DONE

| **1st Quarter: Earth’s Structure****Standard:** * MS-ESS2-1A Develop and use a model to illustrate that energy from the Earth’s interior drives convection which cycles Earth’s crust leading to melting, crystallization, weathering and deformation of large rock formations, including generation of ocean sea floor at ridges, submergence of ocean sea floor at trenches, mountain building and active volcanic chains**.**[Clarification Statement: Emphasis is on the processes of melting, crystallization, weathering, deformation, and sedimentation, which act together to form minerals and rocks through the cycling of Earth’s materials.] [*Assessment Boundary: Assessment does not include the identification and naming of minerals.*]
 |
| --- |

| **4 Exceeds Standard** | In addition to score 3 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. |
| --- | --- |
| **3 At Standard** | In addition to score 2 performance, the student will:* Develop a model to describe:
	+ the cycling of Earth's materials forming mineral and rocks
	+ the flow of energy that drives this process
	+ flow of energy - convection currents
 |
| **2 Approaching Standard** | * Name the 4 Earth’s systems
* Vocabulary: melting, crystallization, weathering, deformation, sedimentation, minerals, rocks, convection currents
* Understand the continuation of a cycle
 |
| **1 Not At Standard** | With help, partial success at score 2 content. |

DONE

| **1st Quarter: Earth’s Structure****Standard:** * MS-ESS2-3B Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions.[Clarification Statement: Examples of data include similarities of rock and fossil types on different continents, the shapes of the continents (including continental shelves), and the locations of ocean structures (such as ridges, fracture zones, and trenches).] [*Assessment Boundary: Paleomagnetic anomalies in oceanic and continental crust are not assessed.*]
 |
| --- |

| **4 Exceeds Standard** | In addition to score 3 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. |
| --- | --- |
| **3 At Standard** | In addition to score 2 performance, the student will:* Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions
	+ Students will be able to
		- match rock and fossil types on different continents,
		- identify the shapes of the continents (including continental shelves),
		- identify the locations of ocean structures (such as ridges, fracture zones, and trenches)
 |
| **2 Approaching Standard** | * Vocabulary: fracture zones, geologic force; plate tectonics, fault, sea-floor structure, continent, continental shape, distribution, rock layer movement
 |
| **1 Not At Standard** | With help, partial success at score 2 content. |

**DONE**

| **2nd Quarter: Earth’s Surface****Standard:** * MS-ESS2-2A Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.[Clarification Statement: Emphasis is on how processes change Earth’s surface at time and spatial scales that can be large (such as slow plate motions or the uplift of large mountain ranges) or small (such as rapid landslides or microscopic geochemical reactions), and how many geoscience processes (such as earthquakes, volcanoes, and meteor impacts) usually behave gradually but are punctuated by catastrophic events. Examples of geoscience processes include surface weathering and deposition by the movements of water, ice, and wind. Emphasis is on geoscience processes that shape local geographic features, where appropriate.]
 |
| --- |

| **4 Exceeds Standard** | In addition to score 3 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. |
| --- | --- |
| **3 At Standard** | In addition to score 2 performance, the student will: Given evidence, students will write an explanation of how earth’s surface changed over time. |
| **2 Approaching Standard** |  Vocabulary: * Q1:earth’s layers, earth’s surface, earthquake, geoscience, igneous rock, metamorphic rock, plate motion, sediment deposition, sedimentary rock, sedimentation, uplift, volcano, catastrophic, deposition, geographic features - mountain range/chain, ocean basin, surface, and weathering
* Q2: spatial scale and time scale
* Q3: meteor impact
* Q4: surface runoff, landslide, geochemical reaction
 |
| **1 Not At Standard** | With help, partial success at score 2 content. |

| **2nd Quarter: Earth’s Surface****Standard:** * MS-ESS1-5C Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth’s 4.6-billion-year-old history. [Clarification Statement: Emphasis is on how analyses of rock formations and the fossils they contain are used to establish relative ages of major events in Earth’s history. Examples of Earth’s major events could range from being very recent (such as the last Ice Age or the earliest fossils of homo sapiens) to very old (such as the formation of Earth or the earliest evidence of life). Examples can include the formation of mountain chains and ocean basins, the evolution of extinction of particular living organisms, or significant volcanic eruptions.] [Assessment Boundary: Assessment does not include recalling the names of specific periods or epochs and events within them.]
 |
| --- |

| **4 Exceeds Standard** | In addition to score 3 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. |
| --- | --- |
| **3 At Standard** | In addition to score 2 performance, the student will:* Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth’s 4.6-billion-year-old history.
	+ Students will use evidence to explain:
		- rock formations and the fossils they contain to establish relative ages of major events in earth’s history eg. ice age,homo sapiens, formation of Earth, earliest evidence of life
 |
| **2 Approaching Standard** | Vocabulary: Earth’s age, evidence, evolution, extinction, formation, fossil, geologic, geologic evidence, history, homo sapiens, ice age, living organisms, relative age, rock formation, rock layer movement, rock strata, sedimentary rock, time scale, volcanic eruption.  |
| **1 Not At Standard** | With help, partial success at score 2 content. |

**ESS1-1 and ESS1-2 were split for 2016-17 school year. They were one standard prior.**

| **3rd Quarter: Astronomy and Space****Standard:** * MS-ESS1-1 Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons. [Clarification Statement: Examples of models can be physical, graphical, or conceptual.]
 |
| --- |

| **4 Exceeds Standard** | In addition to score 3 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. |
| --- | --- |
| **3 At Standard** | In addition to score 2 performance, the student will:* Develop a model of the Earth-sun-moon system
	+ cyclic patterns of lunar phases
	+ eclipses of the sun and moon
* Apply the model of the Earth-sun-moon system to describe the:
	+ cyclic patterns of lunar phases
	+ eclipses of the sun and moon
 |
| **2 Approaching Standard** | * Vocabulary: lunar phase, lunar, cyclic pattern, solar and lunar eclipses, cycle, axis, equinox, solstice
* Identify phases of the moon - gibbous, waxing, waning, crescent, quarters
 |
| **1 Not At Standard** | With help, partial success at score 2 content. |

| **3rd Quarter: Astronomy and Space****Standard:** * MS-ESS1-2 Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of seasons. [Clarification Statement: Examples of models can be physical, graphical, or conceptual.]
 |
| --- |

| **4 Exceeds Standard** | In addition to score 3 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. |
| --- | --- |
| **3 At Standard** | In addition to score 2 performance, the student will:* Develop a model of the Earth-sun-moon system
	+ seasons
* Apply the model of the Earth-sun-moon system to describe the:
	+ seasons
 |
| **2 Approaching Standard** | * Vocabulary:cyclic pattern, seasons, cycle, axis, equinox, solstice
* know the relationship between rotation and revolution and what causes the seasons
 |
| **1 Not At Standard** | With help, partial success at score 2 content. |

| **3rd Quarter: Astronomy and Space****Standard:** * MS-ESS1-4B Analyze and interpret data to determine scale properties of objects in the solar system. [Clarification Statement: Emphasis is on the analysis of data from Earth-based instruments, space-based telescopes, and spacecraft to determine similarities and differences among solar system objects. Examples of scale properties include the sizes of an object’s layers (such as crust and atmosphere), surface features (such as volcanoes), and orbital radius. Examples of data include statistical information, drawings and photographs, and models.] [Assessment Boundary: Assessment does not include recalling facts about properties of the planets and other solar system bodies.]
 |
| --- |

| **4 Exceeds Standard** | In addition to score 3 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. |
| --- | --- |
| **3 At Standard** | In addition to score 2 performance, the student will:* Analyze data charts to compare spatial scale of properties in the solar system, such as sizes of orbital radius, planet composition, planet size.
* Interpret data to determine scale properties of objects in the solar system, such as sizes of orbital radius, planet composition, planet size.
 |
| **2 Approaching Standard** | * Vocabulary: atmosphere, crust, instruments, orbital radius, planet composition, planet size, scale property, solar system, space and earth based, spacecraft, surface feature, telescope
* Describe the scale properties of various objects in the solar system
 |
| **1 Not At Standard** | With help, partial success at score 2 content. |

DONE

| **All 4 Quarters: Human Impact** **Standard:** * MS-ESS3-4C Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.\* [Clarification Statement: Examples of the design process include examining human environmental impacts, assessing the kinds of solutions that are feasible, and designing and evaluating solutions that could reduce that impact. Examples of human impacts can include water usage (such as the withdrawal of water from streams and aquifers or the construction of dams and levees), land usage (such as urban development, agriculture, or the removal of wetlands), and pollution (such as of the air, water, or land).]
 |
| --- |

| **4 Exceeds Standard** | In addition to score 3 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. |
| --- | --- |
| **3 At Standard** | In addition to score 2 performance, the student will:* Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
 |
| **2 Approaching Standard** | * Vocabulary: deforestation, machinery, human impact, agriculture, aquifer, construction, dam, land usage, minimize, monitor, pollution, urban development.
* Describe how humans have impacted the environment.
* Describe how possible solutions mitigate human impact.
 |
| **1 Not At Standard** | With help, partial success at score 2 content. |

| **All 4 Quarters: Human Impact****Standard:** * MS-ESS3-3C Analyze data to define the relationship for how increases in human population and per-capita consumption of natural resources impact Earth’s systems. [Clarification Statement: Examples of data include grade-appropriate databases on human populations and the rates of consumption of food and natural resources (such as freshwater, mineral, and energy). Examples of impacts can include changes to the appearance, composition, and structure of Earth’s systems as well as the rates at which they change. The consequences of increases in human populations and consumption of natural resources are described by science, but science does not make the decisions for the actions society takes.]
 |
| --- |

| **4 Exceeds Standard** | In addition to score 3 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. |
| --- | --- |
| **3 At Standard** | In addition to score 2 performance, the student will:* Students will be able to support the claim that increases human population and per-capita consumption of natural resources have an impact on earth's systems.
 |
| **2 Approaching Standard** | * Vocabulary: natural resource, impact, consumption, deforestation, earth systems
 |
| **1 Not At Standard** | With help, partial success at score 2 content. |

| **All 4 Quarters: Inquiry****Standard:** * **MS-ETS1-1A Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.**
 |
| --- |

| **4 Exceeds Standard** | In addition to score 3 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. |
| --- | --- |
| **3 At Standard** | In addition to score 2 performance, the student will:* **Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.**
 |
| **2 Approaching Standard** | * Vocabulary: consideration, constraint, criteria, design problem, design task, environment, impact, limitation, possible, potential, precise, principle, relevant, sufficient, solution.
 |
| **1 Not At Standard** | With help, partial success at score 2 content. |

| **All 4 Quarters: Inquiry****Standard:** * **MS-ETS1-2B Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.**
 |
| --- |

| **4 Exceeds Standard** | In addition to score 3 performance, the student demonstrates kkm in-depth inferences and applications that go beyond what was taught. |
| --- | --- |
| **3 At Standard** | In addition to score 2 performance, the student will:* **Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.**
 |
| **2 Approaching Standard** | * Vocabulary: competing, constraint, criteria, design solution, determine, evaluate, problem, process, solution, systematic, rubric
 |
| **1 Not At Standard** | With help, partial success at score 2 content. |

| **All 4 Quarters: Inquiry****Standard:** * **MS-ETS1-3B Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.**
 |
| --- |

| **4 Exceeds Standard** | In addition to score 3 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught. |
| --- | --- |
| **3 At Standard** | In addition to score 2 performance, the student will:* **Analyze data from tests to determine similarities and differences among several design solutions to identify the best characteristics of each that can be combined into a new solution to better meet the criteria for success.**
 |
| **2 Approaching Standard** | * Vocabulary: characteristic, combine, criteria, data, design design solution, determine, difference, identify, incorporate, perform, redesign process, similarity, solution
 |
| **1 Not At Standard** | With help, partial success at score 2 content. |