

Southern Research STEM Education Outreach
Middle School Field Trip Experiences
2015 Alabama Course of Study Alignment

	Green Engineering	Infectious Diseases	The Three Seas
	Physical Science Standards (Grade 8)	Life Science Standards (Grade 7)	Earth and Space Science Standards (Grade 6)
15. Analyze evidence to explain how changes in human population, per capita consumption of natural resources, and other human activities affect Earth's systems.			✓
3. Construct an explanation of the function of specific cell structures for maintaining a stable environment.		✓	
4. Construct models and representations of organ systems to demonstrate how multiple interacting organs and systems work together to accomplish specific functions.		✓	
13. Create and analyze graphical displays to illustrate the relationships of kinetic energy to the mass and speed of an object.	✓		
14. Use models to construct an explanation of how a system of objects may contain varying types and amounts of potential energy.	✓		
16. Apply the law of conservation of energy to develop arguments supporting the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.	✓		
	Science and Engineering Practices		
Asking Questions and Defining Problems	✓	✓	✓
Developing and Using Models	✓	✓	✓
Planning and Carrying Out Investigations	✓	✓	✓
Analyzing and Interpreting Data	✓	✓	✓
Using Mathematics and Computational Thinking	✓		
Constructing Explanations and Designing Solutions	✓		

Engaging in Argument from Evidence			
Obtaining, Evaluating, and Communicating Information			
	Cross-Cutting Concepts		
Patterns	✓	✓	✓
Cause and Effect			✓
Scale, Proportion, and Quantity	✓		
Systems and System Models	✓	✓	✓
Energy and Matter	✓		
Structure and Function	✓		
Stability and Change			