

Program Scope

The NGSS **SEPs**, **DCIs** and **CCCs** are fully integrated in the topics. They can also be introduced, reviewed, and reinforced using the SEPs and CCCs Preview Presentation and Activities in the course.

PHYSICAL	EARTH
MODULE Matter and Change TOPIC 1 Introduction to Matter 1 Structure of Matter 2 Modeling Matter TOPIC 2 Solids, Liquids, and Gases 1 States of Matter 2 Changes in State TOPIC 3 Physical Change and Chemical Reactions 1 Physical and Chemical Changes 2 Chemical Reactions 3 Synthetic Materials	MODULE Weather and Climate TOPIC 1 Weather 1 The Water Cycle 2 Weather and Air Masses 3 Weather Changes TOPIC 2 Climate 1 Patterns of Circulation in the Atmosphere 2 Patterns of Circulation in the Ocean
MODULE Thermal Energy TOPIC 1 Thermal Energy 1 Thermal Energy Transfer 2 Thermal Energy and Matter 3 Optimizing Thermal Energy Flow	MODULE A Changing Earth TOPIC 1 Cycling of Earth's Materials 1 The Rock Cycle and Mineral Formation 2 Weathering 3 Erosion and Deposition TOPIC 2 Plate Tectonics and Catastrophic Events 1 Evidence of Plate Movement 2 Plate Tectonics and Earth's Surface 3 Catastrophic Events TOPIC 3 Natural Hazards 1 Earthquake Hazards 2 Volcanic Hazards 3 Severe Weather
MODULE Forces TOPIC 1 Force and Motion 1 Newton's First Law of Motion 2 Newton's Second Law of Motion 3 Newton's Third Law of Motion TOPIC 2 Noncontact Forces and Force Fields 1 Electric Forces 2 Magnetic Force 3 Gravitational Force 4 Force Fields and Interactions	MODULE Earth's History TOPIC 1 History of Earth 1 Determining the Ages of Rocks 2 Geologic Time Scale 3 Major Events in Earth's History
MODULE Energy TOPIC 1 Potential Energy and Kinetic Energy in Systems 1 Graphing Kinetic Energy 2 Potential Energy in Systems 3 Conservation of Energy	MODULE Natural Resources and Human Impacts TOPIC 1 Distribution of Natural Resources 1 Energy Resources 2 Mineral Resources 3 Water Resources TOPIC 2 Human Impacts on Earth's Systems 1 Population Growth and Resource Consumption 2 Humans and Climate Change 3 Energy Use 4 Water Use 5 Land Use
MODULE Waves TOPIC 1 Waves and Information Technologies 1 Wave Properties 2 Mechanical Waves 3 Light Waves 4 Information Transfer Technologies	MODULE Space Science TOPIC 1 Earth-Moon-Sun System 1 Seasons 2 Eclipses and Lunar Phases TOPIC 2 The Solar System, Galaxies, and Universe 1 Objects in the Solar System 2 Movement in the Solar System and Galaxies

LIFE

MODULE Cells and Systems

TOPIC 1 Cells

- 1 Living Things and Cells
- 2 Cell Organelles Structure and Function

TOPIC 2 Human Body Systems

- 1 Body Organization
- 2 Systems Interacting
- 3 Controlling Processes

MODULE Growth and Development

TOPIC 1 Growth and Development

- 1 Animal Behaviors and Reproduction
- 2 Plant Structures and Reproduction
- 3 Factors that Affect Growth

MODULE Matter, Energy, and Ecosystems

TOPIC 1 Matter and Energy in Organisms

- 1 Photosynthesis
- 2 Cellular Respiration

TOPIC 2 Interactions, Energy, and Matter in Ecosystems

- 1 Ecosystem Dynamics
- 2 Ecosystem Interactions
- 3 Flow of Energy
- 4 Cycling of Matter

TOPIC 3 Dynamic and Resilient Ecosystems

- 1 Change in Ecosystems
- 2 Biodiversity
- 3 Ecosystem Services

MODULE Genetics and Evolution

TOPIC 1 Inheritance and Variation of Traits

- 1 Transfer of Genetic Information
- 2 Variation of Traits
- 3 Genetic Technologies

TOPIC 2 Natural Selection and Change Over Time

- 1 Natural Selection
- 2 Evidence in the Fossil Record
- 3 Anatomical Evidence for Evolution