

## NGSS Disciplinary Core Ideas

Core Idea	Component A	Component B	Component C	Component D	Component E
PS1 Matter and Its Interactions	PS1.A: Structure and Properties of Matter	PS1.B: Chemical Reactions	PS1.C: Nuclear Processes		
PS2 Motion and Stability: Forces and Interactions	PS2.A: Forces and Motion	PS2.B: Types of Interactions	PS2.C: Stability and Instability in Physical Systems		
PS3 Energy	PS3.A: Definitions of Energy	PS3.B: Conservation of Energy and Energy Transfer	PS3.C Relationship Between Energy and Forces	PS3.D Energy in Chemical Processes and Everyday Life	
PS4 Waves and Their Applications in Technologies for Information Transfer	PS4.A: Wave Properties	PS4.B: Electromagnetic Radiation	PS4.C: Information Technologies and Instrumentation		
LS1 From Molecules to Organisms: Structures and Processes	LS1.A: Structure and Function	LS1.B: Growth and Development of Organisms	LS1.C: Organization for Matter and Energy Flow in Organisms	LS1.D: Information Processing	
LS2 Ecosystems: Interactions, Energy, and Dynamics	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 Heredity: Inheritance and Variation of Traits	LS3.A: Inheritance of Traits	LS3.B: Variation of Traits			
LS4 Biological Evolution: Unity and Diversity	LS4.A: Evidence of Common Ancestry and Diversity	LS4.B: Natural Selection	LS4.C: Adaptation	LS4.D: Biodiversity and Humans	
ESS1 Earth's Place in the Universe	ESS1.A: The Universe and Its Stars	ESS1.B: Earth and the Solar System	ESS1.C: The History of the Planet Earth		
ESS2 Earth's Systems	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 Earth and Human Activity	ESS3.A: Natural Resources	ESS3.B: Natural Hazards	ESS3.C: Human Impact on Earth Systems	ESS.3.D: Global Climate Change	
ETS1 Engineering Design	ETS1.A: Defining and Delimiting an Engineering Problem	ETS1.B: Developing Possible Solutions	ETS1.C: Optimizing the Design Solution		
ETS2 Links Among Engineering, Technology, Science, and Society	ETS2.A: Interdependence of Science, Engineering, and Tech.	ETS2.B: Influence of Engineering, Technology, and Science on Society and the Natural World			