

Weeks 1 – 3	Weeks 4 – 6
<p style="text-align: center;">Unit/Topic Scientific Method/ Inquiry and Measurement Structure and Transformation of Matter- Understanding Matter</p>	<p style="text-align: center;">Unit/Topic Structure and Transformation of Matter- Understanding Matter Motion and Forces- Laws of Motion</p>
<p>SC-08-1.1.1</p> <p>Students will:</p> <ul style="list-style-type: none"> • interpret models/representations of elements; • classify elements based upon patterns in their physical (e.g., density, boiling point, solubility) and chemical (e.g., flammability, reactivity) properties. <p>Models enhance understanding that an element is composed of a single type of atom. Organization/interpretation of data illustrates that when elements are listed according to the number of protons, repeating patterns of physical (e.g., density, boiling point, solubility) and chemical properties (e.g., flammability, reactivity), can be used to identify families of elements with similar properties.</p> <p style="text-align: right;">DOK 2</p> <p><i>SC-08-1.1.2</i></p> <p><i>Students will understand that matter is made of minute particles called atoms, and atoms are composed of even smaller components. The components of an atom have measurable properties such as mass and electrical charge. Each atom has a positively charged nucleus surrounded by negatively charged electrons. The electric force between the nucleus and the electrons holds the atom together.</i></p>	<p>SC-08-1.1.1</p> <p>Students will:</p> <ul style="list-style-type: none"> • interpret models/representations of elements; • classify elements based upon patterns in their physical (e.g., density, boiling point, solubility) and chemical (e.g., flammability, reactivity) properties. <p>Models enhance understanding that an element is composed of a single type of atom. Organization/interpretation of data illustrates that when elements are listed according to the number of protons, repeating patterns of physical (e.g., density, boiling point, solubility) and chemical properties (e.g., flammability, reactivity), can be used to identify families of elements with similar properties.</p> <p style="text-align: right;">DOK 2</p>

SC-08-1.1.3

Students will understand that the atom's nucleus is composed of protons and neutrons that are much more massive than electrons.

SC-08-1.1.4

Students will describe interactions which cause the movement of each element among the solid Earth, oceans, atmosphere and organisms (biogeochemical cycles).

Earth is a system containing essentially a fixed amount of each stable chemical atom or element that can exist in several different reservoirs. The interactions within the earth system cause the movement of each element among reservoirs in the solid Earth, oceans, atmosphere and organisms as part of biogeochemical cycles.

DOK 2

SC-08-1.1.2

Students will understand that matter is made of minute particles called atoms, and atoms are composed of even smaller components. The components of an atom have measurable properties such as mass and electrical charge. Each atom has a positively charged nucleus surrounded by negatively charged electrons. The electric force between the nucleus and the electrons holds the atom together.

SC-08-1.1.3

Students will understand that the atom's nucleus is composed of protons and neutrons that are much more massive than electrons.

SC-08-1.1.4

Students will describe interactions which cause the movement of each element among the solid Earth, oceans, atmosphere and organisms (biogeochemical cycles).

Earth is a system containing essentially a fixed amount of each stable chemical atom or element that can exist in several different reservoirs. The interactions within the earth system cause the movement of each element among reservoirs in the solid Earth, oceans, atmosphere and organisms as part of biogeochemical cycles.

DOK 2

Motion And Forces- Laws of Motion

SC-08-1.2.1

Students will describe and explain the effects of balanced and unbalanced forces on motion as found in real-life phenomena.

Objects change their motion only when a net force is applied. Newton's Laws of Motion are used to describe the effects of forces on the motion of objects.

DOK 3

CURRICULUM			CURRICULUM		
Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Identify	Identify	Identify	Identify	Identify	Identify

<p align="center">Sub-Topics Scientific Method/Inquiry and Measurement</p>	<p align="center">Sub-Topics Structure and Transformation of Matter- Understanding Matter</p>	<p align="center">Sub-Topics Structure and Transformation of Matter- Understanding Matter</p>	<p align="center">Sub-Topics Structure and Transformation of Matter- Understanding Matter & Motion and Forces- Laws of Motion</p>	<p align="center">Sub-Topics Structure and Transformation of Matter- Understanding Matter & Motion and Forces- Laws of Motion</p>	<p align="center">Sub-Topics Structure and Transformation of Matter- Understanding Matter & Motion and Forces- Laws of Motion</p>
<p align="center">I CAN STATEMENTS: Scientific Method/Inquiry and Measurement</p> <p>I can use the scientific method to create an original experiment or test a previous experiment.</p> <p>I can communicate scientific findings through verbal and/or written expression.</p>	<p align="center">I CAN STATEMENTS: Structure and Transformation of Matter- Understanding Matter</p> <p>I can identify the parts of an atom.</p> <p>I can interpret models/representations of elements.</p> <p>I can classify elements based on their physical properties.</p> <p>I can distinguish the differences and similarities between physical/chemical properties of elements.</p> <p>I can classify substances by their reactivity.</p>	<p align="center">I CAN STATEMENTS: Structure and Transformation of Matter- Understanding Matter</p> <p>I can identify the parts of an atom.</p> <p>I can interpret models/representations of elements.</p> <p>I can classify elements based on their physical properties.</p> <p>I can distinguish the differences and similarities between physical/chemical properties of elements.</p> <p>I can classify substances by their reactivity.</p>	<p align="center">I CAN STATEMENTS:</p>	<p align="center">I CAN STATEMENTS:</p>	<p align="center">I CAN STATEMENTS:</p>

<p align="center">Critical Vocabulary Scientific Method/Inquiry and Measurement</p> <p>scientific method variable control data observation, interpret mass volume density weight metric predict infer horizontal/vertical axis hypothesis</p>	<p align="center">Critical Vocabulary Structure and Transformation of Matter- Understanding Matter</p> <p>chemistry matter element atom compound molecule chemical formula pure substance mixture miscible immiscible pressure energy evaporation condensation sublimation chemical property reactivity melting point boiling point density chemical change physical change Atom nucleus proton, neutron electron atomic mass atomic charge</p>	<p align="center">Critical Vocabulary Structure and Transformation of Matter- Understanding Matter</p> <p>Chemistry Matter element atom compound molecule chemical formula pure substance mixture miscible, immiscible pressure energy evaporation condensation sublimation chemical property reactivity melting point boiling point, Density chemical change physical change Atom, nucleus proton neutron electron atomic mass atomic charge</p>	<p align="center">Critical Vocabulary</p>	<p align="center">Critical Vocabulary</p>	<p align="center">Critical Vocabulary</p>
<p align="center">Suggested Strategies/Activities</p> <p>Construct Models Research projects Power Point Presentation</p>	<p align="center">Suggested Strategies/Activities</p> <p>Construct Models Research projects Power Point Presentation</p>	<p align="center">Suggested Strategies/Activities</p> <p>Construct Models Research projects Power Point Presentation</p>	<p align="center">Suggested Strategies/Activities</p> <p>Construct Models Research projects Power Point Presentation</p>	<p align="center">Suggested Strategies/Activities</p> <p>Construct Models Research projects Power Point Presentation</p>	<p align="center">Suggested Strategies/Activities</p> <p>Construct Models Research projects Power Point Presentation</p>

<p>Balanced Assessment: Formative:</p> <p>Clickers Thumbs up Exit slips Quick writes</p> <p>Summative Open response Multiple choice On Demand Design of Authentic Products</p> <p>Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts..)</p>	<p>Balanced Assessment: Formative</p> <p>Clickers Thumbs up Exit slips Quick writes</p> <p>Summative Open response Multiple choice On Demand Design of Authentic Products</p> <p>Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts..)</p>	<p>Balanced Assessment: Formative</p> <p>Clickers Thumbs up Exit slip Quick writes</p> <p>Summative Open response Multiple choice On Demand Design of Authentic Products</p> <p>Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts..)</p>	<p>Balanced Assessment:</p> <p>Formative Clickers Thumbs up Exit slip Quick writes</p> <p>Summative Open response Multiple choice On Demand Design of Authentic Products</p> <p>Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts..)</p>	<p>Balanced Assessment: Formative</p> <p>Clickers Thumbs up Exit slip Quick writes</p> <p>Summative Open response Multiple choice On Demand Design of Authentic Products</p> <p>Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts..)</p>	<p>Balanced Assessment: Formative</p> <p>Clickers Thumbs up Exit slip Quick writes</p> <p>Summative Open response Multiple choice On Demand Design of Authentic Products</p> <p>Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts..)</p>
<p>Resources Needed</p> <p>United Streaming KCCT Coach Book Buckle Down books Web Textbook Brainpop Sciencesaurus www.chen4kids.com</p>	<p>Resources Needed</p> <p>United Streaming KCCT Coach Book Buckle Down books Web Textbook Brainpop Sciencesaurus www.chen4kids.com</p>	<p>Resources Needed</p> <p>United Streaming KCCT Coach Book Buckle Down books Web Textbook Brainpop Sciencesaurus www.chen4kids.com</p>	<p>Resources Needed</p>	<p>Resources Needed</p>	<p>Resources Needed</p>

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Weeks 7-9	Weeks 10-12
<p style="text-align: center;">Unit/Topic Motion and Forces- Laws of Motion Energy Transformations- Forms of Energy</p>	<p style="text-align: center;">Unit/Topic Energy Transformations-Forms of Energy Unity and Diversity- Cells</p>
<p style="text-align: center;">Motion and Forces- Laws of Motion</p> <p>SC-08-1.2.1</p> <p>Students will describe and explain the effects of balanced and unbalanced forces on motion as found in real-life phenomena.</p> <p>Objects change their motion only when a net force is applied. Newton’s Laws of Motion are used to describe the effects of forces on the motion of objects.</p> <p>DOK 3</p>	<p style="text-align: center;">Energy Transformations- Forms of Energy</p> <p>SC-08-4.6.1</p> <p>Students will:</p> <ul style="list-style-type: none"> • explain the cause and effect relationships between global climate and energy transfer; • use evidence to make inferences or predictions about global climate issues. <p>Global climate is determined by energy transfer from the Sun at and near Earth’s surface.</p> <p style="text-align: right;">DOK</p>

Energy Transformation- Forms of Energy

SC-08-4.6.1

Students will:

- explain the cause and effect relationships between global climate and energy transfer;
- use evidence to make inferences or predictions about global climate issues.

Global climate is determined by energy transfer from the Sun at and near Earth's surface.

DOK 3

SC-08-4.6.2

Students will:

- describe or explain energy transfer and energy conservation;
- evaluate alternative solutions to energy problems.

Energy can be transferred in many ways, but it can neither be created nor destroyed.

DOK 3

SC-08-4.6.3

Students will understand that all energy can be considered to be kinetic energy, potential energy, or energy contained by a field (e.g., electric, magnetic, gravitational).

SC-08-4.6.4

SC-08-4.6.2

Students will:

- describe or explain energy transfer and energy conservation;
- evaluate alternative solutions to energy problems.

Energy can be transferred in many ways, but it can neither be created nor destroyed.

DOK 3

SC-08-4.6.3

Students will understand that all energy can be considered to be kinetic energy, potential energy, or energy contained by a field (e.g., electric, magnetic, gravitational).

SC-08-4.6.4

Students will:

- analyze information/data about waves and energy transfer;
- describe the transfer of energy via waves in real life phenomena. Waves, including sound and seismic waves, waves on water and electromagnetic waves, can transfer energy when they interact with matter.

DOK 2

SC-08-4.6.5

Students will:

- describe the relationships between organisms and energy flow in ecosystems (food chains and energy pyramids);
- explain the effects of change to any component of the ecosystem.

Students will:

- analyze information/data about waves and energy transfer;
- describe the transfer of energy via waves in real life phenomena.

Waves, including sound and seismic waves, waves on water and electromagnetic waves, can transfer energy when they interact with matter.

DOK 2

SC-08-4.6.5

Students will:

- describe the relationships between organisms and energy flow in ecosystems (food chains and energy pyramids);
- explain the effects of change to any component of the ecosystem.

Energy flows through ecosystems in one direction from photosynthetic organisms to herbivores to carnivores and decomposers.

DOK 2

Energy flows through ecosystems in one direction from photosynthetic organisms to herbivores to carnivores and decomposers.

DOK 2

Unity and Diversity of Cells

SC-08-3.4.1

Students will explain the relationship between structure and function of the cell components using a variety of representations.

Observations of cells and analysis of cell representations point out that cells have particular structures that underlie their function. Every cell is surrounded by a membrane that separates it from the outside world. Inside the cell is a concentrated mixture of thousands of different molecules that form a variety of specialized structures. These structures carry out specific cell functions.

DOK 3

SC-08-3.4.2

Students will understand that in the development of multicellular organisms, cells multiply (mitosis) and differentiate to form many specialized cells, tissues and organs. This differentiation is regulated through the expression of different genes.

SC-08-3.4.3

Students will form or justify conclusions as to whether a response is innate or learned using data/evidence on behavioral responses to internal and

external stimuli.

Behavioral responses to internal changes and external stimuli can be innate or learned. Responses to external stimuli can result from interactions with the organism's own species or other species, as well as environmental changes.

DOK 3

SC-08-3.4.4

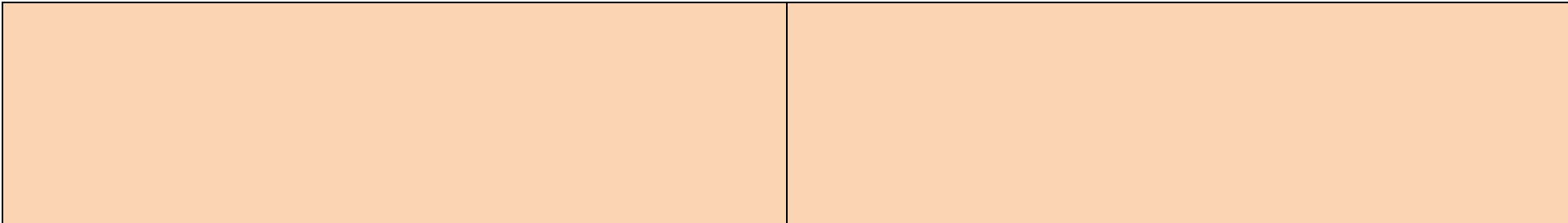
Students will describe and explain patterns found within groups of organisms in order to make biological classifications of those organisms.

Observations and patterns found within groups of organisms allow for biological classifications based on how organisms are related.

DOK 2

SC-08-3.4.5

Students will understand that multicellular animals have nervous systems that generate behavior. Nerve cells communicate with each other by secreting specific molecules.



CURRICULUM			CURRICULUM		
Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Identify Sub-Topics	Identify Sub-Topics	Identify Sub-Topics	Identify Sub-Topics	Identify Sub-Topics	Identify Sub-Topics
Balanced and unbalanced forces	Global Climate Energy transfer	Energy Conservation			
I CAN STATEMENTS: I can predict the motion of various objects by using Newton's laws. I can explain the cause and effect of forces on the motion of objects.	I CAN STATEMENTS: I can compare a variety of energy sources. I can classify methods of heat transfer and forms of energy. I can analyze multiple sources of data to identify global climate.	I CAN STATEMENTS: I can describe the conservation and transfer of energy. I can evaluate alternative solutions to energy problems. I can explain the cause and effect relationships between global climate issues. I can investigate evidence to draw conclusions about global climate issues. I can identify the energy transformations that	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:

		occur in the “production” transmission and use of energy by people in everyday life.			
Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary
Chemical property Reactivity Melting point Boiling point Density Chemical change Physical change Atom Nucleus Proton Neutron Electron Atomic mass Atomic charge Chemistry Element Atom Compound Molecule Chemical formula Pure substance Mixture Miscible Immiscible Pressure Energy Evaporation Condensation	Scientific method Variable Control Data Observation Interpret Mass Volume density Weight Metric Predict Infer Horizontal/vertical Axis Hypothesis	Biogeochemical Interaction Atmosphere Oceanic organisms	Global climate Solar energy Climate data Convection Conduction radiation	Energy Kinetic Energy And forms of energy Mechanical Thermal Chemical magnetic nuclear Law of conservation of energy Power waves	Energy pyramid Herbivore Carnivore Decomposer Omnivore Ecosystem Food chain Energy pyramid
Suggested	Suggested	Suggested	Suggested	Suggested	Suggested

United Streaming KCCT Coach Book Buckle Down Books I-Pad Textbook Brain pop Sciencosaurus Study Island	United Streaming KCCT Coach Book Buckle Down Books I-Pad Textbook Brain pop Sciencosaurus Study Island	United Streaming KCCT Coach Book Buckle Down Books I-Pad Textbook Brain pop Sciencosaurus Study Island	United Streaming KCCT Coach Book Buckle Down Books I-Pad Textbook Brain pop Sciencosaurus Study Island	United Streaming KCCT Coach Book Buckle Down Books I-Pad Textbook Brain pop Sciencosaurus Study Island	United Streaming KCCT Coach Book Buckle Down Books I-Pad Textbook Brain pop Sciencosaurus Study Island
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Weeks 13-15	Weeks 16-18
Unit/Topic Structure and Transformation of Matter- Conservation of Matter)	Unit/Topic Energy Transformation- Forms of Energy
<p>SC-08-1.1.1</p> <p>Students will:</p> <ul style="list-style-type: none"> • interpret models/representations of elements; • classify elements based upon patterns in their physical (e.g., density, boiling point, solubility) and chemical (e.g., flammability, reactivity) properties. <p>Models enhance understanding that an element is composed of a single type of atom. Organization/interpretation of data illustrates that when elements are listed according to the number of protons, repeating patterns of physical (e.g., density, boiling point, solubility) and chemical properties (e.g., flammability, reactivity), can be used to identify families of elements with similar properties.</p> <p style="text-align: center;">DOK 2</p> <p><i>SC-08-1.1.2</i></p>	<p>SC-08-4.6.1</p> <p>Students will:</p> <ul style="list-style-type: none"> • explain the cause and effect relationships between global climate and energy transfer; • use evidence to make inferences or predictions about global climate issues. <p>Global climate is determined by energy transfer from the Sun at and near Earth's surface.</p> <p>DOK 3</p> <p>SC-08-4.6.2</p>

Students will understand that matter is made of minute particles called atoms, and atoms are composed of even smaller components. The components of an atom have measurable properties such as mass and electrical charge. Each atom has a positively charged nucleus surrounded by negatively charged electrons. The electric force between the nucleus and the electrons holds the atom together.

SC-08-1.1.3

Students will understand that the atom's nucleus is composed of protons and neutrons that are much more massive than electrons.

SC-08-1.1.4

Students will describe interactions which cause the movement of each element among the solid Earth, oceans, atmosphere and organisms (biogeochemical cycles).

Earth is a system containing essentially a fixed amount of each stable chemical atom or element that can exist in several different reservoirs. The interactions within the earth system cause the movement of each element among reservoirs in the solid Earth, oceans, atmosphere and organisms as part of biogeochemical cycles.

DOK 2

Students will:

- **describe or explain energy transfer and energy conservation;**
- **evaluate alternative solutions to energy problems.**

Energy can be transferred in many ways, but it can neither be created nor destroyed.

DOK 3

SC-08-4.6.3

Students will understand that all energy can be considered to be kinetic energy, potential energy, or energy contained by a field (e.g., electric, magnetic, gravitational).

SC-08-4.6.4

Students will:

- **analyze information/data about waves and energy transfer;**
- **describe the transfer of energy via waves in real life phenomena.**

Waves, including sound and seismic waves, waves on water and electromagnetic waves, can transfer energy when they interact with matter.

DOK 2

SC-08-4.6.5

	<p>Students will:</p> <ul style="list-style-type: none"> • describe the relationships between organisms and energy flow in ecosystems (food chains and energy pyramids); • explain the effects of change to any component of the ecosystem. <p>Energy flows through ecosystems in one direction from photosynthetic organisms to herbivores to carnivores and decomposers.</p> <p>DOK 2</p>
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CURRICULUM			CURRICULUM		
Week 13	Week 14	Week 15	Week 16	Week 17	Week 18
Identify Sub-Topics	Identify Sub-Topics	Identify Sub-Topics	Identify Sub-Topics	Identify Sub-Topics	Identify Sub-Topics
Atoms/protons	Protons/neutrons	Biochemical cycles	Global Climate	Wave Energy	Eco Systems
<p>I CAN STATEMENTS:</p> <p>I can define the smallest part of matter as an atom.</p> <p>In can explain the makeup of an atom’s nucleus.</p>	<p>I CAN STATEMENTS:</p> <p>I can construct an element with positive/negative charges.</p> <p>I can analyze factors that influence the movement of elements among the earth’s system.</p>	<p>I CAN STATEMENTS:</p> <p>I can describe and illustrate the movement of elements in the Earth’s systems.</p> <p>I can explain how science is constantly changing based on new information.</p>	<p>I CAN STATEMENTS:</p> <p>I can compare a variety of energy sources.</p> <p>I can classify methods of heat transfer and forms of energy.</p> <p>I can analyze multiple sources of data to identify global climate patterns.</p>	<p>I CAN STATEMENTS:</p> <p>I can explain how the interaction of waves with matter provides multiple types of energy</p> <p>I can create examples of potential and kinetic energy in everyday life.</p>	<p>I CAN STATEMENTS:</p> <p>I can explain natural selection and extinction.</p> <p>I can describe food chains and pyramids.</p> <p>I can graph energy-flow within an ecosystem.</p> <p>I can identify the factors that affect any ecosystem’s carrying capacity.</p>

					I can describe the transfer of energy through real-life phenomena.
Critical Vocabulary Chemistry matter element atom compound, molecule chemical formula, pure substance mixture, miscible sublimation chemical property reactivity melting point boiling point density chemical change physical change Atom nucleus proton neutron electron	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary Immiscible Pressure energy evaporation condensation,	Critical Vocabulary	Critical Vocabulary

Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts..)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts..)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts..)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts..)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts..)	Common (PLC Teams will design the common assessments, i.e., grade level, and/or depts..)
Resources Needed	Resources Needed	Resources Needed	Resources Needed	Resources Needed	Resources Needed
United Streaming KCCT Coach Book Buckle Down Books I-Pad Textbook Brain pop Sciencesaurus Study Island	United Streaming KCCT Coach Book Buckle Down Books I-Pad Textbook Brain pop Sciencesaurus Study Island	United Streaming KCCT Coach Book Buckle Down Books I-Pad Textbook Brain pop Sciencesaurus Study Island	United Streaming KCCT Coach Book Buckle Down Books I-Pad Textbook Brain pop Sciencesaurus Study Island	United Streaming KCCT Coach Book Buckle Down Books I-Pad Textbook Brain pop Sciencesaurus Study Island	United Streaming KCCT Coach Book Buckle Down Books I-Pad Textbook Brain pop Sciencesaurus Study Island

Weeks 19-21	Weeks 22-24
Unit/Topic Unity and Diversity- Animal Behavior	Unit/Topic Unity and Diversity- Biological Classification
SC-08-3.4.1 Students will explain the relationship between structure and function of	SC-08-3.4.1 Students will explain the relationship between structure and function of the

the cell components using a variety of representations.

Observations of cells and analysis of cell representations point out that cells have particular structures that underlie their function. Every cell is surrounded by a membrane that separates it from the outside world. Inside the cell is a concentrated mixture of thousands of different molecules that form a variety of specialized structures. These structures carry out specific cell functions.

DOK 3

SC-08-3.4.2

Students will understand that in the development of multicellular organisms, cells multiply (mitosis) and differentiate to form many specialized cells, tissues and organs. This differentiation is regulated through the expression of different genes.

SC-08-3.4.4

Students will describe and explain patterns found within groups of organisms in order to make biological classifications of those organisms.

Observations and patterns found within groups of organisms allow for biological classifications based on how organisms are related.

DOK 2

SC-08-3.4.5

Students will understand that multicellular animals have nervous systems that generate behavior. Nerve cells communicate with each other by secreting specific molecules.

SC-08-3.4.3

Students will form or justify conclusions as to whether a response is

cell components using a variety of representations.

Observations of cells and analysis of cell representations point out that cells have particular structures that underlie their function. Every cell is surrounded by a membrane that separates it from the outside world. Inside the cell is a concentrated mixture of thousands of different molecules that form a variety of specialized structures. These structures carry out specific cell functions.

DOK 3

SC-08-3.4.2

Students will understand that in the development of multicellular organisms, cells multiply (mitosis) and differentiate to form many specialized cells, tissues and organs. This differentiation is regulated through the expression of different genes.

SC-08-3.4.4

Students will describe and explain patterns found within groups of organisms in order to make biological classifications of those organisms.

Observations and patterns found within groups of organisms allow for biological classifications based on how organisms are related.

DOK 2

SC-08-3.4.5

Students will understand that multicellular animals have nervous systems that generate behavior. Nerve cells communicate with each other by secreting specific molecules.

SC-08-3.4.3

innate or learned using data/evidence on behavioral responses to internal and external stimuli.

Behavioral responses to internal changes and external stimuli can be innate or learned. Responses to external stimuli can result from interactions with the organism’s own species or other species, as well as environmental changes.

DOK 3

Students will form or justify conclusions as to whether a response is innate or learned using data/evidence on behavioral responses to internal and external stimuli.

Behavioral responses to internal changes and external stimuli can be innate or learned. Responses to external stimuli can result from interactions with the organism’s own species or other species, as well as environmental changes.

DOK 3

CURRICULUM			CURRICULUM		
Week 19	Week 20	Week 21	Week 22	Week 23	Week 24
<p>Identify Sub-Topics</p> <p>Cell structure and functions</p>	<p>Identify Sub-Topics</p> <p>Multicellular organisms</p>	<p>Identify Sub-Topics</p> <p>Innate or learned behavioral responses.</p>	<p>Identify Sub-Topics</p> <p>Cells function</p>	<p>Identify Sub-Topics</p> <p>Specialize cells</p>	<p>Identify Sub-Topics</p> <p>Biological classification</p>
<p>I CAN STATEMENTS:</p> <p>I can identify the organelles of a cell.</p> <p>I can collect and analyze information to explain the factors of heredity</p>	<p>I CAN STATEMENTS:</p> <p>I can describe how genes/chromosomes are passed from generation to generation.</p>	<p>I CAN STATEMENTS:</p>	<p>I CAN STATEMENTS:</p>	<p>I CAN STATEMENTS:</p> <p>I can explain the purpose of the nervous system in organisms.</p> <p>I can compare and contrast innate and learned behaviors.</p>	<p>I CAN STATEMENTS:</p> <p>I can classify organisms based on similar characteristics.</p> <p>I can explain the reasons why group organisms are related.</p>

<p>and learned behavior.</p> <p>I can explain how genes determine specialized function of cells.</p>	<p>I can create a model of a cell.</p> <p>I can describe the function of various organelles.</p>			<p>I can describe how internal and external stimuli affect organisms.</p>	<p>I can relate the impact of technological advances on the natural world.</p>
<p>Critical Vocabulary</p> <p>Cell theory Organelle Cell wall Cell membrane nucleus</p>	<p>Critical Vocabulary</p> <p>Chromatin Cytoplasm Mitochondria Endoplasmic Reticulum Ribosome Golgi body Chloroplast Vacuole Lysosome Plant cell Animal cell Multi cellular</p>	<p>Critical Vocabulary</p>	<p>Critical Vocabulary</p> <p>Organism Mitosis Genes Differentiation Cells Tissues organs</p>	<p>Critical Vocabulary</p> <p>Innate Learned behavior Multi cellular Internal stimuli External stimuli Nervous system</p>	<p>Critical Vocabulary</p> <p>Classification Taxonomy Species Binomial Nomenclature Genus Species kingdom Phylum Class order</p>
<p>Suggested Strategies/Activities</p> <p>Construct Models Research projects Power Point Presentation</p>	<p>Suggested Strategies/Activities</p> <p>Construct Models Research projects Power Point Presentation</p>	<p>Suggested Strategies/Activities</p> <p>Construct Models Research projects Power Point Presentation</p>	<p>Suggested Strategies/Activities</p> <p>Construct Models Research projects Power Point Presentation</p>	<p>Suggested Strategies/Activities</p> <p>Construct Models Research projects Power Point Presentation</p>	<p>Suggested Strategies/Activities</p> <p>Construct Models Research projects Power Point Presentation</p>

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Weeks 25-27	Weeks 28-30
Unit/Topic Biological Change- Diversity	Unit/Topic Energy Transformations- Energy Global Climate
<p>SC-08-3.5.1</p> <p>Students will draw conclusions and make inferences about the consequences of change over time that can account for the similarities among diverse species.</p> <p>The consequences of change over time provide a scientific explanation for the fossil record of ancient life forms and for the striking molecular similarities observed among the diverse species of living organisms.</p> <p>DOK 3</p>	<p>SC-08-4.6.1</p> <p>Students will:</p> <ul style="list-style-type: none"> • explain the cause and effect relationships between global climate and energy transfer; • use evidence to make inferences or predictions about global climate issues. <p>Global climate is determined by energy transfer from the Sun at and near Earth's surface.</p> <p>DOK 3</p> <p>SC-08-4.6.2</p> <p>Students will:</p> <ul style="list-style-type: none"> • describe or explain energy transfer and energy conservation; • evaluate alternative solutions to energy problems. <p>Energy can be transferred in many ways, but it can neither be created nor destroyed.</p> <p>DOK 3</p> <p><i>SC-08-4.6.3</i></p> <p><i>Students will understand that all energy can be considered to be kinetic energy, potential energy, or energy contained by a field (e.g., electric, magnetic, gravitational).</i></p>

SC-08-4.6.4

Students will:

- analyze information/data about waves and energy transfer;
 - describe the transfer of energy via waves in real life phenomena.
- Waves, including sound and seismic waves, waves on water and electromagnetic waves, can transfer energy when they interact with matter.

DOK 2

SC-08-4.6.5

Students will:

- describe the relationships between organisms and energy flow in ecosystems (food chains and energy pyramids);
- explain the effects of change to any component of the ecosystem.

Energy flows through ecosystems in one direction from photosynthetic organisms to herbivores to carnivores and decomposers.

DOK 2

CURRICULUM

Week 25

Week 26

Week 27

CURRICULUM

Week 28

Week 29

Week 30

Identify Sub-Topics Change over time	Identify Sub-Topics	Identify Sub-Topics	Identify Sub-Topics Global Climate Issues	Identify Sub-Topics	Identify Sub-Topics
I CAN STATEMENTS: I can draw conclusions about species development over time by the examination of fossils. I can compare/contrast fossil records.	I CAN STATEMENTS: I can draw conclusions about the history of the earth by examining layers of sedimentary rock, using the laws of superposition.	I CAN STATEMENTS: I can analyze the relationship between diverse species using fossil records. I can differentiate between experimental conditions that may occur during observations	I CAN STATEMENTS:	I CAN STATEMENTS:	I CAN STATEMENTS:
Critical Vocabulary Adaptation Natural selection Competition predation Uniformitarianism Castastrophism Relative dating Superposition Geologic column undonformity	Critical Vocabulary Absolute dating Isotopes Radioactive decay Half-life Fossil Index fossil	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary	Critical Vocabulary

Suggested Strategies/Activities	Suggested Strategies/Activities	Suggested Strategies/Activities	Suggested Strategies/Activities	Suggested Strategies/Activities	Suggested Strategies/Activities
Construct Models Research projects Power Point Presentation	Construct Models Research projects Power Point Presentation	Construct Models Research projects Power Point Presentation	Construct Models Research projects Power Point Presentation	Construct Models Research projects Power Point Presentation	Construct Models Research projects Power Point Presentation
Balanced Assessment: Formative	Balanced Assessment: Formative	Balanced Assessment: Formative	Balanced Assessment: Formative	Balanced Assessment: Formative	Balanced Assessment: Formative
Clickers Thumbs up Exit slips Quick writes	Clickers Thumbs up Exit slips Quick writes	Clickers Thumbs up Exit slips Quick writes	Clickers Thumbs up Exit slips Quick writes	Clickers Thumbs up Exit slips Quick writes	Clickers Thumbs up Exit slips Quick writes
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Resources Needed	Resources Needed	Resources Needed	Resources Needed	Resources Needed	Resources Needed
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Weeks 31-33	Weeks 34-36
Unit/Topic Interdependence- Ecosystems	Unit/Topic The Earth and the Universe- Processes which Shape Earth
SC-08-4.7.1 Students will describe the interrelationships and interdependencies within an ecosystem and predict the effects of change on one or more	SC-08-2.3.1 Students will describe various techniques for estimating geological time (radioactive dating, observing rock sequences, comparing fossils).

<p>components within an ecosystem.</p> <p>Organisms both cooperate and compete in ecosystems. Often changes in one component of an ecosystem will have effects on the entire system that are difficult to predict. The interrelationships and interdependencies of these organisms may generate ecosystems that are stable for hundreds or thousands of years.</p> <p>DOK 3</p> <p>SC-08-4.7.2</p> <p>Students will:</p> <ul style="list-style-type: none"> • explain the interactions of the components of the Earth system (e.g., solid Earth, oceans, atmosphere, living organisms); • propose solutions to detrimental interactions. <p>Interactions among the solid Earth, the oceans, the atmosphere and living things have resulted in the ongoing development of a changing Earth system.</p> <p style="text-align: right;">DOK 3</p>	<p>Techniques used to estimate geological time include using radioactive dating, observing rock sequences and comparing fossils to correlate the rock sequences at various locations. Deductions can be made based on available data and observation of models as to the age of rocks/fossils.</p> <p>DOK 2</p> <p><i>SC-08-2.3.2</i></p> <p><i>Students will understand that earthquakes and volcanic eruptions can be observed on a human time scale, but many processes, such as mountain building and plate movements, take place over hundreds of millions of years</i></p> <p>SC-08-2.3.3</p> <p>Students will:</p> <ul style="list-style-type: none"> • explain the transfer of Earth’s internal heat in the mantle (crustal movement, hotspots, geysers); • describe the interacting components (convection currents) within the Earth’s system. <p>The outward transfer of Earth’s internal heat drives convection circulation in the mantle. This causes the crustal plates to move on the face of the Earth.</p> <p>DOK 2</p> <p><i>SC-08-2.3.4</i></p> <p><i>Students will understand that the Sun, Earth and the rest of the solar system formed approximately 4.6 billion years ago.</i></p>
CURRICULUM	CURRICULUM

Week 31	Week 32	Week 33	Week 34	Week 35	Week 36
<p>Identify Sub-Topics</p> <p>Interdependency ecosystem</p>	<p>Identify Sub-Topics</p> <p>Interactions with earth systems</p>	<p>Identify Sub-Topics</p> <p>Interactions with earth systems</p>	<p>Identify Sub-Topics</p> <p>Geological Time</p>	<p>Identify Sub-Topics</p> <p>Earth quakes, volcanoes, plates</p>	<p>Identify Sub-Topics</p> <p>Crustal movement</p>
<p>I CAN STATEMENTS:</p>	<p>I CAN STATEMENTS:</p> <p>I can explain the law of conservation of matter related to the energy in an ecosystem. I can explain the interactions of the components of the earth systems</p>	<p>I CAN STATEMENTS:</p> <p>I can develop a logical argument regarding solutions to harmful interactions between living things and the earth. I can model flow of energy with an ecosystem.</p>	<p>I CAN STATEMENTS:</p> <p>I can determine the approximate age of earth by evaluating various geological techniques. I can identify a variety of landforms on earth and investigate the forces responsible. I can describe various techniques to date the earth.</p>	<p>I CAN STATEMENTS:</p> <p>I can analyze information from radioactive dating to prove the age of the earth. I can construct a timeline of the formation of the solar system. I can apply the concept of convection currents to the phenomenon of earth's system.</p>	<p>I CAN STATEMENTS:</p> <p>I can summarize the cause of crustal plate movement on the earth's surface. i can explain the transfer of earth's heat in the mantle.</p>
<p>Critical Vocabulary</p>	<p>Critical Vocabulary</p>	<p>Critical Vocabulary</p>	<p>Critical Vocabulary</p> <p>Uniformitarianism Catastrophism Relative dating superposition Geologic column Unconformity Absolute dating Isotopes Radioactive decay Half-life Fossil Index fossil Geologic time Scale</p>	<p>Critical Vocabulary</p> <p>Crust Mantle Core Lithosphere Plate tectonic continental drift Divergent boundary</p>	<p>Critical Vocabulary</p>

			Eon Era Period Epoch		
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