

**Next Generation Science
Standards Advanced
Academy
10th-12th Grade 2018**

	Astronomy Night-Celestial Marathon	Space History (Early Rocketry-Shuttle)	Engineering Extreme Environments (E3)	Flight Hardware	Hover Craft Challenge	International Space Programs	Intro to Flight	Model Rocket Challenge	Robotics-Rover Engineering Challenge	Russian Culture & Lab	SLS/Orion
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
ESS1.C: The History of Planet Earth			X								
ESS2.A: Earth Materials and Systems			X								
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			X								
ESS2.E: Biogeology											
ESS3.A: Natural Resources											
ESS3.B: Natural Hazards											
ESS3.C: Human Impacts of Earth Systems											
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		X	X	X		
PS2.B: Types of Interactions		X					X			X	
PS2.C: Stability and Instability in Physical Systems				X							

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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		
ETS1.B: Developing Possible Solutions			X		X			X	X		
ETS1.C: Optimizing the Design Solution			X		X			X			

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	Space Meds	Space Suits	Thermal Protection Systems
Earth and Space Science			
ESS1.A: The Universe and Its Stars			
ESS1.B: Earth and the Solar System		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			
ESS3.B: Natural Hazards			
ESS3.C: Human Impacts of Earth Systems			
ESS3.D: Global Climate Change			
Physical Science			
PS1.A: Structure and Properties of Matter			
PS1.B: Chemical Reactions			
PS1.C Nuclear Processes			
PS2.A: Forces and Motion			
PS2.B: Types of Interactions	X		
PS2.C: Stability and Instability in Physical Systems			

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	Space Meds	Space Suits	Thermal Protection Systems
PS3.A: Definitions of Energy	X		X
PS3.B: Conservation of Energy and Energy Transfer			X
PS3.C: Relationship Between Energy and Forces			
PS3.D: Energy and Chemical Processes in Everyday Life			
PS4.A: Wave Properties			
PS4.B: Electromagnetic Radiation		X	X
PS4.C: Information Technologies and Instrumentation			
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			
LS1.D: Information Processing			
LS2.A: Interdependent Relationships in Ecosystems			
LS2.B: Cycles of Matter and Energy Transfer in Ecosystems			
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			

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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
ETS1.B: Developing Possible Solutions		X	X
ETS1.C: Optimizing the Design Solution		X	X