

Columbus County Schools Science Curriculum Guide

SUBJECT: Science	GRADE LEVEL: 8 th Grade	GRADING PERIOD:
Module(s): E The Dynamic Earth	Time Frame: 20 days Dates: Oct. 13th – Nov. 7th	Unit: 4 Earth's History
Essential Standard: 8. E.2: Understand the history of Earth and its life forms based on evidence of change recorded in fossil records and landforms.		

Lessons:	Technology and Literacy Standards and Tasks	Academic Vocabulary:	Assessment(s):	Additional Resources:
Lesson Name: Evidence of Earth's history. Clarifying Objective: 8.E.2.2: Explain the use of fossils, ice cores, composition of sedimentary rocks, faults and igneous rock formations found in rock layers as evidence of the history of the Earth and its changing life forms.		★ breaking ★ uplift ★ geological ★ law of superposition ★ igneous rock ★ metamorphic rock ★ intrusion ★ ice core ★ faults ★ sediments ★ undisturbed rock layer ★ geologic time scale ★ uniformitarianism	Formative: • Quizzes • Cooperative Activities • Labs, Science Notebook • Foldables • Word Maps (graphic organizers) • Bell Ringer/Exit Tickets Summative: • Projects (with rubrics: Powerpoint/Flipchart, Animoto, Prezi, brochures, WebQuests, internet based)	• Science Fusion: E, The Dynamic Earth. Unit 2, lessons 1-3, pages 104-149. • <i>North Carolina End of Grade Coach (2013):</i> Chapter 7: Lessons 17, 18, 19 • <i>McDougal Littell Science</i> Grade 8: • Unit B: Chapter 1: Sections 1 and 2 • <i>McDougal Littell Science</i> Grade 8:

Time Frame:6 days Essential Question: How do we learn about Earth's History?		STUDENT "I CAN" STATEMENTS • I can describe how rocks are formed. • I can give evidence of geologic and biological evolution. • I can explain how fossils can be used to provide evidence of how life and environmental conditions have changed. • I can describe how the law of superposition supports geologic history.	research assignments • ClassScape: Classroom based and County Benchmark • Chapter and Unit tests(Science fusion Test bank)	• Unit A: Chapter 2 • <i>McDougal Littell Science</i> Grade 8: • Chapter 1 • Radioactive Dating: Looking at Half-Lives Using M&Ms http://serc.carleton.edu/sp/mnstep/activities/34884.html • Half-life game http://phet.colorado.edu/en/simulation/radioactive-dating-game • Rock types review games http://reviewgamezone.com/game.php?id=4 • Video http://www.youtube.com/watch?v=ihfKNRdIE2E • www.Learn360.com http://www.ucmp.berkeley.edu/education/explotime.html
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Lesson Name: Relative Dating/ Absolute Dating Clarifying Objective: 8.E.2.1: Infer the age of Earth and relative age of rocks and fossils from index fossils and ordering of rock layers (relative dating and radioactive dating). Time Frame: 14 days Essential Question: How are relative ages of rock measured? How is absolute age of rock measured?	• CCSS.ELA-Literacy.RST.6-8.1 Cite specific textual evidence to support analysis of science and technical texts. • CCSS.ELA-Literacy.RST.6-8.2 Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions. • CCSS.ELA-Literacy.RST.6-8.5 Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic. • CCSS.ELA-Literacy.RST.6-8.6 Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text. Activity:WritetoLearn Science 6 9.1 What are rocks and minerals?	★ infer ★ relative age ★ absolute age ★ fossils ★ index fossil ★ relative dating ★ radioactive dating ★ erosion ★ lithospheric plates ★ atmospheric composition ★ catastrophe ★ asteroid ★ sedimentary rock ★ folding STUDENT "I CAN" STATEMENTS • I can differentiate between relative and absolute age. • I can give examples of absolute and relative dating. • I understand how index fossils are used to help determine the age of rocks and rock layers.	Formative: • Quizzes • Cooperative Activities • Labs, Science Notebook • Foldables • Word Maps (graphic organizers) • Bell Ringer/Exit Tickets Science Formative Assessment 75 practical strategies (Keeley) • First word/last word. p. 88 • Interest scale. p.115 • point p.138 • S.T.I.P. Scientific terminology Inventory Probe. p.180 Uncovering student ideas in science. Vol. 1 • Mountain Age p.167 Uncovering student ideas in science. Vol. 2	• Science Fusion: E, The Dynamic Earth. Unit 2, lessons 1-3, pages 104-149. • <i>North Carolina End of Grade Coach (2013):</i> Chapter 7: Lessons 17, 18, 19 • <i>McDougal Littell Science Grade 8:</i> Unit B: Chapter 1: Sections 1 and 2 • <i>McDougal Littell Science Grade 8:</i> Unit A: Chapter 2 • <i>McDougal Littell Science Grade 8:</i> Chapter 1 • Radioactive Dating: Looking at Half-Lives Using M&Ms http://serc.carleton.edu/sp/mnstep/activities/3488
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	Cold Case: Dinosaurs Part 1 Cold Case: Dinosaurs Part 2 Cold Case: Dinosaurs Part 3	I can apply the law of superposition to determine the relative age of the fossils.	Is it a rock, version 1 and 2. p.151 and 158 Mountaintop fossils. p.165 Summative: - Projects (with rubrics: Powerpoint/Flipchart, Animoto, Prezi, brochures, WebQuests, internet based research assignments - ClassScape: Classroom based and County Benchmark - Chapter and Unit tests(Science fusion Test bank)	4.html - Half-life game http://phet.colorado.edu/en/simulation/radioactive-dating-game - Rock types review games http://reviewgamezone.com/game.php?id=4 - Video http://www.youtube.com/watch?v=ihfKNRdIE2E www.Learn360.com http://www.ucmp.berkeley.edu/education/explotime.html
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