

Middle School Earth and Space Science NGSS-Aligned Bundle

MS-ESS1, MS-ESS2, MS-ESS3

- ✓ Full Teaching Timeline and Unit Breakdown
- ✓ Lessons, Activities, Labs, Projects, and more
- ✓ NO PREP! Just open and teach
- ✓ Covers ALL Middle School Earth & Space Science Standards



Bundles Included

MS-ESS1

NGSS MS-ESS1-1 Curriculum Bundle

Earth-Sun-Moon System: Phases, Eclipses, and Seasons

- ✓ 2 Lessons and 15 Activities
- ✓ Everything You Need to Teach NGSS MS-ESS1-1



NGSS MS-ESS1-3 Curriculum Bundle

Solar System Scale & Structure: Analysis of Planets and Moons

- ✓ 2 Lessons, 7 Activities, and 1 Project
- ✓ Everything You Need to Teach NGSS MS-ESS1-3



NGSS MS-ESS1-2 Curriculum Bundle

Gravity & Orbital Motion Modeling the Solar System & Galaxies

- ✓ 2 Lessons, 7 Activities, and 1 Project
- ✓ Everything You Need to Teach NGSS MS-ESS1-2



NGSS MS-ESS1-4 Curriculum Bundle

Geologic Time Scale & Rock Strata: Explaining Earth's History

- ✓ 3 Lessons and 6 Activities
- ✓ Everything You Need to Teach NGSS MS-ESS1-4



MS-ESS2

NGSS MS-ESS2-1 Curriculum Bundle	NGSS MS-ESS2-2 Curriculum Bundle	NGSS MS-ESS2-3 Curriculum Bundle
The Cycling of Earth's Material	Shaping the Earth	Evidence of Plate Tectonics - Fossils, Rock Cycle, and Geologic Time
✓ 2 Lessons and 4 Activities ✓ Everything You Need to Teach NGSS MS-ESS2-1	✓ 5 Lessons and 5 Activities ✓ Everything You Need to Teach NGSS MS-ESS2-2	✓ 3 Lessons and 4 Activities ✓ Everything You Need to Teach NGSS MS-ESS2-3



NGSS MS-ESS2-4 Curriculum Bundle	NGSS MS-ESS2-5 Curriculum Bundle	NGSS MS-ESS2-6 Curriculum Bundle
The Water Cycle	How Air Masses Cause Weather Changes	How Unequal Heating and Earth's Rotation Shape Climate
✓ 1 Lesson and 5 Activities ✓ Everything You Need to Teach NGSS MS-ESS2-4	✓ 2 Lessons and 4 Activities ✓ Everything You Need to Teach NGSS MS-ESS2-5	✓ 1 Lesson and 3 Activities ✓ Everything You Need to Teach NGSS MS-ESS2-6



MS-ESS3

NGSS MS-ESS3-1 Curriculum Bundle

Earth's Uneven Natural Resources

- ✓ 5 Lessons and 10 Activities
- ✓ Everything You Need to Teach NGSS MS-ESS3-1



NGSS MS-ESS3-2 Curriculum Bundle

Forecasting Natural Hazards

- ✓ 1 Lesson and 8 Activities
- ✓ Everything You Need to Teach NGSS MS-ESS3-2



NGSS MS-ESS3-3 Curriculum Bundle

Human Impact on the Environment

- ✓ 1 Lesson and 9 Activities
- ✓ Everything You Need to Teach NGSS MS-ESS3-3



NGSS MS-ESS3-4 Curriculum Bundle

Environmental Impacts of Human Population & Resource Use

- ✓ 3 Lessons, 3 Projects, and 8 Activities
- ✓ Everything You Need to Teach NGSS MS-ESS3-4



NGSS MS-ESS3-5 Curriculum Bundle

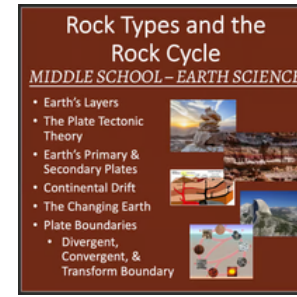
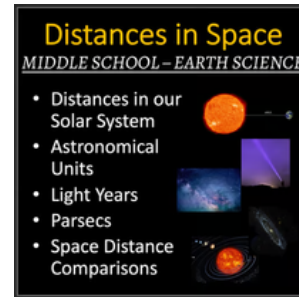
Climate Change & Global Warming Evidence

- ✓ 2 Lessons, 1 Project, and 9 Activities
- ✓ Everything You Need to Teach NGSS MS-ESS3-5

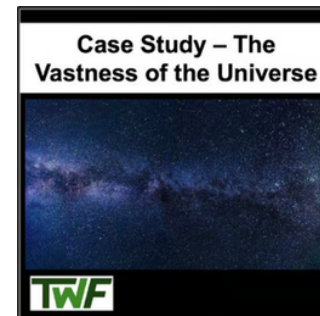
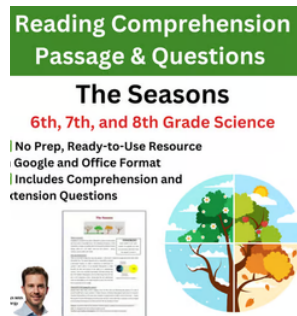


Everything You Need to Completely Cover NGSS MS-ESS1

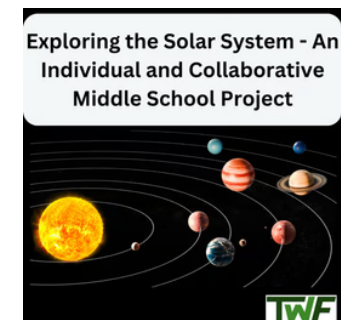
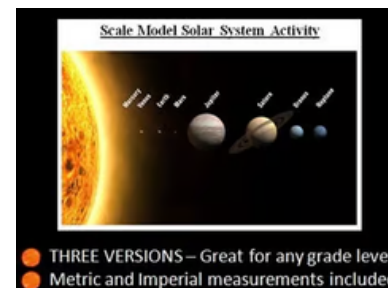
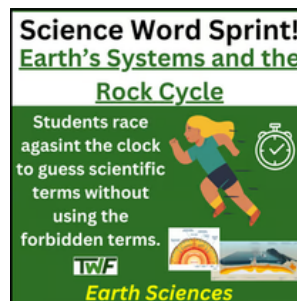
Complete Lessons



Activities



Labs



Projects

Everything You Need to Completely Cover NGSS MS-ESS2

Complete Lessons

Activities

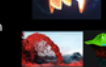
Labs

Projects

Earth's Layers

MIDDLE SCHOOL – EARTH SCIENCE

- Earth's Layers
- The Plate Tectonic Theory
- Earth's Primary & Secondary Plates
- Continental Drift
- The Changing Earth
- Plate Boundaries
 - Divergent, Convergent, & Transform Boundary



TWFE

The Water Cycle

Included in your bundle:

- The Water Cycle
- Phases of Water
- Evaporation
- Condensation
- Precipitation
- Infiltration
- Runoff (Accumulation)
- Transpiration



TWFE

Plate Tectonics Lab Station Activity



7 Lab Station Activities to get your kids out of their seats and engaged in their learning

Ocean Currents and Climate Simulation Activity



OCEAN CURRENTS

Hands-On Teacher or Student Demonstration
MS-ESS2-6

Earthquakes, Volcanoes, and Tsunamis

- Earthquakes
- Tectonic Plates, Boundaries, and Seismic Waves
- The Great Chilean Earthquake
- Volcanoes
- Types of Volcanoes
- Volcano Dangers
- Mount Tambora
- Tsunamis
- Social and Environment Impact of Tsunamis



This digital presentation includes both Google and Office resources and is Google Classroom Ready

Reading Comprehension Passage & Questions

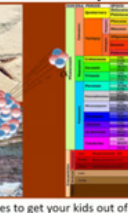
Earthquakes

6th, 7th, and 8th Grade Science

- ✓ No Prep, Ready-to-Use Resource in Google and Office Format
- ✓ Includes Comprehension and Extension Questions



Fossils and Geologic Time Lab Station Activity



7 Lab Station Activities to get your kids out of their seats and engaged in their learning

The Earth's Puzzle - A Geologic Adventure

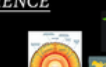


Story Prompt

Tectonic Plates

MIDDLE SCHOOL – EARTH SCIENCE

- Earth's Layers
- The Plate Tectonic Theory
- Earth's Primary & Secondary Plates
- Continental Drift
- The Changing Earth
- Plate Boundaries
 - Divergent, Convergent, & Transform Boundary



How Air Masses Shape Our Weather - Lesson

6th, 7th, 8th Grade

- ✓ How Air Masses Shape Our Weather: Air Masses, High- and Low-Pressure Systems, Weather Fronts, How weather changes and why it's so hard to predict weather accurately.
- ✓ Student + Teacher Versions: Office, Google, and PDF Versions
- ✓ Multimedia-Rich Lesson with No Prep Required



Rock Types and the Rock Cycle

MIDDLE SCHOOL – EARTH SCIENCE

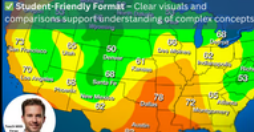
- Earth's Layers
- The Plate Tectonic Theory
- Earth's Primary & Secondary Plates
- Continental Drift
- The Changing Earth
- Plate Boundaries
 - Divergent, Convergent, & Transform Boundary



Regional Climates - Lesson

6th, 7th, 8th Grade

- ✓ Comprehensive Climate Overview – Covers latitude, altitude, oceans, landforms, and wind patterns
- ✓ Student-friendly Format – Clear visuals and explanations support understanding of complex concepts

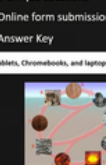


Device-Based Scavenger Hunt The Rock Cycle

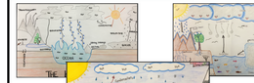
Includes

- 5 Unique Locations
- Online form submission
- Answer Key

Works on all smartphones, tablets, Chromebooks, and laptops



Water Cycle Activity



Hands-On Water Cycle Model
Grading Made Easy
Perfect for Multiple Grades
Real Student Examples Included

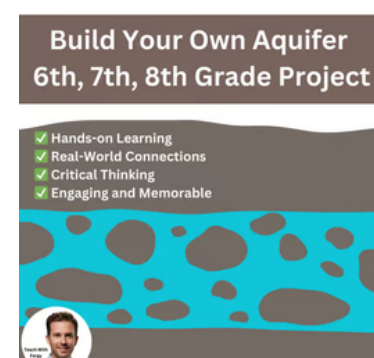
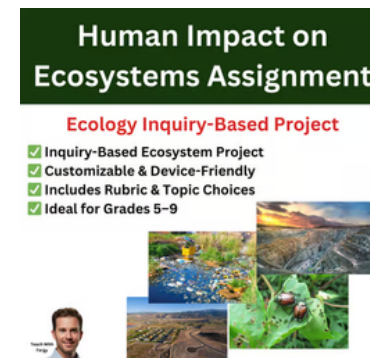
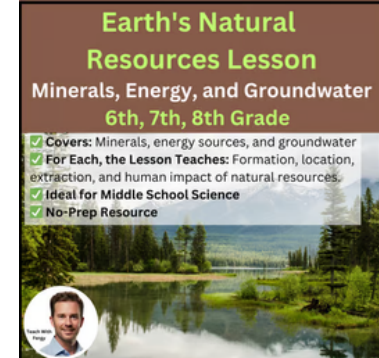
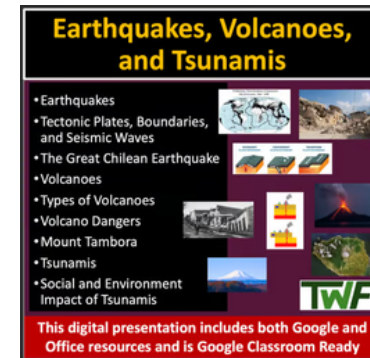
Everything You Need to Completely Cover NGSS MS-ESS3

Complete Lessons

Activities

Labs

Projects



Full Teaching Outline - The Standard is Explained and the Resources it Incorporates are Outlined

MS ESS1 Earth's Place in the Universe

MS-ESS1-4. 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.

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. Example 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 or 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.

Resources:

- Rock Types and the Rock Cycle - Lesson
- Fossils and Geologic Time - Lesson
- Earthquakes, Volcanoes and Tsunamis - Lesson
- Geologic Time - Reading
- The Rock Cycle - Scavenger Hunt
- The Rock Cycle - Lab Station Activity
- Earths Systems and the Rock Cycle Review Game - Science Word Sprint
- The Earths Puzzle - A Geologic Adventure - Story Prompt
- The Rock Cycle Word Search and Scramble Activity

NGSS Standard Daily Teaching Plan

MS-ESS1-4. 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.

Lesson Length: 55 minutes

Timeframe: 2 Weeks, 10 Days

Day	Lesson/Activity
Day 1	Rock Types and the Rock Cycle - Lesson The Rock Cycle Word Search and Scramble Activity
Day 2	The Rock Cycle - Scavenger Hunt The Rock Cycle - Lab Station Activity
Day 3	Earths Systems and the Rock Cycle Review Game - Science Word Sprint
Day 4	Fossils and Geologic Time - Lesson Geologic Time - Reading
Day 5	The Earths Puzzle - A Geologic Adventure - Story Prompt
Day 6	Earthquakes, Volcanoes and Tsunamis - Lesson
Day 7	Rock Types and the Rock Cycle - Lesson (Review) The Rock Cycle - Lab Station Activity (Review)
Day 8	Fossils and Geologic Time - Lesson (Review) Geologic Time - Reading (Discussion)
Day 9	Earthquakes, Volcanoes and Tsunamis - Lesson (Review) Earths Systems and the Rock Cycle Review Game - Science Word Sprint
Day 10	Comprehensive Review: The Earths Puzzle - A Geologic Adventure - Story Prompt Optional: Any unfinished activities

MS ESS1 Earth's Place in the Universe

MS-ESS1-2. Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.

Emphasis for the model is on gravity as the force that holds together the solar system and Milky Way galaxy and controls orbital motions within them. Examples of models can be physical (such as the analogy of distance along a football field) or computer visualizations of elliptical orbits) or conceptual (such as mathematical proportions relative to the size of familiar objects such as students' school or state).

Assessment Boundary: Assessment does not include Kepler's Laws of orbital motion or the apparent retrograde motion of the planets as viewed from Earth.

Resources:

- Our Solar System - Lesson
- Galaxies Other Objects and the Universe - Lesson
- Model Solar System Activity
- Exploring the Solar System Project
- Crash Course Video Worksheet - The Gravity of the Situation
- Crash Course Video Worksheet - The Solar System
- Crash Course Video Worksheet - Newtonian Gravity
- Stars Galaxies and the Universe - Word Search and Scramble
- Bill Nye Outer Space Video Worksheet
- Our Solar System Digital INB

NGSS Standard Daily Teaching Plan

MS-ESS1-2. Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.

Lesson Length: 55 minutes

Timeframe: 2 Weeks, 10 Days

Day #	Lesson/Activity
Day 1	Our Solar System - Lesson Bill Nye Outer Space Video Worksheet
Day 2	Crash Course Video Worksheet - The Solar System Our Solar System Digital INB
Day 3	Model Solar System Activity Stars Galaxies and the Universe - Word Search and Scramble
Day 4	Galaxies Other Objects and the Universe - Lesson Crash Course Video Worksheet - The Gravity of the Situation
Day 5	Crash Course Video Worksheet - Newtonian Gravity Exploring the Solar System Project (Part 1 - Introduction & Planning)
Day 6	Exploring the Solar System Project (Part 2 - Research & Work Session)
Day 7	Exploring the Solar System Project (Part 3 - Continue Work & Begin Presentations)
Day 8	Exploring the Solar System Project (Part 4 - Student Presentations)
Day 9	Stars Galaxies and the Universe - Word Search and Scramble (as review) Thomas Gravity Concepts & Connections Review
Day 10	Exploring the Solar System Project (Part 5 - Final Presentations & Wrap-Up)

MS ESS2 Earth's Systems

MS-ESS2-4. Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates. [Clarification Statement: Emphasis is on how patterns vary by latitude, altitude, and geographic land distribution. Emphasis of atmospheric circulation is on the sunlight-driven latitudinal banding, the Coriolis effect, and resulting prevailing winds; emphasis of ocean circulation is on the transfer of heat by the global ocean convection cycle, which is constrained by the Coriolis effect and the outflows of continents. Examples of models can be diagrams, maps and globes, or digital representations.] [Assessment Boundary: Assessment does not include the dynamics of the Coriolis effect.]

Resources:

- Regional Climates Lesson
- Atmospheric Circulation Reading
- Why The Wind Blows Reading
- Ocean Currents and Climate Simulation Activity

NGSS Standard Daily Teaching Plan

MS-ESS2-4. Develop and use a model to describe how unequal heating and rotation of the Earth cause patterns of atmospheric and oceanic circulation that determine regional climates. [Clarification Statement: Emphasis is on how patterns vary by latitude, altitude, and geographic land distribution. Emphasis of atmospheric circulation is on the sunlight-driven latitudinal banding, the Coriolis effect, and resulting prevailing winds; emphasis of ocean circulation is on the transfer of heat by the global ocean convection cycle, which is constrained by the Coriolis effect and the outflows of continents. Examples of models can be diagrams, maps and globes, or digital representations.] [Assessment Boundary: Assessment does not include the dynamics of the Coriolis effect.]

Lesson Length: 55 minutes

Timeframe: 4 Days

Day	Lesson/Activity
Day 1	Regional Climates Lesson
Day 2	Atmospheric Circulation Reading and Why The Wind Blows Reading
Day 3	Ocean Currents and Climate Simulation Activity
Day 4	Complete any outstanding readings or activities

MS ESS2 Earth's Systems

MS-ESS2-1. Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process. [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.]

Resources:

- Rock Types and the Rock Cycle Lesson
- Earth's Systems and the Rock Cycle Review Game Science Word Sprint
- The Rock Cycle - Scavenger Hunt
- The Rock Cycle Lab Station Activity
- The Rock Cycle Word Search and Scramble Activity
- Weathering, Erosion, and Deposition Lesson

NGSS Standard Daily Teaching Plan

MS-ESS2-1. Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process. [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.]

Lesson Length: 55 minutes

Timeframe: 6 Days

Day	Lesson/Activity	Notes
Day 1	Rock Types and the Rock Cycle Lesson	
Day 2	Rock Types and the Rock Cycle Lesson Complete The Rock Cycle Word Search and Scramble Activity	
Day 3	The Rock Cycle Lab Station Activity	
Day 4	The Rock Cycle - Scavenger Hunt	
Day 5	Weathering, Erosion, and Deposition Lesson	
Day 6	Earth's Systems and the Rock Cycle Review Game Science Word Sprint	

MS ESS2 Earth's Systems

MS-ESS2-2. 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.]

Resources:

- Earthquakes, Volcanoes and Tsunamis Lesson
- Earthquakes and Volcanoes - Scavenger Hunt
- Earthquakes and Volcanoes Lab Station Activity
- Earthquakes Reading
- Earth's Layers Lesson
- Tectonic Plates Lesson
- Plate Tectonics Reading
- Plate Tectonics Lab Station Activity
- Weathering, Erosion, and Deposition Lesson
- Caves and How They Form Lesson

NGSS Standard Daily Teaching Plan

MS-ESS2-2. 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.]

Lesson Length: 55 minutes

Timeframe: 10 Days

Day	Lesson/Activity	Notes
Day 1	Earth's Layers - Lesson	
Day 2	Tectonic Plates - Lesson	
Day 3	Plate Tectonics - Reading	
Day 4	Plate Tectonics - Lab Station Activity	
Day 5	Earthquakes, Volcanoes and Tsunamis - Lesson	
Day 6	Earthquakes and Volcanoes - Scavenger Hunt	
Day 7	Earthquakes and Volcanoes - Lab Station Activity	
Day 8	Earthquakes - Reading	
Day 9	Weathering, Erosion, and Deposition - Lesson	
Day 10	Caves and How They Form - Lesson	

MS ESS2 Earth's Systems

MS-ESS2-5. Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions. [Clarification Statement: Emphasis is on how air masses flow from regions of high pressure to low pressure, causing weather (defined by temperature, pressure, humidity, precipitation, and wind) at a fixed location to change over time, and how sudden changes in weather can result when different air masses collide. Emphasis is on how weather can be predicted within probabilistic ranges. Examples of data can be provided to students (such as weather maps, diagrams, and visualizations) or obtained through laboratory experiments (such as with condensation.) [Assessment Boundary: Assessment does not include recalling the names of cloud types or weather symbols used on weather maps or the reported diagrams from weather stations.]

Resources:

- How Air Masses Shape Our Weather Lesson
- Simulated Air Mass Collision - Lab Activity
- Weather Map Detective - Activity
- Weather and Weather Lesson
- How Weather Works Reading
- Weather Climate Word Search and Scramble

NGSS Standard Daily Teaching Plan

MS-ESS2-5. Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions. [Clarification Statement: Emphasis is on how air masses flow from regions of high pressure to low pressure, causing weather (defined by temperature, pressure, humidity, precipitation, and wind) at a fixed location to change over time, and how sudden changes in weather can result when different air masses collide. Emphasis is on how weather can be predicted within probabilistic ranges. Examples of data can be provided to students (such as weather maps, diagrams, and visualizations) or obtained through laboratory experiments (such as with condensation.) [Assessment Boundary: Assessment does not include recalling the names of cloud types or weather symbols used on weather maps or the reported diagrams from weather stations.]

Lesson Length: 55 minutes

Timeframe: 6 Days

Day	Lesson/Activity	Notes
Day 1	How Air Masses Shape Our Weather Lesson Start Simulated Air Mass Collision - Lab Activity	
Day 2	Finish Simulated Air Mass Collision - Lab Activity How Weather Works Reading	
Day 3	Finish How Weather Works Reading Weather Map Detective - Activity	
Day 4	Water and Weather Lesson	
Day 5	Finish Water and Weather Lesson Weather Climate Word Search and Scramble	
Day 6	Complete any outstanding activities	

MS ESS2 Earth's Systems

MS-ESS2-3. 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.]

Resources:

- Fossils and Geologic Time Lesson
- Fossils and Geologic Time Lab Station Activity
- Fossils Reading
- Geologic Time Reading
- Science Story Prompt The Earths Puzzle A Geologic Adventure
- Tectonic Plates Lesson
- Rock Types and the Rock Cycle Lesson

NGSS Standard Daily Teaching Plan

MS-ESS2-3. 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.]

Lesson Length: 55 minutes

Timeframe: 6 Days

Day	Lesson/Activity	Notes
Day 1	Fossils and Geologic Time Lesson	
Day 2	Fossils and Geologic Time Lab Station Activity	
Day 3	Fossils Reading or Geologic Time Reading	
Day 4	Tectonic Plates Lesson	
Day 5	Rock Types and the Rock Cycle Lesson	
Day 6	Science Story Prompt The Earths Puzzle A Geologic Adventure	

MS ESS2 Earth's Systems

MS-ESS2-4. Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity. [Clarification Statement: Emphasis is on the ways water changes its state as it moves through the multiple pathways of the hydrologic cycle. Examples of models can be conceptual or physical.] [Assessment Boundary: A quantitative understanding of the latent heat of vaporization and fusion is not assessed.]

Resources:

- Water Cycle Lesson
- Bill Nye Video Worksheet - The Water Cycle
- Crash Course Video Worksheet - The Hydrologic and Carbon Cycles
- Water Cycle Diagram Activity
- The Water Cycle Word Search and Scramble Activities
- The Water Cycle Reading

NGSS Standard Daily Teaching Plan

MS-ESS2-4. Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity. [Clarification Statement: Emphasis is on the ways water changes its state as it moves through the multiple pathways of the hydrologic cycle. Examples of models can be conceptual or physical.] [Assessment Boundary: A quantitative understanding of the latent heat of vaporization and fusion is not assessed.]

Lesson Length: 55 minutes

Timeframe: 6 Days

Day	Lesson/Activity	Notes
Day 1	Water Cycle Lesson	
Day 2	Bill Nye Video Worksheet - The Water Cycle or Crash Course Video Worksheet - The Hydrologic and Carbon Cycles	
	The Water Cycle Word Search and Scramble Activities	
Day 3	The Rock Cycle Lab Station Activity	
Day 4	Water Cycle Diagram Activity	
Day 5	Water Cycle Diagram Activity Complete	
Day 6	The Water Cycle Reading	

Who is this Bundle for?

- **Teachers who want a ready-made, print-and-teach bundle that covers each standard**
- **Teachers who teach Middle School Earth and Space Science and use the NGSS**
- **Teachers who want multiple resources at their fingertips including lessons and a variety of activities, in order to meet the standard**