Next Generation Science Standards	Reach Educator Guide Module No. 1	2	3	4	5	6	7	8	9	10
I. Scientific and Engineering Practices										
1. Asking questions (for science) and defining problems (for engineering)	•	•	•	•	•	•	•	•	•	•
2. Developing and using models.	•	•	•	•			•		•	•
3. Planning and carrying out investigations	•	•	•		•	•	•	•	•	•
4. Analyzing and interpreting data	•	•		•	•	•		•		•
5. Using mathematics and computational thinking	•	•	•	•	•		•	•		•
6. Constructing explanations (for science) and designing solutions (for engineering)	•	•	•	•	•				•	•
7. Engaging in argument from evidence			•		•			•	•	•
8. Obtaining, evaluating, and communicating information	•		•	•	•			•	•	•
II. Crosscutting Concepts										
1. Patterns	•			•	•			•		•
2. Cause and effect mechanism and explanation	•	•		•		•		•	•	•
3. Scale, proportion, and quantity		•	•		•		•			•
4. Systems and system models				•				•	•	•
5. Energy and matter: flows, cycles, and conservation					•	•		•	•	
6. Structure and function		•	•						•	•
7. Stability and change					•	•				
III. Disciplinary Core Ideas										
Physical Sciences										
MS-PS1-2. Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred.		•								•
Life Sciences										
MS-LS2-1. Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.					•					
MS-LS2-2. Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.					•					

MS-LS2-5. Evaluate competing design solutions for maintaining biodiversity and ecosystem services.					•					
Earth and Space Sciences										
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.						•				
MS-ESS2-3. Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of past plate motions					•					•
ıct a scientific explanation based on evidence for how the uneven distributions of Earth's groundwater resources are the result of past and current geoscience processes.					•				•	•
MS-ESS2-5. Collect data to provide evidence for how the motions and complex interactions of air masses results in changes in weather conditions.	•							•	•	
MS-ESS2-6. 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.	•							•		
MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the Environment.					•	•			•	•
MS-ESS3-4. Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.					•	•			•	
Engineering, Technology, and Applications of Science										
MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, considering relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.	•	•	•						•	•
MS-ETS1-2. Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.	•	•							•	•