	Things can be done to materials to change some of their properties, but not all materials respond	Things can be done to materials to change some of their properties, but not all materials respond	<i>Things can be done to materials to change some of their properties, but not all materials re-</i>	Heating and cooling cause changes in the properties of materials and may cause the material	<i>Heating and cooling cause changes in the properties of materials and may cause the</i>	<i>Heating and cooling cause changes in the properties of materials and may cause the</i>	

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
	<p>the same way to what is done to them.</p> <p>Objects can be broken into smaller pieces, which changes the appearance of the material but does not change what it is made of.</p> <p>D-3.k</p>	<p>the same way to what is done to them.</p> <p>D-3.1</p>	<p><i>spend the same way to what is done to them.</i></p> <p>Objects can be broken into smaller pieces, which changes the appearance of the material but does not change what it is made of.</p> <p><i>Water can be changed from one state to another, but when this occurs the amount of water is the same as before the change.</i></p> <p>D-3.2</p>	<p>to change state.</p> <p>Many kinds of changes occur faster under hotter conditions.</p> <p>When a new material is made by combining two or more materials, it has properties that are different from the original materials.</p> <p>D-3.3</p>	<p><i>material to change state.</i></p> <p><i>Many kinds of changes occur faster under hotter conditions.</i></p> <p>D-3.4</p>	<p><i>material to change state.</i></p> <p><i>When a solid dissolves in a liquid, a physical change has occurred.</i></p> <p><i>Many kinds of changes occur faster under hotter conditions.</i></p> <p>When a new material is made by combining two or more materials, it has properties that are different from the original materials.</p> <p>Chemical reactions occur all around us.</p> <p>D-3.5</p>	
D-4: Position and Motion of Objects	<p>The position of an object can be described by locating it relative to another object or the background.</p>	<p><i>The position of an object can be described by locating it relative to another object or the background.</i></p> <p><i>Motion can be described (e.g.,</i></p>	<p><i>The position of an object or organism can be described by locating it relative to another object or the background.</i></p>	<p><i>The position of an object or organism can be described by locating it relative to another object or the background.</i></p>	<p><i>The motion of an object can be described by its position, direction of motion, and speed. That motion can be measured and represented on a graph.</i></p>	<p><i>The motion of an object can be described by its position, direction of motion, and speed. That motion can be measured and represented on a graph.</i></p>	

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
		<p><i>straight, zigzag, back and forth, round and round, fast and slow) by tracing and measuring an object's position over time.</i></p> <p><i>Pushing or pulling can change the position and motion of objects.</i></p>			<p><i>Changes in speed or direction of motion are caused by forces and the greater the force is, the greater the change in motion will be.</i></p> <p><i>The more massive an object is the less effect a given force will have.</i></p>		
	<i>D-4.k</i>	<i>D-4.1</i>	<i>D-4.2</i>	<i>D-4.3</i>	<i>D-4.4</i>	<i>D-4.5</i>	
D-5: Forces of Nature	Things near the earth fall to the ground, unless something holds them up.	<p><i>Things near the earth fall to the ground, unless something holds them up.</i></p> <p><i>Magnets attract and repel each other and certain kinds of other materials.</i></p> <p><i>Magnets can be used to make some things move without being touched.</i></p>		The earth's gravity pulls any object toward it without touching it.	The earth's gravity pulls any object toward it without touching it.	The earth's gravity pulls any object toward it without touching it.	
	D-5.k	D-5.1		D-5.3	D-5.4	D-5.5	

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
D-6: Interactions of Energy and Matter	The sun provides the light and heat the earth needs.	<i>The sun provides the light and heat the earth needs.</i>	<i>The sun warms the land, air, and water.</i>	<p><i>Sound is produced by vibrating objects.</i></p> <p>The pitch of sound can be varied by changing the rate of vibration.</p> <p>Heat can be produced in many ways, such as burning, rubbing, or mixing one substance with another.</p>	<p><i>Electricity in circuits can produce light, heat, sound, and magnetic effects.</i></p> <p>Electrical circuits require a complete loop through which an electrical current can pass.</p> <p>Heat can be produced in many ways, such as burning, rubbing, or mixing one substance with another.</p> <p>A change in temperature is a result of addition or subtraction of heat.</p> <p><i>Energy can be stored and released to make an object move.</i></p> <p>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</p>	Heat can be produced in many ways, such as burning, rubbing, or mixing one substance with another.	Living things use energy.

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
	D-6.k	<i>D-6.1</i>	<i>D-6.2</i>	<i>D-6.3</i>	temperature. D-6.4	D-6.5	D-6.6
D-7: Conservation of Energy							The total energy of the universe is constant. Energy can be transferred in many ways, but it can never be destroyed. D-7.6
STANDARD E: EARTH SCIENCE—STUDENTS WILL DEMONSTRATE AN UNDERSTANDING OF THE STRUCTURE AND SYSTEMS OF EARTH AND THE UNIVERSE AND OF THEIR INTERACTIONS.							
E-1: Properties and Structures of the Earth and its Materials	Earth materials are solid rocks and soils, water, and the gases of the atmosphere.	Earth materials are solid rocks and soils, water, and the gases of the atmosphere.	<i>Earth materials are solid rocks and soils, water, and the gases of the atmosphere.</i> <i>Chunks of rocks come in many sizes and shapes, from boulders to grains of sand and even smaller.</i> <i>Soil is made partly from weathered rock, partly from plant remains, and also contains many living organisms.</i> <i>Different types of earth materials</i>	Water is a very important earth material that can be liquid, solid, or gas and can be made to change from one form to another.	<i>Earth materials are solid rocks and soils, water, and the gases of the atmosphere.</i> <i>Rock is composed of different combinations of minerals. Smaller rocks come from the breakage and weathering of bedrock and larger rocks.</i> <i>Different types of earth materials have different properties (e.g., color, texture, capacity to retain water, ability to</i>	<i>Water is a very important earth material that can be liquid, solid, or gas and can be made to change from one form to another.</i> Air surrounds us and can move and cause changes. <i>A landform is a shape of the earth's surface.</i>	<i>The solid earth is layered with a lithosphere; hot, convecting mantle; and dense, metallic core.</i> <i>Lithospheric plates constantly move at rates of centimeters per year in response to movements in the mantle.</i> <i>Major geological events, such as earthquakes, volcanic eruptions, and mountain building, result from lithospheric plate motions.</i>

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
			<p><i>have different properties (e.g., color, texture, capacity to retain water, ability to support plant growth), which make them useful in different ways (e.g., building materials, sources of fuel, growing plants).</i></p> <p>Water is a very important earth material that can be liquid or solid and can be made to change from one form to another.</p> <p><i>Air surrounds us and can move and cause changes.</i></p> <p><i>Weather happens in the air that surrounds the earth.</i></p>		<p><i>support plant growth), which make them useful in different ways (e.g., building materials, sources of fuel, growing plants.)</i></p> <p><i>Water is a very important earth material that can be liquid, solid, or gas and can be made to change from one form to another.</i></p> <p>Air surrounds us and can move and cause changes.</p> <p>Rocks and minerals can be organized based on properties, such as hardness, color, texture, and appearance.</p> <p>Some earth materials absorb more water than other earth materials do.</p>		<p><i>Landforms are the result of a combination of constructive forces (crystal deformation, volcanic eruption, deposition of sediment) and destructive forces (weathering, erosion).</i></p> <p><i>Soil consists of weathered rocks and decomposed organic material from dead plants, animals, and bacteria. Soils are often found in layers.</i></p> <p>Water is a solvent. As it passes through the water cycle it dissolves minerals and gases and carries them to the oceans.</p> <p><i>Living organisms have played many roles in the earth system, including affecting the</i></p>

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
					Water flows more easily through some earth materials than through others.		<i>composition of the atmosphere, producing some types of rocks, and contributing to the weathering of rocks.</i>
	E-1.k	E-1.1	E-1.2	E-1.3	E-1.4	E-1.5	E-1.6
E-2: History and Changes of the Earth			The surface of the earth changes. Some changes are due to slow processes, such as erosions and weathering.	Fossils provide evidence about the plants and animals that lived long ago and the nature of the environment at that time.	<i>The surface of the earth changes. Some changes are due to slow processes, such as erosions and weathering,</i> and some changes are due to rapid processes, such as landslides, volcanic eruptions, and earthquakes. Waves, wind, water, and ice shape and re-shape the earth's land surface by eroding rock and soil in some areas and depositing them in other areas.	<i>The surface of the earth changes. Some changes are due to slow processes, such as erosions and weathering, and some changes are due to rapid processes, such as landslides, volcanic eruptions, and earthquakes.</i> <i>Waves, wind, water, and ice shape and re-shape the earth's land surface by eroding rock and soil in some areas and depositing them in other areas.</i> Fossils provide evidence about the plants and	<i>The earth processes we see today, including erosion, movement of lithospheric plates, and changes in atmospheric composition, are similar to those that occurred in the past.</i> <i>Climates have sometimes changed abruptly in the past as a result of changes in the earth's crust.</i> <i>Thousands of layers of sedimentary rock confirm the long history of the changing surface of the earth and the changing life</i>

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
						animals that lived long ago and the nature of the environment at that time.	<p><i>forms whose remains (fossils) Are found in successive layers. The youngest layers are not always found on top.</i></p> <p><i>Human activities have changed the earth’s land, oceans, and atmosphere. Some of these changes have decreased the capacity of the environment to support some life forms.</i></p>
			E-2.2	E-2.3	E-2.4	E-2.5	E-2.6
E-3: Cycles in the Earth System	<p>Some events in nature have a repeating pattern.</p> <p>Seasonal changes occur in living things in the schoolyard.</p>	Some events in nature have a repeating pattern.	<p>The appearance of the moon changes in a pattern that can be observed, compared, and predicted. The pattern repeats approximately once a month.</p> <p>The objects in the sky—the sun, moon, stars and clouds—all have locations and movements that</p>	<p>The sun, moon, and stars all appear to move slowly across the sky.</p> <p>The patterns of stars in the sky stay the same, although they appear to move across the sky nightly. Different stars can be seen in different seasons.</p>	<p>The sun, moon, and stars all appear to move slowly across the sky.</p> <p>Planets change their positions against the background of stars.</p> <p>Evaporation and condensation contribute to the movement of water through the</p>		<p><i>Some changes in the solid earth can be described as the “rock cycle.”</i></p> <p>Water circulates through the crust, oceans, and atmosphere in what is known as the “water cycle.”</p>

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
			<p>can be observed and described.</p> <p>Water can be a liquid or a solid and can change from one form to another.</p> <p><i>Weather changes from day to day and over the seasons. Weather can be described by measurable quantities, such as temperature, wind direction and speed, and precipitation.</i></p> <p><i>Seasonal changes occur in living things in the schoolyard.</i></p>	<p>Evaporation and condensation contribute to the movement of water through the water cycle.</p> <p>Clouds and fog are made of tiny droplets of water.</p>	<p>water cycle. Clouds and fog are made of tiny droplets of water.</p>		
	E-3.k	E-3.1	E-3.2	E-3.3	E-3.4		<i>E-3.6</i>
E-4: The Earth, Our Solar System, and Space	The sun provides the light and heat the earth needs.	<i>The sun provides the light and heat the earth needs.</i>	<p><i>The objects in the sky—the sun, moon, stars and clouds—all have properties which can be observed and described.</i></p> <p><i>The sun provides the light and heat the earth</i></p>	<p>The number of stars that can be seen through telescopes is dramatically greater than can be seen by the unaided eye.</p> <p>Stars are like the sun, some being</p>	<p><i>The earth is approximately spherical in shape. The rotation of the earth on its axis every 24 hours produces the night and day cycle.</i></p> <p>The earth is one</p>	<p>Things on or near the earth are pulled toward it by the earth's gravity.</p> <p>The earth is approximately spherical in shape. The rotation of the earth</p>	

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
			<p><i>needs.</i></p> <p><i>The sun can be seen only in the daytime, but the moon can be seen sometimes at night and sometimes during the day.</i></p>	<p>smaller and some larger, but so far away that they look like points of light.</p> <p>The sun appears to move across the sky in the same way every day, but its path changes slowly over the seasons.</p>	<p>of several planets that orbit the sun, and the moon orbits around the earth.</p>	<p>on its axis every 24 hours produces the night and day cycle.</p> <p>The number of stars that can be seen through telescopes is dramatically greater than can be seen by the unaided eye.</p> <p>The earth is one of several planets that orbit the sun, and the moon orbits around the earth.</p> <p>Stars are like the sun, some being smaller and some larger, but so far away that they look like points of light.</p> <p>The sun appears to move across the sky in the same way every day, but its path changes slowly over the seasons.</p>	
	E-4.k	E-4.1	E-4.2	E-4.3	E-4.4	E-4.5	

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
STANDARD F: LIFE AND ENVIRONMENTAL SCIENCE —STUDENTS WILL DEMONSTRATE AN UNDERSTANDING OF THE CHARACTERISTICS AND STRUCTURES OF LIVING THINGS, THE PROCESSES OF LIFE, AND HOW LIVING THINGS INTERACT WITH ONE ANOTHER AND THEIR ENVIRONMENT.							
F-1: Characteristics, Structure, and Function in Living Things	<p>Each kind of living thing has unique structures and behaviors, but different kinds of living things can have similar structures and behaviors.</p> <p>Living things have structures and behaviors that help them live in different environments.</p> <p><i>Living things have basic needs: food, water, air, light, and an appropriate environment in which to live.</i></p> <p>The behaviors of living things are influenced by internal and external cues.</p>	<p><i>Each kind of living thing has unique structures and behaviors, but different kinds of living things can have similar structures and behaviors.</i></p> <p><i>Living things have structures and behaviors that help them live in different environments.</i></p> <p><i>Living things have basic needs: food, water, air, light, and an appropriate environment in which to live.</i></p> <p><i>The behaviors of living things are influenced by internal and external cues.</i></p>	<p><i>Each kind of living thing has unique structures and behaviors, but different kinds of living things can have similar structures and behaviors.</i></p> <p><i>Living things have structures and behaviors that help them live in different environments.</i></p> <p><i>Living things have basic needs: food, water, air, light, and an appropriate environment in which to live.</i></p> <p><i>The behaviors of living things are influenced by internal and external cues.</i></p>	<p><i>Each kind of living thing has unique structures and behaviors, but different kinds of living things can have similar structures and behaviors.</i></p> <p><i>Living things have structures and behaviors that help them live in different environments.</i></p> <p><i>Living things have basic needs: food, water, air, light, and an appropriate environment in which to live.</i></p> <p><i>The behaviors of living things are influenced by internal and external cues.</i></p> <p>Living things can be sorted into groups using a variety of</p>		<p><i>Each kind of living thing has unique structures and behaviors, but different kinds of living things can have similar structures and behaviors.</i></p> <p><i>Living things have structures and behaviors that help them live in different environments.</i></p> <p><i>Living things have basic needs: food, water, air, light, and an appropriate environment in which to live.</i></p> <p><i>The behaviors of living things are influenced by internal and external cues.</i></p> <p>Living things can be sorted into groups using a variety of</p>	<p><i>Living systems at all levels demonstrate the complementary nature of structure and function.</i></p> <p><i>Organisms have a variety of body plans and internal structures to accomplish the functions required for life.</i></p> <p>All organisms are composed of cells. Many organisms are single cells; others are multicellular.</p> <p>Important levels of organization for structure and function include cells, organs, tissues, organ systems, whole organisms, and ecosystems.</p> <p><i>The functions that are required</i></p>

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
				characteristics.		characteristics.	<p><i>for life include obtaining and using resources, growing, reproducing, and maintaining stable internal conditions by sensing and responding to a constantly changing external environment. In classifying organisms, biologists consider details of internal and external structures and processes and the evidence of common ancestry to be more important than behavior or general appearance.</i></p> <p><i>Disease is a breakdown in structures or functions of an organism and can be caused by intrinsic failure of a system or infection by</i></p>

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
	F-1.k	F-1.1	F-1.2	F-1.3		F-1.5	<i>other organisms.</i>
F-2: Life Cycles and Heredity of Living Things	<p>Living things have life cycles that include being born, developing into adults, reproducing, and dying.</p> <p>Living things are very much, but not exactly, like their parents.</p> <p>There is variation among individuals of one kind.</p>	<p>Living things have life cycles that include being born, developing into adults, reproducing, and dying.</p> <p>Living things are very much, but not exactly, like their parents.</p> <p>There is variation among individuals of one kind.</p> <p>Many characteristics of an organism are inherited from the parents of the organism, but other characteristics result from interactions with the environment.</p>	<p><i>Living things have life cycles that include being born, developing into adults, reproducing, and dying.</i></p> <p><i>Living things are very much, but not exactly, like their parents.</i></p> <p>There is variation among individuals of one kind.</p> <p>Many characteristics of an organism are inherited from the parents of the organism, but other characteristics result from interactions with the environment.</p>	<p><i>Living things have life cycles that include being born, developing into adults, reproducing, and dying.</i></p> <p>Many characteristics of an organism are inherited from the parents of the organism, but other characteristics result from interactions with the environment.</p> <p>There is variation among individuals of one kind, and sometimes the differences give individuals an advantage in surviving and reproducing.</p>			<p><i>F-1.6</i></p> <p><i>Reproduction is essential to the continuation of every species.</i></p> <p>Every organism requires a set of instructions for specifying its traits. Heredity is the passage of these instructions from one generation to another.</p> <p>Heredity information is contained in genes, located in the chromosomes of each cell. Each gene carries a single unit of information. An inherited trait of an individual can be determined by one or by many genes, and a single gene can influence more than one trait.</p> <p>Some traits are inherited, and</p>

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
							<p>others result from interactions with the environment.</p> <p>Some organisms reproduce asexually, which means all the genes come from a single parent.</p> <p>In sexual reproduction, a single specialized cell from a female merges with a specialized cell from a male. As the fertilized egg, carrying genetic information from each parent, multiplies to form the complete organism, the same genetic information is copied in each cell.</p>
	F-2.k	F-2.1	F-2.2	F-2.3			F-2.6
F-3: Organisms, Populations, and Ecosystems	Living things are found almost everywhere in the world, and different environments support the life of different types of organisms.	<i>Living things are found almost everywhere in the world, and different environments support the life of different types of organisms.</i>	<i>Living things are found almost everywhere in the world, and different environments support the life of different types of organisms.</i>	<i>Living things are found almost everywhere in the world, and different environments support the life of different types of organisms.</i>		<i>Living things are found almost everywhere in the world, and different environments support the life of different types of organisms.</i>	<i>Millions of species of animals, plants, and microorganisms are alive today.</i>

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
	The behavior of living things is influenced by conditions in the environment.	The behavior of living things is influenced by conditions in the environment.	<i>The behavior of living things is influenced by conditions in the environment.</i>	<i>The behavior of living things is influenced by conditions in the environment.</i> <i>An organism's behavior can help it survive in a changing environment.</i> <i>Organisms interact with one another in various ways.</i> <i>All organisms (including humans) cause changes in the environment.</i>		<i>The behavior of living things is influenced by conditions in the environment.</i> <i>An organism's behavior can help it survive in a changing environment.</i> <i>Organisms interact with one another in various ways.</i> <i>When the environment changes, some living things survive and others die or move to new locations.</i> All organisms (including humans) cause changes in the environment.	
	F-3.k	F-3.1	F-3.2	F-3.3		F-3.5	F-3.6
F-4: Matter and Energy in Living Systems	The sun provides the light and heat that all living things need.	The sun provides the light and heat that all living things need.	<i>All animals depend on plants. Some animals eat plants for food.</i>	<i>All animals depend on plants. Some animals eat plants for food.</i>	All animals depend on plants. Some animals eat plants for food. Other animals eat	All animals depend on plants. Some animals eat plants for food. Other animals eat	

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
	All animals depend on plants. Some animals eat plants for food. Other animals eat animals that eat the plants. F-4.k	All animals depend on plants. Some animals eat plants for food. Other animals eat animals that eat the plants. F-4.1	<i>Other animals eat animals that eat the plants.</i> <i>F-4.2</i>	<i>Other animals eat animals that eat the plants.</i> Over the whole earth, organisms are growing, dying and decaying and new organisms are being produced. Some source of energy is needed for organisms to live and grow. <i>F-4.3</i>	animals that eat the plants. Over the whole earth, organisms are growing, dying and decaying and new organisms are being produced. Some source of energy is needed for organisms to live and grow. F-4.4	animals that eat the plants. Over the whole earth, organisms are growing, dying and decaying and new organisms are being produced. Some source of energy is needed for organisms to live and grow. F-4.5	
STANDARD G: SCIENCE APPLICATIONS—STUDENTS WILL DEMONSTRATE AN UNDERSTANDING OF THE RELATIONSHIP BETWEEN SCIENCE AND TECHNOLOGY AND THE WAYS IN WHICH THAT RELATIONSHIP INFLUENCES HUMAN ACTIVITIES.							
G-1: The Process of Technological Design	Explain a simple problem; propose a product or design to solve the problem; implement the proposed solution; evaluate the product or design; and communicate the problem, design, and solution. G-1.k	Explain a simple problem; propose a product or design to solve the problem; implement the proposed solution; evaluate the product or design; and communicate the problem, design, and solution. G-1.1	Explain a simple problem; propose a product or design to solve the problem; implement the proposed solution; evaluate the product or design; and communicate the problem, design, and solution. G-1.2	<i>Explain a simple problem; propose a product or design to solve the problem; implement the proposed solution; evaluate the product or design; and communicate the problem, design, and solution.</i> <i>G-1.3</i>	<i>Explain a simple problem; propose a product or design to solve the problem; implement the proposed solution; evaluate the product or design; and communicate the problem, design, and solution.</i> <i>G-1.4</i>	<i>Explain a simple problem; propose a product or design to solve the problem; implement the proposed solution; evaluate the product or design; and communicate the problem, design, and solution.</i> <i>G-1.5</i>	<i>Identify appropriate problems for technological design, design a solution or product, implement a proposed design, evaluate completed technological designs or products, and communicate the process of technological design.</i> <i>G-1.6</i>

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
G-2: Abilities to Distinguish Between Natural Objects and Objects Made by Humans	<i>Some objects occur in nature; others have been designed and made by people to solve human problems and enhance the quality of life.</i> G-2.k	<i>Some objects occur in nature; others have been designed and made by people to solve human problems and enhance the quality of life.</i> G-2.1	<i>Some objects occur in nature; others have been designed and made by people to solve human problems and enhance the quality of life.</i> G-2.2	<i>Some objects occur in nature; others have been designed and made by people to solve human problems and enhance the quality of life.</i> G-2.3	<i>Some objects occur in nature; others have been designed and made by people to solve human problems and enhance the quality of life.</i> G-2.4	<i>Some objects occur in nature; others have been designed and made by people to solve human problems and enhance the quality of life.</i> G-2.5	Propose a design (or redesign) of an applied science model or a machine that will have an impact in the community or elsewhere in the world. G-2.6
G-3: Understanding About Science and Technology	<i>People have always invented tools and ways of doing things to solve problems.</i> <i>Tools are used to do things better or more easily and to do some things that could not otherwise be done at all. Tools are used to observe, measure, and make things.</i>	<i>People have always invented tools and ways of doing things to solve problems.</i> <i>Tools are used to do things better or more easily and to do some things that could not otherwise be done at all. Tools are used to observe, measure, and make things.</i>	<i>People have always invented tools and ways of doing things to solve problems.</i> <i>Tools are used to do things better or more easily and to do some things that could not otherwise be done at all. Tools are used to observe, measure, and make things.</i>	<i>People have always invented tools and ways of doing things to solve problems, but most tools of today are modifications of tools from the past.</i> <i>Tools are used to do things better or more easily and to do some things that could not otherwise be done at all. Tools are used to observe, measure, and make things.</i>	<i>People have always invented tools and ways of doing things to solve problems, but most tools of today are modifications of tools from the past.</i> <i>Tools are used to do things better or more easily and to do some things that could not otherwise be done at all. Tools are used to observe, measure, and make things.</i> <i>Scientists and engineers often work together in teams to solve problems and develop new</i>	<i>People have always invented tools and ways of doing things to solve problems, but most tools of today are modifications of tools from the past.</i> <i>Tools are used to do things better or more easily and to do some things that could not otherwise be done at all. Tools are used to observe, measure, and make things.</i> <i>Scientists and engineers often work together in teams to solve problems and develop new</i>	<i>Technology impacts trends in science and scientific research.</i> <i>Science and technology have both positive and negative impacts on our culture.</i> Scientists rely on technology to enhance the gathering and manipulation of data.

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
	<i>G-3.k</i>	<i>G-3.1</i>	<i>G-3.2</i>	<i>G-3.3</i>	<i>technology.</i> <i>G-3.4</i>	<i>technology.</i> <i>G-3.5</i>	G-3.6
STANDARD H: SCIENCE IN SOCIAL AND PERSONAL PERSPECTIVES—STUDENTS WILL USE SCIENCE INFORMATION AND SKILLS TO MAKE INFORMED DECISIONS ABOUT THEMSELVES, THEIR COMMUNITY, AND THE WORLD IN WHICH THEY LIVE.							
H-1: Personal and Community Health							<i>Natural environments may contain substances (for example, radon and lead) that are harmful to human beings. Maintaining environmental health involves establishing or monitoring quality standards related to use of soil, water, and air.</i> H-1.6
H-2: Human Population Growth	Human populations are groups of people living in a particular location. H-2.k	Human populations are groups of people living in a particular location. H-2.1	Human populations are groups of people living in a particular location. H-2.2	Human populations are groups of people living in a particular location. The size of a population can increase or decrease. H-2.3	Human populations are groups of people living in a particular location. The size of a population can increase or decrease. H-2.4	Human populations are groups of people living in a particular location. The size of a population can increase or decrease. H-2.5	When an area becomes over-populated, the environment will become degraded due to the increased use of resources. H-2.6

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
H-3: Types of Resources	<p>Resources are things we get from the living and nonliving environment to meet the needs and wants of a population.</p> <p>Some resources are basic materials, such as air, water, and soil; some are produced from basic resources, such as food, fuel, and building materials.</p> <p>The supply of many resources is limited, but their availability can be extended through recycling and decreased use.</p> <p>H-3.k</p>	<p>Resources are things we get from the living and nonliving environment to meet the needs and wants of a population.</p> <p>Some resources are basic materials, such as air, water, and soil; some are produced from basic resources, such as food, fuel, and building materials.</p> <p>The supply of many resources is limited, but their availability can be extended through recycling and decreased use.</p> <p>H-3.1</p>	<p><i>Resources are things we get from the living and nonliving environment to meet the needs and wants of a population.</i></p> <p><i>Some resources are basic materials, such as air, water, and soil; some are produced from basic resources, such as food, fuel, and building materials.</i></p> <p>The supply of many resources is limited, but their availability can be extended through recycling and decreased use.</p> <p>H-3.2</p>	<p><i>Resources are things we get from the living and nonliving environment to meet the needs and wants of a population.</i></p> <p><i>Some resources are basic materials, such as air, water, and soil; some are produced from basic resources, such as food, fuel, and building materials.</i></p> <p>The supply of many resources is limited, but their availability can be extended through recycling and decreased use.</p> <p>H-3.3</p>	<p><i>Resources are things we get from the living and nonliving environment to meet the needs and wants of a population.</i></p> <p><i>Some resources are basic materials, such as air, water, and soil; some are produced from basic resources, such as food, fuel and building materials.</i></p> <p>The supply of many resources is limited, but their availability can be extended through recycling and decreased use.</p> <p>H-3.4</p>	<p><i>Resources are things we get from the living and nonliving environment to meet the needs and wants of a population.</i></p> <p><i>Some resources are basic materials, such as air, water, and soil; some are produced from basic resources, such as food, fuel and building materials.</i></p> <p><i>The supply of many resources is limited, but their availability can be extended through recycling and decreased use.</i></p> <p>H-3.5</p>	<p><i>Humans have used renewable and nonrenewable natural resources through history.</i></p> <p><i>The global environment is affected by national policies and practices relating to energy use, waste disposal, ecological management, manufacturing, and population.</i></p> <p>H-3.6</p>
H-4: Quality of and Changes in Environments	<p>Environments are the space, conditions, and factors that affect an individual's and a population's ability to survive and their quality of life.</p>	<p>Environments are the space, conditions, and factors that affect an individual's and a population's ability to survive and their quality of life.</p>	<p>Environments are the space, conditions, and factors that affect an individual's and a population's ability to survive and their quality of life.</p>	<p>Environments are the space, conditions, and factors that affect an individual's and a population's ability to survive and their quality of life.</p>	<p>Environments are the space, conditions, and factors that affect an individual's and a population's ability to survive and their quality of life.</p>	<p><i>Environments are the space, conditions, and factors that affect an individual's and a population's ability to survive and their quality of life.</i></p>	<p><i>Internal and external processes of the earth system cause natural hazards (earthquakes, landslides, wildfires, volcanic eruptions, floods,</i></p>

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
	Changes in environments can be natural or influenced by humans. Some changes are good; and some, like pollution, can influence the health, survival, or activities of living things, including humans.	Changes in environments can be natural or influenced by humans. Some changes are good; and some, like pollution, can influence the health, survival, or activities of living things, including humans.	Changes in environments can be natural or influenced by humans. Some changes are good; and some, like pollution, can influence the health, survival, or activities of living things, including humans.	Changes in environments can be natural or influenced by humans. Some changes are good; and some, like pollution, can influence the health, survival, or activities of living things, including humans. Some environmental changes occur slowly, and others occur rapidly.	Changes in environments can be natural or influenced by humans. Some changes are good; and some, like pollution, can influence the health, survival, or activities of living things, including humans. Some environmental changes occur slowly, and others occur rapidly.	<i>of life.</i> <i>Changes in environments can be natural or influenced by humans. Some changes are good; and some, like pollution, can influence the health, survival, or activities of living things, including humans.</i> <i>Some environmental changes occur slowly, and others occur rapidly.</i>	<i>storms, asteroid impact) that change or destroy human and wildlife habitats, damage property, and harm or kill living organisms.</i> <i>Human activities (resource acquisition, urban growth, land-use decisions, and waste disposal) can induce hazards and can accelerate many natural changes.</i>
	H-4.k	H-4.1	H-4.2	H-4.3	H-4.4	<i>H-4.5</i>	<i>H-4.6</i>
H-5: Science and Technology in Society	Science and technology have improved our food quality and quantity, transportation, health, sanitation, and communication; but these benefits are not equally available to all people in the world.	Science and technology have improved our food quality and quantity, transportation, health, sanitation, and communication; but these benefits are not equally available to all people in the world.	Science and technology have improved our food quality and quantity, transportation, health, sanitation, and communication; but these benefits are not equally available to all people in the world.	<i>Science and technology have improved our food quality and quantity, transportation, health, sanitation, and communication; but these benefits are not equally available to all people in the world.</i>	<i>Science and technology have improved our food quality and quantity, transportation, health, sanitation, and communication; but these benefits are not equally available to all people in the world.</i>	<i>Science and technology have improved our food quality and quantity, transportation, health, sanitation, and communication; but these benefits are not equally available to all people in the world.</i>	<i>Societal challenges often inspire questions for scientific research.</i> <i>Technology influences society through its products and processes.</i> <i>Social needs, attitudes and</i>

	KDG	GRADE 1	GRADE 2	GRADE 3	GRADE 4	GRADE 5	GRADE 6
	H-5.k	H-5.1	H-5.2	<i>H-5.3</i>	<i>H-5.4</i>	<i>H-5.5</i>	<i>values influence the direction of technological development.</i> <i>H-5.6</i>