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Product	Activity Title (Preview Link)	Activity Type	Activity Standards	Performance Expectation (Link)	Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts	Engineering, Tech, & Applications of Science
NGSS HS Physical Science	Periodic Trends (Achieving)	Activity - Achieving	HS-PS1-1, SEP2, PS1.A, CCC1	Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.	SEP2: Developing and Using Models	PS1.A: Structure and Properties of Matter	CCC1: Patterns	N/A
NGSS HS Physical Science	Periodic Trends (Emerging)	Activity - Emerging	HS-PS1-1, SEP2, PS1.A, CCC1	Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.	SEP2: Developing and Using Models	PS1.A: Structure and Properties of Matter	CCC1: Patterns	N/A
NGSS HS Physical Science	Periodic Trends (Mini Assessment)	Mini Assessment	HS-PS1-1, SEP2, PS1.A, CCC1	Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.	SEP2: Developing and Using Models	PS1.A: Structure and Properties of Matter	CCC1: Patterns	N/A
NGSS HS Physical Science	Valence Electrons Part 1 (Physical Science Assessment)	Assessment	HS-PS1-1, SEP2, PS1.A, CCC1	Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.	SEP2: Developing and Using Models	PS1.A: Structure and Properties of Matter	CCC1: Patterns	N/A
NGSS HS Physical Science	Chemical Reactions (Achieving)	Activity - Achieving	HS-PS1-2, SEP6, PS1.A, PS1.B, CCC1	Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.	SEP6: Constructing Explanations and Designing Solutions	PS1.A: Structure and Properties of Matter PS1.B: Chemical Reactions	CCC1: Patterns	N/A
NGSS HS Physical Science	Chemical Reactions (Emerging)	Activity - Emerging	HS-PS1-2, SEP6, PS1.A, PS1.B, CCC1	Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.	SEP6: Constructing Explanations and Designing Solutions	PS1.A: Structure and Properties of Matter PS1.B: Chemical Reactions	CCC1: Patterns	N/A
NGSS HS Physical Science	Chemical Reactions (Mini Assessment)	Mini Assessment	HS-PS1-2, SEP6, PS1.A, PS1.B, CCC1	Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.	SEP6: Constructing Explanations and Designing Solutions	PS1.A: Structure and Properties of Matter PS1.B: Chemical Reactions	CCC1: Patterns	N/A

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NGSS HS Physical Science	Valence Electrons Part 2 (Physical Science Assessment)	Assessment	HS-PS1-2, SEP6, PS1.A, PS1.B, CCC1	Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties.	SEP6: Constructing Explanations and Designing Solutions	PS1.A: Structure and Properties of Matter PS1.B: Chemical Reactions	CCC1: Patterns	N/A
NGSS HS Physical Science	Bulk Properties of Substances (Achieving)	Activity - Achieving	HS-PS1-3, SEP3, PS1.A, CCC1	Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.	SEP3: Planning and Carrying Out Investigations	PS1.A: Structure and Properties of Matter	CCC1: Patterns	N/A
NGSS HS Physical Science	Bulk Properties of Substances (Emerging)	Activity - Emerging	HS-PS1-3, SEP3, PS1.A, CCC1	Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.	SEP3: Planning and Carrying Out Investigations	PS1.A: Structure and Properties of Matter	CCC1: Patterns	N/A
NGSS HS Physical Science	Bulk Properties of Substances (Mini Assessment)	Mini Assessment	HS-PS1-3, SEP3, PS1.A, CCC1	Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.	SEP3: Planning and Carrying Out Investigations	PS1.A: Structure and Properties of Matter	CCC1: Patterns	N/A
NGSS HS Physical Science	Silk's Superpowers Part 1 (Physical Science Assessment)	Assessment	HS-PS1-3, SEP3, PS1.A, CCC1	Plan and conduct an investigation to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles.	SEP3: Planning and Carrying Out Investigations	PS1.A: Structure and Properties of Matter	CCC1: Patterns	N/A
NGSS HS Physical Science	Energy Changes in Chemical Reactions (Achieving)	Activity - Achieving	HS-PS1-4, SEP2, PS1.A, PS1.B, CCC5	Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.	SEP2: Developing and Using Models	PS1.A: Structure and Properties of Matter PS1.B: Chemical Reactions	CCC5: Energy and Matter	N/A
NGSS HS Physical Science	Energy Changes in Chemical Reactions (Emerging)	Activity - Emerging	HS-PS1-4, SEP2, PS1.A, PS1.B, CCC5	Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.	SEP2: Developing and Using Models	PS1.A: Structure and Properties of Matter PS1.B: Chemical Reactions	CCC5: Energy and Matter	N/A
NGSS HS Physical Science	Energy Changes in Chemical Reactions (Mini Assessment)	Mini Assessment	HS-PS1-4, SEP2, PS1.A, PS1.B, CCC5	Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.	SEP2: Developing and Using Models	PS1.A: Structure and Properties of Matter PS1.B: Chemical Reactions	CCC5: Energy and Matter	N/A

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NGSS HS Physical Science	Chemical Energy Part 1 (Physical Science Assessment)	Assessment	HS-PS1-4, SEP2, PS1.A, PS1.B, CCC5	Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.	SEP2: Developing and Using Models	PS1.A: Structure and Properties of Matter PS1.B: Chemical Reactions	CCC5: Energy and Matter	N/A
NGSS HS Physical Science	Rates of Reactions (Achieving)	Activity - Achieving	HS-PS1-5, SEP6, PS1.B, CCC1	Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.	SEP6: Constructing Explanations and Designing Solutions	PS1.B: Chemical Reactions	CCC1: Patterns	N/A
NGSS HS Physical Science	Rates of Reactions (Emerging)	Activity - Emerging	HS-PS1-5, SEP6, PS1.B, CCC1	Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.	SEP6: Constructing Explanations and Designing Solutions	PS1.B: Chemical Reactions	CCC1: Patterns	N/A
NGSS HS Physical Science	Rates of Reactions (Mini Assessment)	Mini Assessment	HS-PS1-5, SEP6, PS1.B, CCC1	Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.	SEP6: Constructing Explanations and Designing Solutions	PS1.B: Chemical Reactions	CCC1: Patterns	N/A
NGSS HS Physical Science	Particle Collisions Part 1 (Physical Science Assessment)	Assessment	HS-PS1-5, SEP6, PS1.B, CCC1	Apply scientific principles and evidence to provide an explanation about the effects of changing the temperature or concentration of the reacting particles on the rate at which a reaction occurs.	SEP6: Constructing Explanations and Designing Solutions	PS1.B: Chemical Reactions	CCC1: Patterns	N/A
NGSS HS Physical Science	Chemical Equilibrium (Achieving)	Activity - Achieving	HS-PS1-6, HS-ETS1-2, SEP6, PS1.B, CCC7	Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.	SEP 6: Constructing Explanations and Designing Solutions	PS1.B: Chemical Reactions	CCC7: Stability and Change	ETS1.C: Optimizing the Design Solution
NGSS HS Physical Science	Chemical Equilibrium (Emerging)	Activity - Emerging	HS-PS1-6, SEP6, PS1.B, CCC7	Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.	SEP 6: Constructing Explanations and Designing Solutions	PS1.B: Chemical Reactions	CCC7: Stability and Change	ETS1.C: Optimizing the Design Solution
NGSS HS Physical Science	Chemical Equilibrium (Mini Assessment)	Mini Assessment	HS-PS1-6, HS-ETS1-2, SEP6, PS1.B, CCC7	Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.	SEP 6: Constructing Explanations and Designing Solutions	PS1.B: Chemical Reactions	CCC7: Stability and Change	ETS1.C: Optimizing the Design Solution

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NGSS HS Physical Science	Particle Collisions Part 2 (Physical Science Assessment)	Assessment	HS-PS1-6, HS-ETS1-2, SEP6, PS1.B, CCC7	Refine the design of a chemical system by specifying a change in conditions that would produce increased amounts of products at equilibrium.	SEP 6: Constructing Explanations and Designing Solutions	PS1.B: Chemical Reactions	CCC7: Stability and Change	ETS1.C: Optimizing the Design Solution
NGSS HS Physical Science	Conservation of Mass (Achieving)	Activity - Achieving	HS-PS1-7, SEP5, PS1.B, CCC5	Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.	SEP5: Using Mathematics and Computational Thinking	PS1.B: Chemical Reactions	CCC5: Energy and Matter	N/A
NGSS HS Physical Science	Conservation of Mass (Emerging)	Activity - Emerging	HS-PS1-7, SEP5, PS1.B, CCC5	Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.	SEP5: Using Mathematics and Computational Thinking	PS1.B: Chemical Reactions	CCC5: Energy and Matter	N/A
NGSS HS Physical Science	Conservation of Mass (Mini Assessment)	Mini Assessment	HS-PS1-7, SEP5, PS1.B, CCC5	Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.	SEP5: Using Mathematics and Computational Thinking	PS1.B: Chemical Reactions	CCC5: Energy and Matter	N/A
NGSS HS Physical Science	Counting Atoms (Physical Science Assessment)	Assessment	HS-PS1-7, SEP5, PS1.B, CCC5	Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.	SEP5: Using Mathematics and Computational Thinking	PS1.B: Chemical Reactions	CCC5: Energy and Matter	N/A
NGSS HS Physical Science	Types of Nuclear Processes (Achieving)	Activity - Achieving	HS-PS1-8, SEP2, PS1.C, CCC5	Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.	SEP2: Developing and Using Models	PS1.C: Nuclear Processes	CCC5: Energy and Matter	N/A
NGSS HS Physical Science	Types of Nuclear Processes (Emerging)	Activity - Emerging	HS-PS1-8, SEP2, PS1.C, CCC5	Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.	SEP2: Developing and Using Models	PS1.C: Nuclear Processes	CCC5: Energy and Matter	N/A
NGSS HS Physical Science	Types of Nuclear Processes (Mini Assessment)	Mini Assessment	HS-PS1-8, SEP2, PS1.C, CCC5	Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.	SEP2: Developing and Using Models	PS1.C: Nuclear Processes	CCC5: Energy and Matter	N/A
NGSS HS Physical Science	Nuclear Processes Part 1 (Physical Science Assessment)	Assessment	HS-PS1-8, SEP2, PS1.C, CCC5	Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.	SEP2: Developing and Using Models	PS1.C: Nuclear Processes	CCC5: Energy and Matter	N/A

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NGSS HS Physical Science	Newton's Second Law of Motion (Achieving)	Activity - Achieving	HS-PS2-1, SEP4, PS2.A, CCC2	Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.	SEP4: Analyzing and Interpreting Data	PS2.A: Forces and Motion	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	Newton's Second Law of Motion (Emerging)	Activity - Emerging	HS-PS2-1, SEP4, PS2.A, CCC2	Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.	SEP4: Analyzing and Interpreting Data	PS2.A: Forces and Motion	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	Newton's Second Law of Motion (Mini Assessment)	Mini Assessment	HS-PS2-1, SEP4, PS2.A, CCC2	Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.	SEP4: Analyzing and Interpreting Data	PS2.A: Forces and Motion	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	3-2-1 Blast Off! Part 1 (Physical Science Assessment)	Assessment	HS-PS2-1, SEP4, PS2.A, CCC2	Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.	SEP4: Analyzing and Interpreting Data	PS2.A: Forces and Motion	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	Conservation of Momentum (Achieving)	Activity - Achieving	HS-PS2-2, SEP5, PS2.A, CCC4	Use mathematical representations to support the claim that the total momentum of a system of objects is conserved when there is no net force on the system.	SEP5: Using Mathematics and Computational Thinking	PS2.A: Forces and Motion	CCC4: Systems and System Models	N/A
NGSS HS Physical Science	Conservation of Momentum (Emerging)	Activity - Emerging	HS-PS2-2, SEP5, PS2.A, CCC4	Use mathematical representations to support the claim that the total momentum of a system of objects is conserved when there is no net force on the system.	SEP5: Using Mathematics and Computational Thinking	PS2.A: Forces and Motion	CCC4: Systems and System Models	N/A
NGSS HS Physical Science	Conservation of Momentum (Mini Assessment)	Mini Assessment	HS-PS2-2, SEP5, PS2.A, CCC4	Use mathematical representations to support the claim that the total momentum of a system of objects is conserved when there is no net force on the system.	SEP5: Using Mathematics and Computational Thinking	PS2.A: Forces and Motion	CCC4: Systems and System Models	N/A
NGSS HS Physical Science	3-2-1 Blast Off! Part 2 (Physical Science Assessment)	Assessment	HS-PS2-2, SEP5, PS2.A, CCC4	Use mathematical representations to support the claim that the total momentum of a system of objects is conserved when there is no net force on the system.	SEP5: Using Mathematics and Computational Thinking	PS2.A: Forces and Motion	CCC4: Systems and System Models	N/A

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NGSS HS Physical Science	Minimizing Force Device (Achieving)	Activity - Achieving	HS-PS2-3, HS-ETS1-1, HS-ETS1-2, SEP6, PS2.A, CCC2	Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.	SEP6: Constructing Explanations and Designing Solutions	PS2.A: Forces and Motion	CCC2: Cause and Effect	ETS1.A: Defining Engineering Problems ETS1.C: Optimizing the Design Solution
NGSS HS Physical Science	Minimizing Force Device (Emerging)	Activity - Emerging	HS-PS2-3, HS-ETS1-1, HS-ETS1-2, SEP6, PS2.A, CCC2	Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.	SEP6: Constructing Explanations and Designing Solutions	PS2.A: Forces and Motion	CCC2: Cause and Effect	ETS1.A: Defining Engineering Problems ETS1.C: Optimizing the Design Solution
NGSS HS Physical Science	Minimizing Force Device (Mini Assessment)	Mini Assessment	HS-PS2-3, HS-ETS1-1, HS-ETS1-2, SEP6, PS2.A, CCC2	Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.	SEP6: Constructing Explanations and Designing Solutions	PS2.A: Forces and Motion	CCC2: Cause and Effect	ETS1.A: Defining Engineering Problems ETS1.C: Optimizing the Design Solution
NGSS HS Physical Science	Boat Fenders (Physical Science Assessment)	Assessment	HS-PS2-3, HS-ETS1-1, HS-ETS1-2, SEP6, PS2.A, CCC2	Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.	SEP6: Constructing Explanations and Designing Solutions	PS2.A: Forces and Motion	CCC2: Cause and Effect	ETS1.A: Defining Engineering Problems ETS1.C: Optimizing the Design Solution
NGSS HS Physical Science	Predicting Gravitational and Electrostatic Forces Using Scientific Laws (Achieving)	Activity - Emerging	HS-PS2-4, SEP5, PS2.B, CCC1	Use mathematical representations of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic force between objects.	SEP5: Using Mathematics and Computational Thinking	PS2.B: Types of Interactions	CCC1: Patterns	N/A
NGSS HS Physical Science	Predicting Gravitational and Electrostatic Forces Using Scientific Laws (Emerging)	Activity - Achieving	HS-PS2-4, SEP5, PS2.B, CCC1	Use mathematical representations of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic force between objects.	SEP5: Using Mathematics and Computational Thinking	PS2.B: Types of Interactions	CCC1: Patterns	N/A
NGSS HS Physical Science	Predicting Gravitational and Electrostatic Forces Using Scientific Laws (Mini Assessment)	Mini Assessment	HS-PS2-4, SEP5, PS2.B, CCC1	Use mathematical representations of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic force between objects.	SEP5: Using Mathematics and Computational Thinking	PS2.B: Types of Interactions	CCC1: Patterns	N/A

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NGSS HS Physical Science	Gravity and Charges (Physical Science Assessment)	Assessment	HS-PS2-4, SEP5, PS2.B, CCC1	Use mathematical representations of Newton's Law of Gravitation and Coulomb's Law to describe and predict the gravitational and electrostatic force between objects.	SEP5: Using Mathematics and Computational Thinking	PS2.B: Types of Interactions	CCC1: Patterns	N/A
NGSS HS Physical Science	Investigating Electric Currents and Magnetic Fields (Achieving)	Activity - Achieving	HS-PS2-5, SEP3, PS2.B, PS3.A, CCC2	Plan and conduct an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current.	SEP3: Planning and Carrying Out Investigations	PS2.B: Types of Interactions PS3.A: Definitions of Energy	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	Investigating Electric Currents and Magnetic Fields (Emerging)	Activity - Emerging	HS-PS2-5, SEP3, PS2.B, PS3.A, CCC2	Plan and conduct an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current.	SEP3: Planning and Carrying Out Investigations	PS2.B: Types of Interactions PS3.A: Definitions of Energy	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	Investigating Electric Currents and Magnetic Fields (Mini Assessment)	Mini Assessment	HS-PS2-5, SEP3, PS2.B, PS3.A, CCC2	Plan and conduct an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current.	SEP3: Planning and Carrying Out Investigations	PS2.B: Types of Interactions PS3.A: Definitions of Energy	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	Transformers Part 1 (Physical Science Assessment)	Assessment	HS-PS2-5, SEP3, PS2.B, PS3.A, CCC2	Plan and conduct an investigation to provide evidence that an electric current can produce a magnetic field and that a changing magnetic field can produce an electric current.	SEP3: Planning and Carrying Out Investigations	PS2.B: Types of Interactions PS3.A: Definitions of Energy	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	Molecular Level Structure and Function in Designed Materials (Achieving)	Activity - Achieving	HS-PS2-6, SEP8, PS2.B, CCC6	Communicate scientific and technical information about why the molecular-level structure is important in the functioning of designed materials.	SEP8: Obtaining, Evaluating, and Communicating Information	PS2.B: Types of Interactions	CCC6: Structure and Function	N/A
NGSS HS Physical Science	Molecular Level Structure and Function in Designed Materials (Emerging)	Activity - Emerging	HS-PS2-6, SEP8, PS2.B, CCC6	Communicate scientific and technical information about why the molecular-level structure is important in the functioning of designed materials.	SEP8: Obtaining, Evaluating, and Communicating Information	PS2.B: Types of Interactions	CCC6: Structure and Function	N/A
NGSS HS Physical Science	Molecular Level Structure and Function in Designed Materials (Mini Assessment)	Mini Assessment	HS-PS2-6, SEP8, PS2.B, CCC6	Communicate scientific and technical information about why the molecular-level structure is important in the functioning of designed materials.	SEP8: Obtaining, Evaluating, and Communicating Information	PS2.B: Types of Interactions	CCC6: Structure and Function	N/A

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NGSS HS Physical Science	Silk's Superpowers Part 2 (Physical Science Assessment)	Assessment	HS-PS2-6, SEP8, PS2.B, CCC6	Communicate scientific and technical information about why the molecular-level structure is important in the functioning of designed materials.	SEP8: Obtaining, Evaluating, and Communicating Information	PS2.B: Types of Interactions	CCC6: Structure and Function	N/A
NGSS HS Physical Science	Computational Models of Energy in a System (Achieving)	Activity - Achieving	HS-PS3-1, SEP5, PS3.A, PS3.B, CCC4	Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.	SEP5: Using Mathematics and Computational Thinking	PS3.A: Definitions of Energy PS3.B: Conservation of Energy and Energy Transfer	CCC4: Systems and System Models	N/A
NGSS HS Physical Science	Computational Models of Energy in a System (Emerging)	Activity - Emerging	HS-PS3-1, SEP5, PS3.A, PS3.B, CCC4	Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.	SEP5: Using Mathematics and Computational Thinking	PS3.A: Definitions of Energy PS3.B: Conservation of Energy and Energy Transfer	CCC4: Systems and System Models	N/A
NGSS HS Physical Science	Computational Models of Energy in a System (Mini Assessment)	Mini Assessment	HS-PS3-1, SEP5, PS3.A, PS3.B, CCC4	Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.	SEP5: Using Mathematics and Computational Thinking	PS3.A: Definitions of Energy PS3.B: Conservation of Energy and Energy Transfer	CCC4: Systems and System Models	N/A
NGSS HS Physical Science	Energy of a Spring (Physical Science Assessment)	Assessment	HS-PS3-1, SEP5, PS3.A, PS3.B, CCC4	Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known.	SEP5: Using Mathematics and Computational Thinking	PS3.A: Definitions of Energy PS3.B: Conservation of Energy and Energy Transfer	CCC4: Systems and System Models	N/A
NGSS HS Physical Science	Modeling Energy of Position and Energy of Motion (Achieving)	Activity - Achieving	HS-PS3-2, SEP2, PS3.A, CCC5	Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative positions of particles (objects).	SEP2: Developing and Using Models	PS3A: Definitions of Energy	CCC5: Energy and Matter	N/A
NGSS HS Physical Science	Modeling Energy of Position and Energy of Motion (Emerging)	Activity - Emerging	HS-PS3-2, SEP2, PS3.A, CCC5	Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative positions of particles (objects).	SEP2: Developing and Using Models	PS3A: Definitions of Energy	CCC5: Energy and Matter	N/A

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NGSS HS Physical Science	Modeling Energy of Position and Energy of Motion (Mini Assessment)	Mini Assessment	HS-PS3-2, SEP2, PS3.A, CCC5	Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative positions of particles (objects).	SEP2: Developing and Using Models	PS3A: Definitions of Energy	CCC5: Energy and Matter	N/A
NGSS HS Physical Science	Shaping Horseshoes (Physical Science Assessment)	Assessment	HS-PS3-2, SEP2, PS3.A, CCC5	Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative positions of particles (objects).	SEP2: Developing and Using Models	PS3A: Definitions of Energy	CCC5: Energy and Matter	N/A
NGSS HS Physical Science	Energy Conversion Devices (Achieving)	Activity - Achieving	HS-PS3-3, HS-ETS1-1, SEP6, PS3.A, PS3.D, CCC5, ETS1.A	Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.	SEP6: Constructing Explanations and Designing Solutions	PS3.A: Definitions of Energy PS3.D: Energy in Chemical Processes and Everyday Life	CCC5: Energy and Matter	ETS1.A: Defining Engineering Problems
NGSS HS Physical Science	Energy Conversion Devices (Emerging)	Activity - Emerging	HS-PS3-3, HS-ETS1-1, SEP6, PS3.A, PS3.D, CCC5, ETS1.A	Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.	SEP6: Constructing Explanations and Designing Solutions	PS3.A: Definitions of Energy PS3.D: Energy in Chemical Processes and Everyday Life	CCC5: Energy and Matter	ETS1.A: Defining Engineering Problems
NGSS HS Physical Science	Energy Conversion Devices (Mini Assessment)	Mini Assessment	HS-PS3-3, HS-ETS1-1, SEP6, PS3.A, PS3.D, CCC5, ETS1.A	Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.	SEP6: Constructing Explanations and Designing Solutions	PS3.A: Definitions of Energy PS3.D: Energy in Chemical Processes and Everyday Life	CCC5: Energy and Matter	ETS1.A: Defining Engineering Problems
NGSS HS Physical Science	Solar Oven (Physical Science Assessment)	Assessment	HS-PS3-3, HS-ETS1-1, SEP6, PS3.A, PS3.D, CCC5, ETS1.A	Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.	SEP6: Constructing Explanations and Designing Solutions	PS3.A: Definitions of Energy PS3.D: Energy in Chemical Processes and Everyday Life	CCC5: Energy and Matter	ETS1.A: Defining Engineering Problems

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NGSS HS Physical Science	Transfer of Thermal Energy (Achieving)	Activity - Achieving	HS-PS3-4, SEP3, PS3.B, PS3.D, CCC4	Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics).	SEP3: Planning and Carrying Out Investigations	PS3.B: Conservation of Energy and Energy Transfer PS3.D: Energy in Chemical Processes and Everyday Life	CCC4: Systems and System Models	N/A
NGSS HS Physical Science	Transfer of Thermal Energy (Emerging)	Activity - Emerging	HS-PS3-4, SEP3, PS3.B, PS3.D, CCC4	Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics).	SEP3: Planning and Carrying Out Investigations	PS3.B: Conservation of Energy and Energy Transfer PS3.D: Energy in Chemical Processes and Everyday Life	CCC4: Systems and System Models	N/A
NGSS HS Physical Science	Transfer of Thermal Energy (Mini Assessment)	Mini Assessment	HS-PS3-4, SEP3, PS3.B, PS3.D, CCC4	Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics).	SEP3: Planning and Carrying Out Investigations	PS3.B: Conservation of Energy and Energy Transfer PS3.D: Energy in Chemical Processes and Everyday Life	CCC4: Systems and System Models	N/A
NGSS HS Physical Science	Is it Hot or Cold? (Physical Science Assessment)	Assessment	HS-PS3-4, SEP3, PS3.B, PS3.D, CCC4	Plan and conduct an investigation to provide evidence that the transfer of thermal energy when two components of different temperature are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics).	SEP3: Planning and Carrying Out Investigations	PS3.B: Conservation of Energy and Energy Transfer PS3.D: Energy in Chemical Processes and Everyday Life	CCC4: Systems and System Models	N/A
NGSS HS Physical Science	Models of Objects Interacting in Electric and Magnetic Fields (Achieving)	Activity - Achieving	HS-PS3-5, SEP2, PS3.C, CCC2	Develop and use a model of two objedcts interacting through electric or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction.	SEP2: Developing and Using Models	PS3.C: Relationship Between Energy and Forces	CCC2: Cause and Effect	N/A

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NGSS HS Physical Science	Models of Objects Interacting in Electric and Magnetic Fields (Emerging)	Activity - Emerging	HS-PS3-5, SEP2, PS3.C, CCC2	Develop and use a model of two objedcts interacting through electric or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction.	SEP2: Developing and Using Models	PS3.C: Relationship Between Energy and Forces	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	Models of Objects Interacting in Electric and Magnetic Fields (Mini Assessment)	Mini Assessment	HS-PS3-5, SEP2, PS3.C, CCC2	Develop and use a model of two objedcts interacting through electric or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction.	SEP2: Developing and Using Models	PS3.C: Relationship Between Energy and Forces	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	Transformers Part 2 (Physical Science Assessment)	Assessment	HS-PS3-5, SEP2, PS3.C, CCC2	Develop and use a model of two objedcts interacting through electric or magnetic fields to illustrate the forces between objects and the changes in energy of the objects due to the interaction.	SEP2: Developing and Using Models	PS3.C: Relationship Between Energy and Forces	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	Relationship of Wave Properties in Various Media (Achieving)	Activity - Achieving	HS-PS4-1, SEP5, PS4.A, CCC2	Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media.	SEP5: Using Mathematics and Computational Thinking	PS4.A: Wave Properties	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	Relationship of Wave Properties in Various Media (Emerging)	Activity - Emerging	HS-PS4-1, SEP5, PS4.A, CCC2	Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media.	SEP5: Using Mathematics and Computational Thinking	PS4.A: Wave Properties	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	Relationship of Wave Properties in Various Media (Mini Assessment)	Mini Assessment	HS-PS4-1, SEP5, PS4.A, CCC2	Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media.	SEP5: Using Mathematics and Computational Thinking	PS4.A: Wave Properties	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	Seismic Waves (Physical Science Assessment)	Assessment	HS-PS4-1, SEP5, PS4.A, CCC2	Use mathematical representations to support a claim regarding relationships among the frequency, wavelength, and speed of waves traveling in various media.	SEP5: Using Mathematics and Computational Thinking	PS4.A: Wave Properties	CCC2: Cause and Effect	N/A

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NGSS HS Physical Science	Advantages of Digital Transmission (Achieving)	Activity - Achieving	HS-PS4-2, SEP1, PS4.A, CCC7	Evaluate questions about the advantages of using a digital transmission and storage of information.	SEP1: Asking Questions and Defining Problems	PS4.A: Wave Properties	CCC7: Stability and Change	N/A
NGSS HS Physical Science	Advantages of Digital Transmission (Emerging)	Activity - Emerging	HS-PS4-2, SEP1, PS4.A, CCC7	Evaluate questions about the advantages of using a digital transmission and storage of information.	SEP1: Asking Questions and Defining Problems	PS4.A: Wave Properties	CCC7: Stability and Change	N/A
NGSS HS Physical Science	Advantages of Digital Transmission (Mini Assessment)	Mini Assessment	HS-PS4-2, SEP1, PS4.A, CCC7	Evaluate questions about the advantages of using a digital transmission and storage of information.	SEP1: Asking Questions and Defining Problems	PS4.A: Wave Properties	CCC7: Stability and Change	N/A
NGSS HS Physical Science	Cyber Security (Physical Science Assessment)	Assessment	HS-PS4-2, SEP1, PS4.A, CCC7	Evaluate questions about the advantages of using a digital transmission and storage of information.	SEP1: Asking Questions and Defining Problems	PS4.A: Wave Properties	CCC7: Stability and Change	N/A
NGSS HS Physical Science	Model of Electromagnetic Radiation (Achieving)	Activity - Achieving	HS-PS4-3, SEP7, PS4.A, PS4.B, CCC4	Evaluate the claims, evidence, and reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other.	SEP7: Engaging in Argument From Evidence	PS4.A: Wave Properties PS4.B: Electromagnetic Radiation	CCC4: Systems and System Models	N/A
NGSS HS Physical Science	Model of Electromagnetic Radiation (Emerging)	Activity - Emerging	HS-PS4-3, SEP7, PS4.A, PS4.B, CCC4	Evaluate the claims, evidence, and reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other.	SEP7: Engaging in Argument From Evidence	PS4.A: Wave Properties PS4.B: Electromagnetic Radiation	CCC4: Systems and System Models	N/A
NGSS HS Physical Science	Model of Electromagnetic Radiation (Mini Assessment)	Mini Assessment	HS-PS4-3, SEP7, PS4.A, PS4.B, CCC4	Evaluate the claims, evidence, and reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other.	SEP7: Engaging in Argument From Evidence	PS4.A: Wave Properties PS4.B: Electromagnetic Radiation	CCC4: Systems and System Models	N/A
NGSS HS Physical Science	It's Electric Part 1 (Physical Science Assessment)	Assessment	HS-PS4-3, SEP7, PS4.A, PS4.B, CCC4	Evaluate the claims, evidence, and reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model, and that for some situations one model is more useful than the other.	SEP7: Engaging in Argument From Evidence	PS4.A: Wave Properties PS4.B: Electromagnetic Radiation	CCC4: Systems and System Models	N/A

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NGSS HS Physical Science	Effects of Electromagnetic Radiation on Matter (Achieving)	Activity - Achieving	HS-PS4-4, SEP8, PS4.B, CCC2	Evaluate the validity and reliability of claims in published materials of the effects that different frequencies of electromagnetic radiation have when absorbed by matter.	SEP8: Obtaining, Evaluating, and Communicating Information	PS4.B: Electromagnetic Radiation	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	Effects of Electromagnetic Radiation on Matter (Emerging)	Activity - Emerging	HS-PS4-4, SEP8, PS4.B, CCC2	Evaluate the validity and reliability of claims in published materials of the effects that different frequencies of electromagnetic radiation have when absorbed by matter.	SEP8: Obtaining, Evaluating, and Communicating Information	PS4.B: Electromagnetic Radiation	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	Effects of Electromagnetic Radiation on Matter (Mini Assessment)	Mini Assessment	HS-PS4-4, SEP8, PS4.B, CCC2	Evaluate the validity and reliability of claims in published materials of the effects that different frequencies of electromagnetic radiation have when absorbed by matter.	SEP8: Obtaining, Evaluating, and Communicating Information	PS4.B: Electromagnetic Radiation	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	Red Light Therapy (Physical Science Assessment)	Assessment	HS-PS4-4, SEP8, PS4.B, CCC2	Evaluate the validity and reliability of claims in published materials of the effects that different frequencies of electromagnetic radiation have when absorbed by matter.	SEP8: Obtaining, Evaluating, and Communicating Information	PS4.B: Electromagnetic Radiation	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	Technology Utilizing Waves (Achieving)	Activity - Achieving	HS-PS4-5, SEP8, PS3.D, PS4.A, PS4.B, PS4.C	Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.	SEP8: Obtaining, Evaluating, and Communicating Information	PS3.D: Energy in Chemical Processes and Everyday Life PS4.A: Wave Properties PS4.B: Electromagnetic Radiation PS4.C: Information Technologies and Instrumentation	CCC2: Cause and Effect	N/A

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NGSS HS Physical Science	Technology Utilizing Waves (Emerging)	Activity - Emerging	HS-PS4-5, SEP8, PS3.D, PS4.A, PS4.B, PS4.C	Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.	SEP8: Obtaining, Evaluating, and Communicating Information	PS3.D: Energy in Chemical Processes and Everyday Life PS4.A: Wave Properties PS4.B: Electromagnetic Radiation PS4.C: Information Technologies and Instrumentation	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	Technology Utilizing Waves (Mini Assessment)	Mini Assessment	HS-PS4-5, SEP8, PS3.D, PS4.A, PS4.B, PS4.C	Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.	SEP8: Obtaining, Evaluating, and Communicating Information	PS3.D: Energy in Chemical Processes and Everyday Life PS4.A: Wave Properties PS4.B: Electromagnetic Radiation PS4.C: Information Technologies and Instrumentation	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	It's Electric Part 2 (Physical Science Assessment)	Assessment	HS-PS4-5, SEP8, PS3.D, PS4.A, PS4.B, PS4.C	Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.	SEP8: Obtaining, Evaluating, and Communicating Information	PS3.D: Energy in Chemical Processes and Everyday Life PS4.A: Wave Properties PS4.B: Electromagnetic Radiation PS4.C: Information Technologies and Instrumentation	CCC2: Cause and Effect	N/A
NGSS HS Physical Science	HS Physical Science Course Assessment	Course Assessment	HS-PS	NA	NA	NA	NA	NA

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NGSS HS Life Science	DNA, Genes, and Proteins (Achieving)	Activity - Achieving	HS-LS1-1, SEP6, LS1.A, CCC6	Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.	SEP6: Constructing Explanations and Designing Solutions	LS1.A: Structure and Function	CCC6: Structure and Function	N/A
NGSS HS Life Science	DNA, Genes, and Proteins (Emerging)	Activity - Emerging	HS-LS1-1, SEP6, LS1.A, CCC6	Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.	SEP6: Constructing Explanations and Designing Solutions	LS1.A: Structure and Function	CCC6: Structure and Function	N/A
NGSS HS Life Science	DNA, Genes, and Proteins (Mini Assessment)	Mini Assessment	HS-LS1-1, SEP6, LS1.A, CCC6	Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.	SEP6: Constructing Explanations and Designing Solutions	LS1.A: Structure and Function	CCC6: Structure and Function	N/A
NGSS HS Life Science	Melanin and Skin Color Part 1 (Life Science Assessment)	Assessment	HS-LS1-1, SEP6, LS1.A, CCC6	Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.	SEP6: Constructing Explanations and Designing Solutions	LS1.A: Structure and Function	CCC6: Structure and Function	N/A
NGSS HS Life Science	Interacting Subsystems in Organisms (Achieving)	Activity - Achieving	HS-LS1-2, SEP2, LS1.A, CCC4	Develop and use a model to illustrate the hierarchical organization of interacting subsystems that provide specific functions within multicellular organisms.	SEP2: Developing and Using Models	LS1.A: Structure and Function	CCC4: Systems and System Models	N/A
NGSS HS Life Science	Interacting Subsystems in Organisms (Emerging)	Activity - Emerging	HS-LS1-2, SEP2, LS1.A, CCC4	Develop and use a model to illustrate the hierarchical organization of interacting subsystems that provide specific functions within multicellular organisms.	SEP2: Developing and Using Models	LS1.A: Structure and Function	CCC4: Systems and System Models	N/A
NGSS HS Life Science	Interacting Subsystems in Organisms (Mini Assessment)	Mini Assessment	HS-LS1-2, SEP2, LS1.A, CCC4	Develop and use a model to illustrate the hierarchical organization of interacting subsystems that provide specific functions within multicellular organisms.	SEP2: Developing and Using Models	LS1.A: Structure and Function	CCC4: Systems and System Models	N/A
NGSS HS Life Science	Homeostasis Part 1 (Life Science Assessment)	Assessment	HS-LS1-2, SEP2, LS1.A, CCC4	Develop and use a model to illustrate the hierarchical organization of interacting subsystems that provide specific functions within multicellular organisms.	SEP2: Developing and Using Models	LS1.A: Structure and Function	CCC4: Systems and System Models	N/A

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NGSS HS Life Science	Feedback Mechanisms and Homeostasis (Achieving)	Activity - Achieving	HS-LS1-3, SEP3, LS1.A, CCC7	Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.	SEP3: Planning and Carrying Out Investigations	LS1.A: Structure and Function	CCC7: Stability and Change	N/A
NGSS HS Life Science	Feedback Mechanisms and Homeostasis (Emerging)	Activity - Emerging	HS-LS1-3, SEP3, LS1.A, CCC7	Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.	SEP3: Planning and Carrying Out Investigations	LS1.A: Structure and Function	CCC7: Stability and Change	N/A
NGSS HS Life Science	Feedback Mechanisms and Homeostasis (Mini Assessment)	Mini Assessment	HS-LS1-3, SEP3, LS1.A, CCC7	Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.	SEP3: Planning and Carrying Out Investigations	LS1.A: Structure and Function	CCC7: Stability and Change	N/A
NGSS HS Life Science	Homeostasis Part 2 (Life Science Assessment)	Assessment	HS-LS1-3, SEP3, LS1.A, CCC7	Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.	SEP3: Planning and Carrying Out Investigations	LS1.A: Structure and Function	CCC7: Stability and Change	N/A
NGSS HS Life Science	Cell Division and Differentiation (Achieving)	Activity - Achieving	HS-LS1-4, SEP2, LS1.B, CCC4	Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.	SEP2: Developing and Using Models	LS1.B: Growth and Development of Organisms	CCC4: Systems and System Models	N/A
NGSS HS Life Science	Cell Division and Differentiation (Emerging)	Activity - Emerging	HS-LS1-4, SEP2, LS1.B, CCC4	Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.	SEP2: Developing and Using Models	LS1.B: Growth and Development of Organisms	CCC4: Systems and System Models	N/A
NGSS HS Life Science	Cell Division and Differentiation (Mini Assessment)	Mini Assessment	HS-LS1-4, SEP2, LS1.B, CCC4	Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.	SEP2: Developing and Using Models	LS1.B: Growth and Development of Organisms	CCC4: Systems and System Models	N/A
NGSS HS Life Science	Human Development (Life Science Assessment)	Assessment	HS-LS1-4, SEP2, LS1.B, CCC4	Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.	SEP2: Developing and Using Models	LS1.B: Growth and Development of Organisms	CCC4: Systems and System Models	N/A
NGSS HS Life Science	Photosynthesis (Achieving)	Activity - Achieving	HS-LS1-5, SEP2, LS1.C, CCC5	Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.	SEP2: Developing and Using Models	LS1.C: Organization for Matter and Energy Flow in Organisms	CCC5: Energy and Matter	N/A
NGSS HS Life Science	Photosynthesis (Emerging)	Activity - Emerging	HS-LS1-5, SEP2, LS1.C, CCC5	Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.	SEP2: Developing and Using Models	LS1.C: Organization for Matter and Energy Flow in Organisms	CCC5: Energy and Matter	N/A

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NGSS HS Life Science	Photosynthesis (Mini Assessment)	Mini Assessment	HS-LS1-5, SEP2, LS1.C, CCC5	Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.	SEP2: Developing and Using Models	LS1.C: Organization for Matter and Energy Flow in Organisms	CCC5: Energy and Matter	N/A
NGSS HS Life Science	Chemical Energy Part 2 (Life Science Assessment)	Assessment	HS-LS1-5, SEP2, LS1.C, CCC5	Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.	SEP2: Developing and Using Models	LS1.C: Organization for Matter and Energy Flow in Organisms	CCC5: Energy and Matter	N/A
NGSS HS Life Science	Carbon-Based Molecules (Achieving)	Activity - Achieving	HS-LS1-6, SEP6, LS1.C, CCC5	Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.	SEP6: Constructing Explanations and Designing Solutions	LS1.C: Organization for Matter and Energy Flow in Organisms	CCC5: Energy and Matter	N/A
NGSS HS Life Science	Carbon-Based Molecules (Emerging)	Activity - Emerging	HS-LS1-6, SEP6, LS1.C, CCC5	Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.	SEP6: Constructing Explanations and Designing Solutions	LS1.C: Organization for Matter and Energy Flow in Organisms	CCC5: Energy and Matter	N/A
NGSS HS Life Science	Carbon-Based Molecules (Mini Assessment)	Mini Assessment	HS-LS1-6, SEP6, LS1.C, CCC5	Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.	SEP6: Constructing Explanations and Designing Solutions	LS1.C: Organization for Matter and Energy Flow in Organisms	CCC5: Energy and Matter	N/A
NGSS HS Life Science	Metabolism Part 1 (Life Science Assessment)	Assessment	HS-LS1-6, SEP6, LS1.C, CCC5	Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.	SEP6: Constructing Explanations and Designing Solutions	LS1.C: Organization for Matter and Energy Flow in Organisms	CCC5: Energy and Matter	N/A
NGSS HS Life Science	Cellular Respiration and Energy (Achieving)	Activity - Achieving	HS-LS1-7, SEP2, LS1.C, CCC5	Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken down and the bonds in new compounds are formed resulting in the net transfer of energy.	SEP2: Developing and Using Models	LS1.C: Organization for Matter and Energy Flow in Organisms	CCC5: Energy and Matter	N/A

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NGSS HS Life Science	Cellular Respiration and Energy (Emerging)	Activity - Emerging	HS-LS1-7, SEP2, LS1.C, CCC5	Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken down and the bonds in new compounds are formed resulting in the net transfer of energy.	SEP2: Developing and Using Models	LS1.C: Organization for Matter and Energy Flow in Organisms	CCC5: Energy and Matter	N/A
NGSS HS Life Science	Cellular Respiration and Energy (Mini Assessment)	Mini Assessment	HS-LS1-7, SEP2, LS1.C, CCC5	Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken down and the bonds in new compounds are formed resulting in the net transfer of energy.	SEP2: Developing and Using Models	LS1.C: Organization for Matter and Energy Flow in Organisms	CCC5: Energy and Matter	N/A
NGSS HS Life Science	Chemical Energy Part 3 (Life Science Assessment)	Assessment	HS-LS1-7, SEP2, LS1.C, CCC5	Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken down and the bonds in new compounds are formed resulting in the net transfer of energy.	SEP2: Developing and Using Models	LS1.C: Organization for Matter and Energy Flow in Organisms	CCC5: Energy and Matter	N/A
NGSS HS Life Science	Carrying Capacity of Ecosystems (Achieving)	Activity - Achieving	HS-LS2-1, SEP5, LS2.A, CCC3	Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.	SEP5: Using Mathematics and Computational Thinking	LS2.A: Interdependent Relationships in Ecosystems	CCC3: Scale, Proportion, and Quantity	N/A
NGSS HS Life Science	Carrying Capacity of Ecosystems (Emerging)	Activity - Emerging	HS-LS2-1, SEP5, LS2.A, CCC3	Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.	SEP5: Using Mathematics and Computational Thinking	LS2.A: Interdependent Relationships in Ecosystems	CCC3: Scale, Proportion, and Quantity	N/A
NGSS HS Life Science	Carrying Capacity of Ecosystems (Mini Assessment)	Mini Assessment	HS-LS2-1, SEP5, LS2.A, CCC3	Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.	SEP5: Using Mathematics and Computational Thinking	LS2.A: Interdependent Relationships in Ecosystems	CCC3: Scale, Proportion, and Quantity	N/A
NGSS HS Life Science	Anguish in the Arctic Part 1 (Life Science Assessment)	Assessment	HS-LS2-1, SEP5, LS2.A, CCC3	Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.	SEP5: Using Mathematics and Computational Thinking	LS2.A: Interdependent Relationships in Ecosystems	CCC3: Scale, Proportion, and Quantity	N/A

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NGSS HS Life Science	Biodiversity in Ecosystems (Achieving)	Activity - Achieving	HS-LS2-2, SEP5, LS2.A, LS2.C, CCC3	Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.	SEP5: Using Mathematics and Computational Thinking	LS2.A: Interdependent Relationships in Ecosystems LS2.C: Ecosystem Dynamics, Functioning, and Resilience	CCC3: Scale, Proportion, and Quantity	N/A
NGSS HS Life Science	Biodiversity in Ecosystems (Emerging)	Activity - Emerging	HS-LS2-2, SEP5, LS2.A, LS2.C, CCC3	Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.	SEP5: Using Mathematics and Computational Thinking	LS2.A: Interdependent Relationships in Ecosystems LS2.C: Ecosystem Dynamics, Functioning, and Resilience	CCC3: Scale, Proportion, and Quantity	N/A
NGSS HS Life Science	Biodiversity in Ecosystems (Mini Assessment)	Mini Assessment	HS-LS2-2, SEP5, LS2.A, LS2.C, CCC3	Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.	SEP5: Using Mathematics and Computational Thinking	LS2.A: Interdependent Relationships in Ecosystems LS2.C: Ecosystem Dynamics, Functioning, and Resilience	CCC3: Scale, Proportion, and Quantity	N/A
NGSS HS Life Science	Anguish in the Arctic Part 2 (Life Science Assessment)	Assessment	HS-LS2-2, SEP5, LS2.A, LS2.C, CCC3	Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.	SEP5: Using Mathematics and Computational Thinking	LS2.A: Interdependent Relationships in Ecosystems LS2.C: Ecosystem Dynamics, Functioning, and Resilience	CCC3: Scale, Proportion, and Quantity	N/A
NGSS HS Life Science	Aerobic and Anaerobic Conditions (Achieving)	Activity - Achieving	HS-LS2-3, SEP6, LS2.B, CCC5	Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditons.	SEP6: Constructing Explanations and Designing Solutions	LS2.B: Cycles of Matter and Energy Transfer in Ecosystems	CCC5: Energy and Matter	N/A
NGSS HS Life Science	Aerobic and Anaerobic Conditions (Emerging)	Activity - Emerging	HS-LS2-3, SEP6, LS2.B, CCC5	Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditons.	SEP6: Constructing Explanations and Designing Solutions	LS2.B: Cycles of Matter and Energy Transfer in Ecosystems	CCC5: Energy and Matter	N/A

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NGSS HS Life Science	Aerobic and Anaerobic Conditions (Mini Assessment)	Mini Assessment	HS-LS2-3, SEP6, LS2.B, CCC5	Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditons.	SEP6: Constructing Explanations and Designing Solutions	LS2.B: Cycles of Matter and Energy Transfer in Ecosystems	CCC5: Energy and Matter	N/A
NGSS HS Life Science	Yellowstone National Park Part 1 (Life Science Assessment)	Assessment	HS-LS2-3, SEP6, LS2.B, CCC5	Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditons.	SEP6: Constructing Explanations and Designing Solutions	LS2.B: Cycles of Matter and Energy Transfer in Ecosystems	CCC5: Energy and Matter	N/A
NGSS HS Life Science	Cycling of Matter and Flow of Energy in Ecosystems (Achieving)	Activity - Achieving	HS-LS2-4, SEP5, LS2.B, CCC5	Use mathematical representations to suppor claims for the cycling of matter and flow of energy among organisms in an ecosystem.	SEP5: Using Mathematics and Computational Thinking	LS2.B: Cycles of Matter and Energy Transfer in Ecosystems	CCC5: Energy and Matter	N/A
NGSS HS Life Science	Cycling of Matter and Flow of Energy in Ecosystems (Emerging)	Activity - Emerging	HS-LS2-4, SEP5, LS2.B, CCC5	Use mathematical representations to suppor claims for the cycling of matter and flow of energy among organisms in an ecosystem.	SEP5: Using Mathematics and Computational Thinking	LS2.B: Cycles of Matter and Energy Transfer in Ecosystems	CCC5: Energy and Matter	N/A
NGSS HS Life Science	Cycling of Matter and Flow of Energy in Ecosystems (Mini Assessment)	Mini Assessment	HS-LS2-4, SEP5, LS2.B, CCC5	Use mathematical representations to suppor claims for the cycling of matter and flow of energy among organisms in an ecosystem.	SEP5: Using Mathematics and Computational Thinking	LS2.B: Cycles of Matter and Energy Transfer in Ecosystems	CCC5: Energy and Matter	N/A
NGSS HS Life Science	Metabolism Part 2 (Life Science Assessment)	Assessment	HS-LS2-4, SEP5, LS2.B, CCC5	Use mathematical representations to suppor claims for the cycling of matter and flow of energy among organisms in an ecosystem.	SEP5: Using Mathematics and Computational Thinking	LS2.B: Cycles of Matter and Energy Transfer in Ecosystems	CCC5: Energy and Matter	N/A
NGSS HS Life Science	Carbon Cycle in the Earth System (Achieving)	Activity - Achieving	HS-LS2-5, SEP2, LS2.B, PS3.D, CCC4	Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.	SEP2: Developing and Using Models	LS2.B: Cycles of Matter and Energy Transfer in Ecosystems PS3.D: Energy in Chemical Processes and Everyday Life	CCC4: Systems and System Models	N/A
NGSS HS Life Science	Carbon Cycle in the Earth System (Emerging)	Activity - Emerging	HS-LS2-5, SEP2, LS2.B, PS3.D, CCC4	Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.	SEP2: Developing and Using Models	LS2.B: Cycles of Matter and Energy Transfer in Ecosystems PS3.D: Energy in Chemical Processes and Everyday Life	CCC4: Systems and System Models	N/A

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NGSS HS Life Science	Carbon Cycle in the Earth System (Mini Assessment)	Mini Assessment	HS-LS2-5, SEP2, LS2.B, PS3.D, CCC4	Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.	SEP2: Developing and Using Models	LS2.B: Cycles of Matter and Energy Transfer in Ecosystems PS3.D: Energy in Chemical Processes and Everyday Life	CCC4: Systems and System Models	N/A
NGSS HS Life Science	Yellowstone National Park Part 2 (Life Science Assessment)	Assessment	HS-LS2-5, SEP2, LS2.B, PS3.D, CCC4	Develop a model to illustrate the role of photosynthesis and cellular respiration in the cycling of carbon among the biosphere, atmosphere, hydrosphere, and geosphere.	SEP2: Developing and Using Models	LS2.B: Cycles of Matter and Energy Transfer in Ecosystems PS3.D: Energy in Chemical Processes and Everyday Life	CCC4: Systems and System Models	N/A
NGSS HS Life Science	Complex Interactions in Ecosystems (Achieving)	Activity - Achieving	HS-LS2-6, SEP7, LS2.C, CCC7	Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organsims in stable conditions, but changing conditions may result in a new ecosystem.	SEP7: Engaging in Argument From Evidence	LS2.C: Ecosystem Dynamics, Functioning, and Resilience	CCC7: Stability and Change	N/A
NGSS HS Life Science	Complex Interactions in Ecosystems (Emerging)	Activity - Emerging	HS-LS2-6, SEP7, LS2.C, CCC7	Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organsims in stable conditions, but changing conditions may result in a new ecosystem.	SEP7: Engaging in Argument From Evidence	LS2.C: Ecosystem Dynamics, Functioning, and Resilience	CCC7: Stability and Change	N/A
NGSS HS Life Science	Complex Interactions in Ecosystems (Mini Assessment)	Mini Assessment	HS-LS2-6, SEP7, LS2.C, CCC7	Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organsims in stable conditions, but changing conditions may result in a new ecosystem.	SEP7: Engaging in Argument From Evidence	LS2.C: Ecosystem Dynamics, Functioning, and Resilience	CCC7: Stability and Change	N/A
NGSS HS Life Science	Anguish in the Arctic Part 3 (Life Science Assessment)	Assessment	HS-LS2-6, SEP7, LS2.C, CCC7	Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organsims in stable conditions, but changing conditions may result in a new ecosystem.	SEP7: Engaging in Argument From Evidence	LS2.C: Ecosystem Dynamics, Functioning, and Resilience	CCC7: Stability and Change	N/A

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NGSS HS Life Science	Reducing Human Impact on Biodiversity and the Environment (Achieving)	Activity - Achieving	HS-LS2-7, HS-ETS1-3, HS-ETS1-4, SEP6, LS2.C, LS4.D, CCC7	Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.	SEP6: Constructing Explanations and Designing Solutions	LS2.C: Ecosystem Dynamics, Functioning, and Resilience LS4.D: Biodiversity and Humans	CCC7: Stability and Change	ETS1.B: Developing Possible Solutions
NGSS HS Life Science	Reducing Human Impact on Biodiversity and the Environment (Emerging)	Activity - Emerging	HS-LS2-7, HS-ETS1-3, HS-ETS1-4, SEP6, LS2.C, LS4.D, CCC7	Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.	SEP6: Constructing Explanations and Designing Solutions	LS2.C: Ecosystem Dynamics, Functioning, and Resilience LS4.D: Biodiversity and Humans	CCC7: Stability and Change	ETS1.B: Developing Possible Solutions
NGSS HS Life Science	Reducing Human Impact on Biodiversity and the Environment (Mini Assessment)	Mini Assessment	HS-LS2-7, HS-ETS1-3, HS-ETS1-4, SEP6, LS2.C, LS4.D, CCC7	Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.	SEP6: Constructing Explanations and Designing Solutions	LS2.C: Ecosystem Dynamics, Functioning, and Resilience LS4.D: Biodiversity and Humans	CCC7: Stability and Change	ETS1.B: Developing Possible Solutions
NGSS HS Life Science	Yellowfin Tuna (Life Science Assessment)	Assessment	HS-LS2-7, HS-ETS1-3, HS-ETS1-4, SEP6, LS2.C, LS4.D, CCC7	Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.	SEP6: Constructing Explanations and Designing Solutions	LS2.C: Ecosystem Dynamics, Functioning, and Resilience LS4.D: Biodiversity and Humans	CCC7: Stability and Change	ETS1.B: Developing Possible Solutions
NGSS HS Life Science	Role of Group Behavior (Achieving)	Activity - Achieving	HS-LS2-8, SEP7, LS2.D, CCC2	Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.	SEP7: Engaging in Argument From Evidence	LS2.D: Biodiversity and Humans	CCC2: Cause and Effect	N/A
NGSS HS Life Science	Role of Group Behavior (Emerging)	Activity - Emerging	HS-LS2-8, SEP7, LS2.D, CCC2	Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.	SEP7: Engaging in Argument From Evidence	LS2.D: Biodiversity and Humans	CCC2: Cause and Effect	N/A
NGSS HS Life Science	Role of Group Behavior (Mini Assessment)	Mini Assessment	HS-LS2-8, SEP7, LS2.D, CCC2	Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.	SEP7: Engaging in Argument From Evidence	LS2.D: Biodiversity and Humans	CCC2: Cause and Effect	N/A
NGSS HS Life Science	Superb Starlings (Life Science Assessment)	Assessment	HS-LS2-8, SEP7, LS2.D, CCC2	Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.	SEP7: Engaging in Argument From Evidence	LS2.D: Biodiversity and Humans	CCC2: Cause and Effect	N/A

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NGSS HS Life Science	The Role of DNA and Chromosomes (Achieving)	Activity - Achieving	HS-LS3-1, SEP1, LS1.A, LS3.A, CCC2	Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.	SEP1: Asking Questions and Defining Problems	LS1.A: Structure and Function LS3.A Inheritance of Traits	CCC2: Cause and Effect	N/A
NGSS HS Life Science	The Role of DNA and Chromosomes (Emerging)	Activity - Emerging	HS-LS3-1, SEP1, LS1.A, LS3.A, CCC2	Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.	SEP1: Asking Questions and Defining Problems	LS1.A: Structure and Function LS3.A Inheritance of Traits	CCC2: Cause and Effect	N/A
NGSS HS Life Science	The Role of DNA and Chromosomes (Mini Assessment)	Mini Assessment	HS-LS3-1, SEP1, LS1.A, LS3.A, CCC2	Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.	SEP1: Asking Questions and Defining Problems	LS1.A: Structure and Function LS3.A Inheritance of Traits	CCC2: Cause and Effect	N/A
NGSS HS Life Science	Melanin and Skin Color Part 2 (Life Science Assessment)	Assessment	HS-LS3-1, SEP1, LS1.A, LS3.A, CCC2	Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.	SEP1: Asking Questions and Defining Problems	LS1.A: Structure and Function LS3.A Inheritance of Traits	CCC2: Cause and Effect	N/A
NGSS HS Life Science	Inherited Genetic Variation (Achieving)	Activity - Achieving	HS-LS3-2, SEP7, LS3.B, CCC2	Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.	SEP7: Engaging in Argument From Evidence	LS3.B: Variation of Traits	CCC2: Cause and Effect	N/A
NGSS HS Life Science	Inherited Genetic Variation (Emerging)	Activity - Emerging	HS-LS3-2, SEP7, LS3.B, CCC2	Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.	SEP7: Engaging in Argument From Evidence	LS3.B: Variation of Traits	CCC2: Cause and Effect	N/A
NGSS HS Life Science	Inherited Genetic Variation (Mini Assessment)	Mini Assessment	HS-LS3-2, SEP7, LS3.B, CCC2	Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.	SEP7: Engaging in Argument From Evidence	LS3.B: Variation of Traits	CCC2: Cause and Effect	N/A

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NGSS HS Life Science	Feralization: Becoming Wild Part 1 (Life Science Assessment)	Assessment	HS-LS3-2, SEP7, LS3.B, CCC2	Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.	SEP7: Engaging in Argument From Evidence	LS3.B: Variation of Traits	CCC2: Cause and Effect	N/A
NGSS HS Life Science	Variation and Distribution of Traits (Achieving)	Activity - Achieving	HS-LS3-3, SEP4, LS3.B, CCC3	Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.	SEP4: Analyzing and Interpreting Data	LS3.B: Variation of Traits	CCC3: Scale, Proportion, and Quantity	N/A
NGSS HS Life Science	Variation and Distribution of Traits (Emerging)	Activity - Emerging	HS-LS3-3, SEP4, LS3.B, CCC3	Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.	SEP4: Analyzing and Interpreting Data	LS3.B: Variation of Traits	CCC3: Scale, Proportion, and Quantity	N/A
NGSS HS Life Science	Variation and Distribution of Traits (Mini Assessment)	Mini Assessment	HS-LS3-3, SEP4, LS3.B, CCC3	Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.	SEP4: Analyzing and Interpreting Data	LS3.B: Variation of Traits	CCC3: Scale, Proportion, and Quantity	N/A
NGSS HS Life Science	Feralization: Becoming Wild Part 2 (Life Science Assessment)	Assessment	HS-LS3-3, SEP4, LS3.B, CCC3	Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.		LS3.B: Variation of Traits	CCC3: Scale, Proportion, and Quantity	N/A
NGSS HS Life Science	Evidence of Common Ancestry and Evolution (Achieving)	Activity - Achieving	HS-LS4-1, SEP8, LS4.A, CCC1	Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.	SEP8: Obtaining, Evaluating, and Communicating Information	LS4.A: Evidence of Common Ancestry and Diversity	CCC1: Patterns	N/A
NGSS HS Life Science	Evidence of Common Ancestry and Evolution (Emerging)	Activity - Emerging	HS-LS4-1, SEP8, LS4.A, CCC1	Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.	SEP8: Obtaining, Evaluating, and Communicating Information	LS4.A: Evidence of Common Ancestry and Diversity	CCC1: Patterns	N/A
NGSS HS Life Science	Evidence of Common Ancestry and Evolution (Mini Assessment)	Mini Assessment	HS-LS4-1, SEP8, LS4.A, CCC1	Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.	SEP8: Obtaining, Evaluating, and Communicating Information	LS4.A: Evidence of Common Ancestry and Diversity	CCC1: Patterns	N/A
NGSS HS Life Science	Evidence for Common Ancestry and Evolution (Life Science Assessment)	Assessment	HS-LS4-1, SEP8, LS4.A, CCC1	Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.	SEP8: Obtaining, Evaluating, and Communicating Information	LS4.A: Evidence of Common Ancestry and Diversity	CCC1: Patterns	N/A

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NGSS HS Life Science	Factors Influencing Evolution (Achieving)	Activity - Achieving	HS-LS4-2, SEP6, LS4.B, LS4.C, CCC2	Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.	SEP6: Constructing Explanations and Designing Solutions	LS4.B: Natural Selection LS4.C: Adaptation	CCC2: Cause and Effect	N/A
NGSS HS Life Science	Factors Influencing Evolution (Emerging)	Activity - Emerging	HS-LS4-2, SEP6, LS4.B, LS4.C, CCC2	Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.	SEP6: Constructing Explanations and Designing Solutions	LS4.B: Natural Selection LS4.C: Adaptation	CCC2: Cause and Effect	N/A
NGSS HS Life Science	Factors Influencing Evolution (Mini Assessment)	Mini Assessment	HS-LS4-2, SEP6, LS4.B, LS4.C, CCC2	Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.	SEP6: Constructing Explanations and Designing Solutions	LS4.B: Natural Selection LS4.C: Adaptation	CCC2: Cause and Effect	N/A

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NGSS HS Life Science	Tawny Owls Part 1 (Life Science Assessment)	Assessment	HS-LS4-2, SEP6, LS4.B, LS4.C, CCC2	Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.	SEP6: Constructing Explanations and Designing Solutions	LS4.B: Natural Selection LS4.C: Adaptation	CCC2: Cause and Effect	N/A
NGSS HS Life Science	Natural Selection and Advantageous Heritable Traits (Achieving)	Activity - Achieving	HS-LS4-3, SEP4, LS4.B, LS4.C, CCC1	Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.	SEP4: Analyzing and Interpreting Data	LS4.B: Natural Selection LS4.C: Adaptation	CCC1: Patterns	N/A
NGSS HS Life Science	Natural Selection and Advantageous Heritable Traits (Emerging)	Activity - Emerging	HS-LS4-3, SEP4, LS4.B, LS4.C, CCC1	Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.	SEP4: Analyzing and Interpreting Data	LS4.B: Natural Selection LS4.C: Adaptation	CCC1: Patterns	N/A
NGSS HS Life Science	Natural Selection and Advantageous Heritable Traits (Mini Assessment)	Mini Assessment	HS-LS4-3, SEP4, LS4.B, LS4.C, CCC1	Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.	SEP4: Analyzing and Interpreting Data	LS4.B: Natural Selection LS4.C: Adaptation	CCC1: Patterns	N/A
NGSS HS Life Science	Tawny Owls Part 2 (Life Science Assessment)	Assessment	HS-LS4-3, SEP4, LS4.B, LS4.C, CCC1	Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.	SEP4: Analyzing and Interpreting Data	LS4.B: Natural Selection LS4.C: Adaptation	CCC1: Patterns	N/A
NGSS HS Life Science	Natural Selection Leads to Adaptation (Achieving)	Activity - Achieving	HS-LS4-4, SEP6, LS4.C, CCC2	Construct an explanation based on evidence for how natural selection leads to adaptation of populations.	SEP6: Constructing Explanations and Designing Solutions	LS4.C: Adaptation	CCC2: Cause and Effect	N/A
NGSS HS Life Science	Natural Selection Leads to Adaptation (Emerging)	Activity - Emerging	HS-LS4-4, SEP6, LS4.C, CCC2	Construct an explanation based on evidence for how natural selection leads to adaptation of populations.	SEP6: Constructing Explanations and Designing Solutions	LS4.C: Adaptation	CCC2: Cause and Effect	N/A

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NGSS HS Life Science	Natural Selection Leads to Adaptation (Mini Assessment)	Mini Assessment	HS-LS4-4, SEP6, LS4.C, CCC2	Construct an explanation based on evidence for how natural selection leads to adaptation of populations.	SEP6: Constructing Explanations and Designing Solutions	LS4.C: Adaptation	CCC2: Cause and Effect	N/A
NGSS HS Life Science	Melanin and Skin Color Part 3 (Life Science Assessment)	Assessment	HS-LS4-4, SEP6, LS4.C, CCC2	Construct an explanation based on evidence for how natural selection leads to adaptation of populations.	SEP6: Constructing Explanations and Designing Solutions	LS4.C: Adaptation	CCC2: Cause and Effect	N/A
NGSS HS Life Science	Changing Environment, Speciation, and Extinction (Achieving)	Activity - Achieving	HS-LS4-5, SEP7, LS4.C, CCC2	Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.	SEP7: Engaging in Argument from Evidence	LS4.C: Adaptation	CCC2: Cause and Effect	N/A
NGSS HS Life Science	Changing Environment, Speciation, and Extinction (Emerging)	Activity - Emerging	HS-LS4-5, SEP7, LS4.C, CCC2	Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.	SEP7: Engaging in Argument from Evidence	LS4.C: Adaptation	CCC2: Cause and Effect	N/A
NGSS HS Life Science	Changing Environment, Speciation, and Extinction (Mini Assessment)	Mini Assessment	HS-LS4-5, SEP7, LS4.C, CCC2	Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.	SEP7: Engaging in Argument from Evidence	LS4.C: Adaptation	CCC2: Cause and Effect	N/A
NGSS HS Life Science	Trying to Survive (Life Science Assessment)	Assessment	HS-LS4-5, SEP7, LS4.C, CCC2	Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.	SEP7: Engaging in Argument from Evidence	LS4.C: Adaptation	CCC2: Cause and Effect	N/A
NGSS HS Life Science	Using Simulations to Test Solutions to Mitigate Human Impact on Biodiversity (Achieving)	Activity - Achieving	HS-LS4-6, HS-ETS1-3, HS-ETS1-4, SEP5, LS4.CD, LS4.D, CCC2	Create or revise a simuation to test a solution to mitigate the adverse impacts of human activity on biodiversity.	SEP5: Using Mathematics and Computational Thinking	LS4.C: Adaptation LS4.D: Biodiversity and Humans	CCC2: Cause and Effect	ETS1.B: Developing Possible Solutions

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NGSS HS Life Science	Using Simulations to Test Solutions to Mitigate Human Impact on Biodiversity (Emerging)	Activity - Emerging	HS-LS4-6, HS-ETS1-3, HS-ETS1-4, SEP5, LS4.CD, LS4.D, CCC2	Create or revise a simuation to test a solution to mitigate the adverse impacts of human activity on biodiversity.	SEP5: Using Mathematics and Computational Thinking	LS4.C: Adaptation LS4.D: Biodiversity and Humans	CCC2: Cause and Effect	ETS1.B: Developing Possible Solutions
NGSS HS Life Science	Using Simulations to Test Solutions to Mitigate Human Impact on Biodiversity (Mini Assessment)	Mini Assessment	HS-LS4-6, HS-ETS1-3, HS-ETS1-4, SEP5, LS4.CD, LS4.D, CCC2	Create or revise a simuation to test a solution to mitigate the adverse impacts of human activity on biodiversity.	SEP5: Using Mathematics and Computational Thinking	LS4.C: Adaptation LS4.D: Biodiversity and Humans	CCC2: Cause and Effect	ETS1.B: Developing Possible Solutions
NGSS HS Life Science	Overfishing and Sustainability Part 3 (Life Science Assessment)	Assessment	HS-LS4-6, HS-ETS1-3, HS-ETS1-4, SEP5, LS4.CD, LS4.D, CCC2	Create or revise a simuation to test a solution to mitigate the adverse impacts of human activity on biodiversity.	SEP5: Using Mathematics and Computational Thinking	LS4.C: Adaptation LS4.D: Biodiversity and Humans	CCC2: Cause and Effect	ETS1.B: Developing Possible Solutions
NGSS HS Life Science	HS Life Science Course Assessment	Course Assessment	HS-LS	NA	NA	NA	NA	NA
NGSS HS Earth and Space Sciences	Lifespan of the Sun (Achieving)	Activity - Achieving	HS-ESS1-1, SEP2, ESS1.A, PS3.D, CCC3	Develop a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun's core to release energy in the form of radiation.	SEP2: Developing and Using Models	ESS1.A: The Universe and Its Stars PS3.D: Energy in Chemical Processes and Everyday Life	CCC3: Scale, Proportion, and Quantity	N/A
NGSS HS Earth and Space Sciences	Lifespan of the Sun (Emerging)	Activity - Emerging	HS-ESS1-1, SEP2, ESS1.A, PS3.D, CCC3	Develop a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun's core to release energy in the form of radiation.	SEP2: Developing and Using Models	ESS1.A: The Universe and Its Stars PS3.D: Energy in Chemical Processes and Everyday Life	CCC3: Scale, Proportion, and Quantity	N/A
NGSS HS Earth and Space Sciences	Lifespan of the Sun (Mini Assessment)	Mini Assessment	HS-ESS1-1, SEP2, ESS1.A, PS3.D, CCC3	Develop a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun's core to release energy in the form of radiation.	SEP2: Developing and Using Models	ESS1.A: The Universe and Its Stars PS3.D: Energy in Chemical Processes and Everyday Life	CCC3: Scale, Proportion, and Quantity	N/A

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NGSS HS Earth and Space Sciences	Nuclear Processes Part 2 (Earth Space Science Assessment)	Assessment	HS-ESS1-1, SEP2, ESS1.A, PS3.D, CCC3	Develop a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun's core to release energy in the form of radiation.	SEP2: Developing and Using Models	ESS1.A: The Universe and Its Stars PS3.D: Energy in Chemical Processes and Everyday Life	CCC3: Scale, Proportion, and Quantity	N/A
NGSS HS Earth and Space Sciences	The Big Bang Theory (Achieving)	Activity - Achieving	HS-ESS1-2, SEP6, ESS1.A, PS4.B, CCC5	Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.	SEP6: Constructing Explanations and Designing Solutions	ESS1.A: The Universe and Its Stars PS4.B: Electromagnetic Radiation	CCC5: Energy and Matter	N/A
NGSS HS Earth and Space Sciences	The Big Bang Theory (Emerging)	Activity - Emerging	HS-ESS1-2, SEP6, ESS1.A, PS4.B, CCC5	Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.	SEP6: Constructing Explanations and Designing Solutions	ESS1.A: The Universe and Its Stars PS4.B: Electromagnetic Radiation	CCC5: Energy and Matter	N/A
NGSS HS Earth and Space Sciences	The Big Bang Theory (Mini Assessment)	Mini Assessment	HS-ESS1-2, SEP6, ESS1.A, PS4.B, CCC5	Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.	SEP6: Constructing Explanations and Designing Solutions	ESS1.A: The Universe and Its Stars PS4.B: Electromagnetic Radiation	CCC5: Energy and Matter	N/A
NGSS HS Earth and Space Sciences	Where It All Started Part 1 (Earth Space Science Assessment)	Assessment	HS-ESS1-2, SEP6, ESS1.A, PS4.B, CCC5	Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.	SEP6: Constructing Explanations and Designing Solutions	ESS1.A: The Universe and Its Stars PS4.B: Electromagnetic Radiation	CCC5: Energy and Matter	N/A
NGSS HS Earth and Space Sciences	Composition of Stars (Achieving)	Activity - Achieving	HS-ESS1-3, SEP8, ESS1.A, CCC5	Communicate scientific ideas about the way stars, over their life cycle, produce elements.	SEP8: Obtaining, Evaluating, and Communicating Information	ESS1.A: The Universe and Its Stars	CCC5: Energy and Matter	N/A
NGSS HS Earth and Space Sciences	Composition of Stars (Emerging)	Activity - Emerging	HS-ESS1-3, SEP8, ESS1.A, CCC5	Communicate scientific ideas about the way stars, over their life cycle, produce elements.	SEP8: Obtaining, Evaluating, and Communicating Information		CCC5: Energy and Matter	N/A
NGSS HS Earth and Space Sciences	Composition of Stars (Mini Assessment)	Mini Assessment	HS-ESS1-3, SEP8, ESS1.A, CCC5	Communicate scientific ideas about the way stars, over their life cycle, produce elements.	SEP8: Obtaining, Evaluating, and Communicating Information		CCC5: Energy and Matter	N/A

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NGSS HS Earth and Space Sciences	Where It All Started Part 2 (Earth Space Science Assessment)	Assessment	HS-ESS1-3, SEP8, ESS1.A, CCC5	Communicate scientific ideas about the way stars, over their life cycle, produce elements.	SEP8: Obtaining, Evaluating, and Communicating Information		CCC5: Energy and Matter	N/A
NGSS HS Earth and Space Sciences	Orbital Motions (Achieving)	Activity - Achieving	HS-ESS1-4, SEP5, ESS1.B, CCC3	Use mathematical or computational representations to predict the motion of orbiting objects in the solar system.	SEP5: Using Mathematics and Computational Thinking	ESS1.B: Earth and the Solar System	CCC3: Scale, Proportion, and Quantity	N/A
NGSS HS Earth and Space Sciences	Orbital Motions (Emerging)	Activity - Emerging	HS-ESS1-4, SEP5, ESS1.B, CCC3	Use mathematical or computational representations to predict the motion of orbiting objects in the solar system.	SEP5: Using Mathematics and Computational Thinking	ESS1.B: Earth and the Solar System	CCC3: Scale, Proportion, and Quantity	N/A
NGSS HS Earth and Space Sciences	Orbital Motions (Mini Assessment)	Mini Assessment	HS-ESS1-4, SEP5, ESS1.B, CCC3	Use mathematical or computational representations to predict the motion of orbiting objects in the solar system.	SEP5: Using Mathematics and Computational Thinking	ESS1.B: Earth and the Solar System	CCC3: Scale, Proportion, and Quantity	N/A
NGSS HS Earth and Space Sciences	Near-Earth Asteroids (Earth Space Science Assessment)	Assessment	HS-ESS1-4, SEP5, ESS1.B, CCC3	Use mathematical or computational representations to predict the motion of orbiting objects in the solar system.	SEP5: Using Mathematics and Computational Thinking	ESS1.B: Earth and the Solar System	CCC3: Scale, Proportion, and Quantity	N/A
NGSS HS Earth and Space Sciences	Evidence of Plate Motion (Achieving)	Activity - Achieving	HS-ESS1-5, SEP7, ESS1.C, ESS2.B, PS1.C, CCC1	Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.	SEP7: Engaging in Argument from Evidence	ESS1.C: The History of Planet Earth ESS2.B: Plate Tectonics and Large-Scale System Interactions PS1.C: Nuclear Processes	CCC1: Patterns	N/A
NGSS HS Earth and Space Sciences	Evidence of Plate Motion (Emerging)	Activity - Emerging	HS-ESS1-5, SEP7, ESS1.C, ESS2.B, PS1.C, CCC1	Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.	SEP7: Engaging in Argument from Evidence	ESS1.C: The History of Planet Earth ESS2.B: Plate Tectonics and Large-Scale System Interactions PS1.C: Nuclear Processes	CCC1: Patterns	N/A

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NGSS HS Earth and Space Sciences	Evidence of Plate Motion (Mini Assessment)	Mini Assessment	HS-ESS1-5, SEP7, ESS1.C, ESS2.B, PS1.C, CCC1	Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.	SEP7: Engaging in Argument from Evidence	ESS1.C: The History of Planet Earth ESS2.B: Plate Tectonics and Large-Scale System Interactions PS1.C: Nuclear Processes	CCC1: Patterns	N/A
NGSS HS Earth and Space Sciences	Moving Matter Part 1 (Earth Space Science Assesssment)	Assessment	HS-ESS1-5, SEP7, ESS1.C, ESS2.B, PS1.C, CCC1	Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.	SEP7: Engaging in Argument from Evidence	ESS1.C: The History of Planet Earth ESS2.B: Plate Tectonics and Large-Scale System Interactions PS1.C: Nuclear Processes	CCC1: Patterns	N/A
NGSS HS Earth and Space Sciences	History of Earth (Achieving)	Activity - Achieving	HS-ESS1-6, SEP6, ESS1.C, PS1.C	Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history.	SEP6: Constructing Explanations and Designing Solutions	ESS1.C: The History of Planet Earth PS1.C: Nuclear Processes	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	History of Earth (Emerging)	Activity - Emerging	HS-ESS1-6, SEP6, ESS1.C, PS1.C	Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history.	SEP6: Constructing Explanations and Designing Solutions	ESS1.C: The History of Planet Earth PS1.C: Nuclear Processes	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	History of Earth (Mini Assessment)	Mini Assessment	HS-ESS1-6, SEP6, ESS1.C, PS1.C	Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history.	SEP6: Constructing Explanations and Designing Solutions	ESS1.C: The History of Planet Earth PS1.C: Nuclear Processes	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	The Chesapeake Bay Crater (Earth Space Science Assessment)	Assessment	HS-ESS1-6, SEP6, ESS1.C, PS1.C	Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history.	SEP6: Constructing Explanations and Designing Solutions	ESS1.C: The History of Planet Earth PS1.C: Nuclear Processes	CCC7: Stability and Change	N/A

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NGSS HS Earth and Space Sciences	Geoscience Processes (Achieving)	Activity - Achieving	HS-ESS2-1, SEP2, ESS2.A, ESS2.B, CCC7	Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features.	SEP2: Developing and Using Models	ESS2.A: Earth Materials and Systems ESS2.B: Plate Tectonics and Large-Scale System Interactions	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	Geoscience Processes (Emerging)	Activity - Emerging	HS-ESS2-1, SEP2, ESS2.A, ESS2.B, CCC7	Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features.	SEP2: Developing and Using Models	ESS2.A: Earth Materials and Systems ESS2.B: Plate Tectonics and Large-Scale System Interactions	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	Geoscience Processes (Mini Assessment)	Mini Assessment	HS-ESS2-1, SEP2, ESS2.A, ESS2.B, CCC7	Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features.	SEP2: Developing and Using Models	ESS2.A: Earth Materials and Systems ESS2.B: Plate Tectonics and Large-Scale System Interactions	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	Moving Matter Part 2 (Earth Space Science Assessment)	Assessment	HS-ESS2-1, SEP2, ESS2.A, ESS2.B, CCC7	Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features.	SEP2: Developing and Using Models	ESS2.A: Earth Materials and Systems ESS2.B: Plate Tectonics and Large-Scale System Interactions	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	Feedback in Earth's Systems (Achieving)	Activity - Achieving	HS-ESS2-2, SEP4, ESS2.A, ESS2.D, CCC7	Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.	SEP4: Analyzing and Interpreting Data	ESS2.A: Earth Materials and Systems ESS2.D: Weather and Climate	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	Feedback in Earth's Systems (Emerging)	Activity - Emerging	HS-ESS2-2, SEP4, ESS2.A, ESS2.D, CCC7	Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.	SEP4: Analyzing and Interpreting Data	ESS2.A: Earth Materials and Systems ESS2.D: Weather and Climate	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	Feedback in Earth's Systems (Mini Assessment)	Mini Assessment	HS-ESS2-2, SEP4, ESS2.A, ESS2.D, CCC7	Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.	SEP4: Analyzing and Interpreting Data	ESS2.A: Earth Materials and Systems ESS2.D: Weather and Climate	CCC7: Stability and Change	N/A

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NGSS HS Earth and Space Sciences	Geoscience Data and Climate Part 1 (Earth Space Science Assessment)	Assessment	HS-ESS2-2, SEP4, ESS2.A, ESS2.D, CCC7	Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.	SEP4: Analyzing and Interpreting Data	ESS2.A: Earth Materials and Systems ESS2.D: Weather and Climate	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	Cycling of Matter in Earth's Interior (Achieving)	Activity - Achieving	HS-ESS2-3, SEP2, ESS2.A, ESS2.B, CCC5	Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection.	SEP2: Developing and Using Models	ESS2.A: Earth Materials and Systems ESS2.B: Plate Tectonics and Large-Scale System Interactions	CCC5: Energy and Matter	N/A
NGSS HS Earth and Space Sciences	Cycling of Matter in Earth's Interior (Emerging)	Activity - Emerging	HS-ESS2-3, SEP2, ESS2.A, ESS2.B, CCC5	Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection.	SEP2: Developing and Using Models	ESS2.A: Earth Materials and Systems ESS2.B: Plate Tectonics and Large-Scale System Interactions	CCC5: Energy and Matter	N/A
NGSS HS Earth and Space Sciences	Cycling of Matter in Earth's Interior (Mini Assessment)	Mini Assessment	HS-ESS2-3, SEP2, ESS2.A, ESS2.B, CCC5	Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection.	SEP2: Developing and Using Models	ESS2.A: Earth Materials and Systems ESS2.B: Plate Tectonics and Large-Scale System Interactions	CCC5: Energy and Matter	N/A
NGSS HS Earth and Space Sciences	Moving Matter Part 3 (Earth Space Science Assesssment)	Assessment	HS-ESS2-3, SEP2, ESS2.A, ESS2.B, CCC5	Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection.	SEP2: Developing and Using Models	ESS2.A: Earth Materials and Systems ESS2.B: Plate Tectonics and Large-Scale System Interactions	CCC5: Energy and Matter	N/A
NGSS HS Earth and Space Sciences	Variations in Energy and Climate (Achieving)	Activity - Achieving	HS-ESS2-4, SEP2, ESS1.B, ESS2.A, ESS2.D, CCC2	Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.	SEP2: Developing and Using Models	ESS1.B: Earth and the Solar System ESS2.A: Earth Materials and Systems ESS2.D: Weather and Climate	CCC2: Cause and Effect	N/A

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NGSS HS Earth and Space Sciences	Variations in Energy and Climate (Emerging)	Activity - Emerging	HS-ESS2-4, SEP2, ESS1.B, ESS2.A, ESS2.D, CCC2	Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.	SEP2: Developing and Using Models	ESS1.B: Earth and the Solar System ESS2.A: Earth Materials and Systems ESS2.D: Weather and Climate	CCC2: Cause and Effect	N/A
NGSS HS Earth and Space Sciences	Variations in Energy and Climate (Mini Assessment)	Mini Assessment	HS-ESS2-4, SEP2, ESS1.B, ESS2.A, ESS2.D, CCC2	Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.	SEP2: Developing and Using Models	ESS1.B: Earth and the Solar System ESS2.A: Earth Materials and Systems ESS2.D: Weather and Climate	CCC2: Cause and Effect	N/A
NGSS HS Earth and Space Sciences	Carboniferous Rainforest Collapse Part 1 (Earth Space Science Assessment)	Assessment	HS-ESS2-4, SEP2, ESS1.B, ESS2.A, ESS2.D, CCC2	Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate.	SEP2: Developing and Using Models	ESS1.B: Earth and the Solar System ESS2.A: Earth Materials and Systems ESS2.D: Weather and Climate	CCC2: Cause and Effect	N/A
NGSS HS Earth and Space Sciences	Hydrology and Surface Processes (Achieving)	Activity - Achieving	HS-ESS2-5, SEP3, ESS2.C, CCC6	Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.	SEP3: Planning and Carrying Out Investigations	ESS2.C: The Roles of Water in Earth's Surface Processes	CCC6: Structure and Function	N/A
NGSS HS Earth and Space Sciences	Hydrology and Surface Processes (Emerging)	Activity - Emerging	HS-ESS2-5, SEP3, ESS2.C, CCC6	Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.	SEP3: Planning and Carrying Out Investigations	ESS2.C: The Roles of Water in Earth's Surface Processes	CCC6: Structure and Function	N/A
NGSS HS Earth and Space Sciences	Hydrology and Surface Processes (Mini Assessment)	Mini Assessment	HS-ESS2-5, SEP3, ESS2.C, CCC6	Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.	SEP3: Planning and Carrying Out Investigations	ESS2.C: The Roles of Water in Earth's Surface Processes	CCC6: Structure and Function	N/A
NGSS HS Earth and Space Sciences	Viscosity of Melted Rock (Earth Space Science Assessment)	Assessment	HS-ESS2-5, SEP3, ESS2.C, CCC6	Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.	SEP3: Planning and Carrying Out Investigations	ESS2.C: The Roles of Water in Earth's Surface Processes	CCC6: Structure and Function	N/A

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NGSS HS Earth and Space Sciences	The Cycling of Carbon (Achieving)	Activity - Achieving	HS-ESS2-6, SEP2, ESS2.D, CCC5	Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.	SEP2: Developing and Using Models	ESS2.D: Weather and Climate	CCC5: Energy and Matter	N/A
NGSS HS Earth and Space Sciences	The Cycling of Carbon (Emerging)	Activity - Emerging	HS-ESS2-6, SEP2, ESS2.D, CCC5	Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.	SEP2: Developing and Using Models	ESS2.D: Weather and Climate	CCC5: Energy and Matter	N/A
NGSS HS Earth and Space Sciences	The Cycling of Carbon (Mini Assessment)	Mini Assessment	HS-ESS2-6, SEP2, ESS2.D, CCC5	Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.	SEP2: Developing and Using Models	ESS2.D: Weather and Climate	CCC5: Energy and Matter	N/A
NGSS HS Earth and Space Sciences	Geoscience Data and Climate Part 2 (Earth Space Science Assessment)	Assessment	HS-ESS2-6, SEP2, ESS2.D, CCC5	Develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.	SEP2: Developing and Using Models	ESS2.D: Weather and Climate	CCC5: Energy and Matter	N/A
NGSS HS Earth and Space Sciences	Coevolution of Earth's Systems and Life (Achieving)	Activity - Achieving	HS-ESS2-7, SEP7, ESS2.D, ESS2.E, CCC7	Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth.	SEP7: Engaging in Argument from Evidence	ESS2.D: Weather and Climate ESS2.E: Biogeology	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	Coevolution of Earth's Systems and Life (Emerging)	Activity - Emerging	HS-ESS2-7, SEP7, ESS2.D, ESS2.E, CCC7	Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth.	SEP7: Engaging in Argument from Evidence	ESS2.D: Weather and Climate ESS2.E: Biogeology	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	Coevolution of Earth's Systems and Life (Mini Assessment)	Mini Assessment	HS-ESS2-7, SEP7, ESS2.D, ESS2.E, CCC7	Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth.	SEP7: Engaging in Argument from Evidence	ESS2.D: Weather and Climate ESS2.E: Biogeology	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	Carboniferous Rainforest Collapse Part 2 (Earth Space Science Assessment)	Assessment	HS-ESS2-7, SEP7, ESS2.D, ESS2.E, CCC7	Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth.	SEP7: Engaging in Argument from Evidence	ESS2.D: Weather and Climate ESS2.E: Biogeology	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	Factors Affecting Human Activity (Achieving)	Activity - Achieving	HS-ESS3-1, SEP6, ESS3.A, ESS3.B, CCC2	Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.	SEP6: Constructing Explanations and Designing Solutions	ESS3.A: Natural Resources ESS3.B: Natural Hazards	CCC2: Cause and Effect	N/A

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NGSS HS Earth and Space Sciences	Factors Affecting Human Activity (Emerging)	Activity - Emerging	HS-ESS3-1, SEP6, ESS3.A, ESS3.B, CCC2	Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.	SEP6: Constructing Explanations and Designing Solutions	ESS3.A: Natural Resources ESS3.B: Natural Hazards	CCC2: Cause and Effect	N/A
NGSS HS Earth and Space Sciences	Factors Affecting Human Activity (Mini Assessment)	Mini Assessment	HS-ESS3-1, SEP6, ESS3.A, ESS3.B, CCC2	Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.	SEP6: Constructing Explanations and Designing Solutions	ESS3.A: Natural Resources ESS3.B: Natural Hazards	CCC2: Cause and Effect	N/A
NGSS HS Earth and Space Sciences	I'm Moving Out (Earth Space Science Assessment)	Assessment	HS-ESS3-1, SEP6, ESS3.A, ESS3.B, CCC2	Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.	SEP6: Constructing Explanations and Designing Solutions	ESS3.A: Natural Resources ESS3.B: Natural Hazards	CCC2: Cause and Effect	N/A
NGSS HS Earth and Space Sciences	Cost-Benefit Ratio Design Solutions for Resources (Achieving)	Activity - Achieving	HS-ESS3-2, HS-ETS1-3, HS-ETS1-4, SEP7, ESS3.A, ETS1.B	Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.	SEP7: Engaging in Argument from Evidence	ESS3.A: Natural Resources	N/A	ETS1.B: Developing Possible Solutions
NGSS HS Earth and Space Sciences	Cost-Benefit Ratio Design Solutions for Resources (Emerging)	Activity - Emerging	HS-ESS3-2, HS-ETS1-3, HS-ETS1-4, SEP7, ESS3.A, ETS1.B	Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.	SEP7: Engaging in Argument from Evidence	ESS3.A: Natural Resources	N/A	ETS1.B: Developing Possible Solutions
NGSS HS Earth and Space Sciences	Cost-Benefit Ratio Design Solutions for Resources (Mini Assessment)	Mini Assessment	HS-ESS3-2, HS-ETS1-3, HS-ETS1-4, SEP7, ESS3.A, ETS1.B	Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.	SEP7: Engaging in Argument from Evidence	ESS3.A: Natural Resources	N/A	ETS1.B: Developing Possible Solutions
NGSS HS Earth and Space Sciences	Home Sweet Home Part 1 (Earth Space Science Assessment)	Assessment	HS-ESS3-2, HS-ETS1-3, HS-ETS1-4, SEP7, ESS3.A, ETS1.B	Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.	SEP7: Engaging in Argument from Evidence	ESS3.A: Natural Resources	N/A	ETS1.B: Developing Possible Solutions
NGSS HS Earth and Space Sciences	Relationships Between Resource Management, Human Sustainability, and Biodiversity (Achieving)	Activity - Achieving	HS-ESS3-3, SEP5, ESS3.C, CCC7	Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.	SEP5: Using Mathematics and Computational Thinking	ESS3.C: Human Impacts on Earth Systems	CCC7: Stability and Change	N/A

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NGSS HS Earth and Space Sciences	Relationships Between Resource Management, Human Sustainability, and Biodiversity (Emerging)	Activity - Emerging	HS-ESS3-3, SEP5, ESS3.C, CCC7	Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.	SEP5: Using Mathematics and Computational Thinking	ESS3.C: Human Impacts on Earth Systems	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	Relationships Between Resource Management, Human Sustainability, and Biodiversity (Mini Assessment)	Mini Assessment	HS-ESS3-3, SEP5, ESS3.C, CCC7	Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.	SEP5: Using Mathematics and Computational Thinking	ESS3.C: Human Impacts on Earth Systems	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	Overfishing and Sustainability Part 1 (Earth Space Science Assessment)	Assessment	HS-ESS3-3, SEP5, ESS3.C, CCC7	Create a computational simulation to illustrate the relationships among management of natural resources, the sustainability of human populations, and biodiversity.	SEP5: Using Mathematics and Computational Thinking	ESS3.C: Human Impacts on Earth Systems	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	Technological Design Solutions for Reducing Human Impact (Achieving)	Activity - Achieving	HS-ESS3-4, HS-ETS1-3, HS-ETS1-4, SEP6, ESS3.C, CCC7, ETS1.B	Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.	SEP6: Constructing Explanations and Designing Solutions	ESS3.C: Human Impacts on Earth Systems	CCC7: Stability and Change	ETS1.B: Developing Possible Solutions
NGSS HS Earth and Space Sciences	Technological Design Solutions for Reducing Human Impact (Emerging)	Activity - Emerging	HS-ESS3-4, HS-ETS1-3, HS-ETS1-4, SEP6, ESS3.C, CCC7, ETS1.B	Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.	SEP6: Constructing Explanations and Designing Solutions	ESS3.C: Human Impacts on Earth Systems	CCC7: Stability and Change	ETS1.B: Developing Possible Solutions
NGSS HS Earth and Space Sciences	Technological Design Solutions for Reducing Human Impact (Mini Assessment)	Mini Assessment	HS-ESS3-4, HS-ETS1-3, HS-ETS1-4, SEP6, ESS3.C, CCC7, ETS1.B	Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.	SEP6: Constructing Explanations and Designing Solutions	ESS3.C: Human Impacts on Earth Systems	CCC7: Stability and Change	ETS1.B: Developing Possible Solutions
NGSS HS Earth and Space Sciences	Home Sweet Home Part 2 (Earth Space Science Assessment)	Assessment	HS-ESS3-4, HS-ETS1-3, HS-ETS1-4, SEP6, ESS3.C, CCC7, ETS1.B	Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.	SEP6: Constructing Explanations and Designing Solutions	ESS3.C: Human Impacts on Earth Systems	CCC7: Stability and Change	ETS1.B: Developing Possible Solutions

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NGSS HS Earth and Space Sciences	Forecasting Climate Change (Achieving)	Activity - Achieving	HS-ESS3-5, SEP4, ESS3.D, CCC7	Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems.	SEP4: Analyzing and Interpreting Data	ESS3.D: Global Climate Change	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	Forecasting Climate Change (Emerging)	Activity - Emerging	HS-ESS3-5, SEP4, ESS3.D, CCC7	Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems.	SEP4: Analyzing and Interpreting Data	ESS3.D: Global Climate Change	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	Forecasting Climate Change (Mini Assessment)	Mini Assessment	HS-ESS3-5, SEP4, ESS3.D, CCC7	Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems.	SEP4: Analyzing and Interpreting Data	ESS3.D: Global Climate Change	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	Geoscience Data and Climate Part 3 (Earth Space Science Assessment)	Assessment	HS-ESS3-5, SEP4, ESS3.D, CCC7	Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current rate of global or regional climate change and associated future impacts to Earth systems.	SEP4: Analyzing and Interpreting Data	ESS3.D: Global Climate Change	CCC7: Stability and Change	N/A
NGSS HS Earth and Space Sciences	Human Impact on Earth Systems (Achieving)	Activity - Achieving	HS-ESS3-6, SEP5, ESS2.D, ESS3.D, CCC4	Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.	SEP5: Using Mathematics and Computational Thinking	ESS2.D: Weather and Climate ESS3.D: Global Climate Change	CCC4: Systems and System Models	N/A
NGSS HS Earth and Space Sciences	Human Impact on Earth Systems (Emerging)	Activity - Emerging	HS-ESS3-6, SEP5, ESS2.D, ESS3.D, CCC4	Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.	SEP5: Using Mathematics and Computational Thinking	ESS2.D: Weather and Climate ESS3.D: Global Climate Change	CCC4: Systems and System Models	N/A
NGSS HS Earth and Space Sciences	Human Impact on Earth Systems (Mini Assessment)	Mini Assessment	HS-ESS3-6, SEP5, ESS2.D, ESS3.D, CCC4	Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.	SEP5: Using Mathematics and Computational Thinking	ESS2.D: Weather and Climate ESS3.D: Global Climate Change	CCC4: Systems and System Models	N/A

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NGSS HS Earth and Space Sciences	Overfishing and Sustainability Part 2 (Earth Space Science Assessment)	Assessment	HS-ESS3-6, SEP5, ESS2.D, ESS3.D, CCC4	Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.	SEP5: Using Mathematics and Computational Thinking	ESS2.D: Weather and Climate ESS3.D: Global Climate Change	CCC4: Systems and System Models	N/A
NGSS HS Earth Space Course Asssessment	HS Earth Space Science Course Assessment	Course Assessment	HS-ESS	NA	NA	NA	NA	NA
NGSS HS High Stakes Assessment	HS High Stakes Assessment	High-Stakes Assessment	HS-	NS	NA	NA	NA	NA