

**Next Generation Science
Standards
Advanced Academy
10th-12th Grade 2017**



	Astronomy Night-Celestial Marathon	Early Space History	Exploration Systems	Flight Hardware	Future of Spaceflight	International Space Programs	Model Rocket Challenge	Robotics-Rover Engineering Challenge	Russian Culture & Lab	Space Meets	Space Suits	Thermal Protection Systems
Earth and Space Science												
ESS1.A: The Universe and Its Stars	X											
ESS1.B: Earth and the Solar System	X	X	X	X	X	X			X		X	
ESS1.C: The History of Planet Earth												
ESS2.A: Earth Materials and Systems												
ESS2.B: Plate Tectonics and Large-Scale System Interactions												
ESS2.C: The Roles of Water in Earth's Surface Processes												
ESS2.D: Weather and Climate												
ESS2.E: Biogeology												
ESS3.A: Natural Resources			X									
ESS3.B: Natural Hazards												
ESS3.C: Human Impacts of Earth Systems			X									
ESS3.D: Global Climate Change												
Physical Science												
PS1.A: Structure and Properties of Matter				X								
PS1.B: Chemical Reactions			X	X					X			
PS1.C Nuclear Processes												
PS2.A: Forces and Motion				X		X	X					
PS2.B: Types of Interactions		X							X	X		
PS2.C: Stability and Instability in Physical Systems				X								
PS3.A: Definitions of Energy			X						X		X	
PS3.B: Conservation of Energy and Energy Transfer			X									X
PS3.C: Relationship Between Energy and Forces				X								
PS3.D: Energy and Chemical Processes in Everyday Life			X	X								
PS4.A: Wave Properties												
PS4.B: Electromagnetic Radiation											X	X
PS4.C: Information Technologies and Instrumentation	X								X			
Life Science												
LS1.A: Structure and Function										X	X	
LS1.B: Growth and Development of Organisms										X		
LS1.C: Organization for Matter and Energy Flow in Organisms			X									
LS1.D: Information Processing												
LS2.A: Interdependent Relationships in Ecosystems			X	X								
LS2.B: Cycles of Matter and Energy Transfer in Ecosystems			X									
LS2.C: Ecosystem Dynamics, Functioning, and Resilience												
LS2.D: Social Interactions and Group Behavior												
LS3.A: Inheritance of Traits												
LS3.B: Variation of Traits												
LS4.A: Evidence of Common Ancestry												
LS4.B Natural Selection												
LS4.C: Adaptation												
LS4.D: Biodiversity and Human												
Engineering Design, Technology, and the Application of Science												
ETS1.A: Defining and Delimiting an Engineering Problem			X				X	X			X	X
ETS1.B: Developing Possible Solutions			X				X	X			X	X
ETS1.C: Optimizing the Design Solution							X				X	X