

**Youngstown City Schools
Grade 8 Science Pacing Guide
Grading Period 2**

Strand/ Content Statement	Duration	Clear Learning Targets	Curriculum Resources	Vocabulary/Concepts
<p style="text-align: center;">EARTH AND SPACE SCIENCE</p> <p>The composition and properties of Earth's interior are identified by the behavior of seismic waves. (8.ESS.1b)</p> <p>*Topics within this content statement will be assessed on both Part I: Performance-Based Assessment and Part 2: End-Of-Year Assessment of Ohio's Next Generation Assessments for Science.</p>	<p style="text-align: center;">Weeks 1-2</p>	<p style="text-align: center;">"I Can..."</p> <ul style="list-style-type: none"> - compare and contrast the speed and movement of different seismic waves. -evaluate seismic data and relate it to how scientists have determined the layers of Earth's interior. -model and explain how S and P waves move through the earth. 	<p style="text-align: center;"><u>Curriculum Units</u></p> <ul style="list-style-type: none"> • Earthly Waves <p><u>Textbook: Holt Series</u></p> <p><u>On-line Simulations:</u></p> <ul style="list-style-type: none"> • P and S Wave Animation : http://www.classzone.com/books/earth_science/terc/content/visualizations/es1009/es1009page01.cfm?chapter_no=visualization • Earthquake simulation www.pHet.colorado.edu <p><u>Discovery Education:</u></p> <ul style="list-style-type: none"> • Inside our Planet [6:59] • Types of Waves [1:15] • Seismology [3:38] • The Earth's Interior [3:33] <p><u>Ohio Department of Education - Science:</u> http://education.ohio.gov/Topics/Ohio-s-New-Learning-Standards/Science</p> <p>AIR Practice Site</p>	<p>Crust Density Inner Core Mantle Outer Core P wave Reflection Refraction S wave Seismic Waves Seismograph Seismologist</p>

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<p style="text-align: center;">EARTH AND SPACE SCIENCE</p> <p style="text-align: center;">Earth's Crust consists of major and minor tectonic plates that move relative to each other (8.ESS.2)</p> <p>*Topics within this content statement will be assessed on both Part I: Performance-Based Assessment and Part 2: End-Of-Year Assessment of Ohio's Next Generation Assessments for Science.</p>	<p style="text-align: center;">Weeks 3-5</p>	<p>"I Can..."</p> <ul style="list-style-type: none"> - describe various historical theories and data evidence that have led to the present-day Plate Tectonic Theory - describe Wegener's Theory of Continental Drift. - model and explain the process of sea-floor spreading. - model and explain how convection currents in the mantle cause the movement of tectonic plates. - describe the movement and interaction of the 3 primary types of plate boundaries (convergent, divergent, transform). - use a boundary map to explain various plate interactions around the world. - explain the resulting geologic effects of plate boundary movement and interaction. - identify specific geologic events and features around the world and explain how plate movement or interaction is responsible for such events. 	<p><u>Curriculum Units</u></p> <ul style="list-style-type: none"> • History Helps When it Comes to Plate Tectonics • Geological Effects of Plate Tectonics <p><u>Textbook: Holt Series</u></p> <p><u>On-line Simulations</u> www.pHet.colorado.edu</p> <ul style="list-style-type: none"> • Building Pangaea • Plate Tectonics <p><u>Discovery Education:</u></p> <ul style="list-style-type: none"> • Continents Adrift: An Introduction to Continental Drift and Plate Tectonics [26:05] • Greatest Discoveries with Bill Nye: Exploring the Earth [10:54] • The Endless Voyage: Making the Pieces Fit [27:22] • Discovering Plate Tectonics [7:08] • Plate Tectonics [5:46] • Hot Spots and Plate Tectonics [2:35] • Plate Tectonics, Volcanoes, and Earthquakes [4:50] <p><u>Ohio Department of Education - Science:</u> http://education.ohio.gov/Topics/Ohio-s-New-Learning-Standards/Science</p> <p>AIR Practice Site</p>	<p>Continental Drift Convection Convection Currents Convergent Core Density Divergent Earthquakes Fault Hawaiian Islands Magma Mantle Mariana Trench Mid-Atlantic Ridge New Madrid Fault System Paleoclimate Paleontological Pangaea Plate Boundaries Plate Tectonic Theory Ridge Ring of Fire San Andreas Fault Sea-Floor Spreading Transform Trench Tsunami Volcanism</p>

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<p style="text-align: center;">EARTH AND SPACE SCIENCE</p> <p>A combination of constructive and destructive geologic processes formed Earth's surface. (8.ESS.3)</p> <p>*Topics within this content statement will be assessed on both Part I: Performance-Based Assessment and Part 2: End-Of-Year Assessment of Ohio's Next Generation Assessments for Science.</p>	<p style="text-align: center;">Weeks 6-7</p>	<p>"I Can..."</p> <ul style="list-style-type: none"> -identify various landforms on a map (i.e. mountains, valleys, ridges, plateaus, depressions) -use maps to determine what caused constructive and destructive features. - compare maps of various locations to identify differences in landforms. - construct a model of a beach that is experiencing erosion and deposition -design an experiment to test the best method to reduce erosion -describe the conditions and constructive/destructive processes that form various landforms. - explain how plate tectonics acts as constructive and destructive processes that can cause changes in earth's surface. 	<p><u>Curriculum Units</u></p> <ul style="list-style-type: none"> • Constructive and Destructive Geological Processes <p><u>Textbook: Holt Series</u></p> <p><u>On-line Simulations:</u></p> <ul style="list-style-type: none"> • Plate Tectonics • Reading Topographic Maps <p><u>Discovery Education:</u></p> <ul style="list-style-type: none"> • Glaciers and Glaciation [25:05] • Geologist's Notebook: Why Land Goes Up and Down [11:00] • Geography Basics: Landforms and Living Patterns [20:00] <p><u>Ohio Department of Education - Science:</u> http://education.ohio.gov/Topics/Ohio-s-New-Learning-Standards/Science</p> <p>AIR Practice Site</p>	<p>Vocabulary/Concepts</p> <p>Coastlines Constructive Processes Contour Lines Deposition Destructive Processes Elevation Erosion Floodplains Geological Processes Glaciers Gradients Hydrosphere Landforms LANDSAT Lithosphere Plate Tectonics Streams Topographic, Physical, Aerial Maps Topography</p>

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<p style="text-align: center;">EARTH AND SPACE SCIENCE</p> <p style="text-align: center;">Evidence of the dynamic changes of Earth's surface through time is found in the geologic record. (8.ESS.4)</p> <p>*Topics within this content statement will be assessed on both Part I: Performance-Based Assessment and Part 2: End-Of-Year Assessment of Ohio's Next Generation Assessments for Science.</p>	<p style="text-align: center;">Weeks 8-9</p>	<p style="text-align: center;">"I Can..."</p> <ul style="list-style-type: none"> - investigate virtual dig sites using various methods in order to determine relative and absolute ages of rock layers. - interpret index fossils and radiometric dating results to explain the law of superposition - interpret and understand past environments by developing and using ice core models 	<p style="text-align: center;"><u>Curriculum Units</u></p> <ul style="list-style-type: none"> • The Mystery of Earth's History <p style="text-align: center;"><u>Textbook: Holt Series</u></p> <p style="text-align: center;"><u>Discovery Education:</u></p> <ul style="list-style-type: none"> • Geologic Time [6:44] • Rocks of Ages [8:56] • How Do Scientists Discover Information about Earth's Past [2:00] • Radiometric Dating [8:51] <p style="text-align: center;"><u>Ohio Department of Education - Science:</u> http://education.ohio.gov/Topics/Ohio-s-New-Learning-Standards/Science</p> <p style="text-align: center;">AIR Practice Site</p>	<p style="text-align: center;">Vocabulary/Concepts</p> <p>Absolute Age Crosscutting Fossil Evidence Geologic Record Geologic Time Ice Core Sampling Index Fossils Law of Superposition Radiometric Dating Relative Age</p>