

Earth Science Pacing Guide 2014-2015

Week #	Topic	Chapter	Lab (Inquiry) Scientific Method/Experimental design Metric System ES p.728- Science Skills	Standards	Comments
1	INB/Scientific Thinking			ETS 1-2: Design a solution to a complex real-world problem by breaking it down.	
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3	Light spectrum/Radiation	PS 16,18 ES 17.2, 24		HS-PS4-4 - Evaluate the effects of electromagnetic radiation	
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5	Earth's Place in the Universe	PS 26 ES 24.3, 25.2		HS-ESS1-1 - Develop a model to illustrate the life span of the sun	
6	Earth's Place in the Universe	PS 26 ES 24.3, 25.2		HS-ESS1-1 - Develop a model to illustrate the life span of the sun	
7	Earth's Place in the Universe	PS 26 ES 25.3		HS-ESS1-2 - Construct an explanation of the Big Bang theory	
8	Earth's Place in the Universe	PS 26 ES 25.3		HS-ESS1-2 - Construct an explanation of the Big Bang theory	
9	Earth's Place in the Universe	PS 26 ES 24.3		HS-ESS1-3 - Communicate scientific ideas about the way stars produce elements.	
10	Benchmark #1				
11	Earth's Place in the Universe	PS 25		HS-ESS1-4 - predict the motion of orbiting objects in the solar system.	
12	Earth's Systems	PS 22 ES 8-11		HS-ESS2-1 - illustrate how Earth's internal and surface processes operate	
13	Earth's Systems	PS 23 ES 8-11		HS-ESS2-2- Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.	
14	Plate Tectonics	PS 22 ES 8 & 9		HS-ESS2-3 - Develop a model of Earth's interior to describe the cycling of matter by thermal convection.	

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15	Plate Tectonics	PS 22 ES 8 & 9		HS-ESS2-3 - Develop a model of Earth's interior to describe the cycling of matter by thermal convection.	
16	Plate Tectonics	ES 8 & 9		HS-ESS2-3 - Develop a model of Earth's interior to describe the cycling of matter by thermal convection.	
17	Benchmark #2				
18	Finals				
19	Motion and Stability: Forces and Interactions	PS 12		HS-PS2-1 - 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.	
20	Motion and Stability: Forces and Interactions	PS 12		HS-PS2-2- support the claim that the total momentum of a system of objects is conserved when there is no net force on the system.	
21	Motion and Stability: Forces and Interactions	PS 12		HS-PS2-3- Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.	
22	Matter and its Interactions	PS 5		HS-PS1-1 - 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.	
23	Matter and its Interactions	PS 6	Bulk strength lab	HS-PS1-3- 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.	
24	Motion and Stability: Forces and Interactions	PS 21	Magnetic field vs. Electric current lab	HS-PS2-5 - 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.	
25	Energy	PS 16		HS-PS3-1 - Create a	

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					computational model to calculate the change in the energy of one component in a system	
26	Energy	PS 15			HS-PS3-3 - Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.*	
27	Review					
28	Benchmark #3					
29	Energy	PS 15	-Specific heat calculations & lab		HS-PS3-4 - Plan and conduct an investigation to provide evidence for the transfer of thermal energy	
30	Waves and their Applications in Technologies for Information Transfer	PS 17			HS-PS4-1 - Use mathematical representations to describe a simple model for waves that includes how the amplitude of a wave is related to the energy in a wave.	
31	Waves and their Applications in Technologies for Information Transfer	PS 17			HS-PS4-2- Evaluate questions about the advantages of using a digital transmission and storage of information	
32	Waves and their Applications in Technologies for Information Transfer	PS 17			HS-PS4-3- Evaluate the claims, evidence, and reasoning behind the idea that electromagnetic radiation can be described either by a wave model or a particle model	
33	Waves and their Applications in Technologies for Information Transfer	PS 17			HS-PS4-5- 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.*	
34	Real World Application				HS-ETS1-1: Engineering Design- Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.	
35	Real World				HS-ETS1-3 - Engineering	

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	Application			Design-Evaluate a solution to a complex real-world problem HS-ETS1-4 - Engineering Design- Use a computer simulation to model the impact of proposed solutions	
36	Real World Application				
37	Project				
38	Project				
39	Final				