

Unit 4: Structure of Earth

Grade 6: Science (2025-2026)

[Unit Overview]

Tools for Planning		
PLC Process Resources • Unit Internalization Protocol • TEA TEKS Guide • Lead4Ward Resources • Lead4Ward Field Guides - Content & SEPs	Year-At-A-Glance/Pacing Calendar • GR 6 Science YAAG 2025-2026 • GR 6 Science Pacing Guide 2025-2026	Additional Planning Resources: • Specially Designed Instruction (SDI) • Language Supports • Multi-Tiered System of Supports (MTSS)

Unit Description
Description: Students explore the structure of the Earth starting with Earth's spheres. They differentiate between the biosphere, hydrosphere, atmosphere, and geosphere and identify the components of each. Students then explore the organization of the geosphere to model and describe the layers of the Earth including the inner core, outer core, mantle, and crust. They continue their understanding of the geosphere by describing the processes of the rock cycle that change and form metamorphic, igneous, and sedimentary rock. Suggested Unit Pacing: 14 Days (14 - 50 minute class periods) Number of Learning Targets: 3

PLC Q1 - Unit 4 Planning Guidance	
Essential Questions	Enduring Understandings
→ What are the spheres that make up the structure of the Earth? → What are the layers of the Earth that are contained in the geosphere? → What are the geologic processes in the rock cycle?	→ The Earth is divided into spheres, including the biosphere, hydrosphere, atmosphere, and geosphere, which each have distinct components. → The geosphere is composed of layers including the inner core, outer core, mantle, and crust. → Metamorphic, igneous, and sedimentary rocks form and change through the rock cycle.

TEKS [District Recommended Essentials are in Bold Type]	
TEKS: → 6.10(A) differentiate between the biosphere, hydrosphere, atmosphere, and geosphere and identify components of each system; → 6.10(B) model and describe the layers of Earth, including the inner core, outer core, mantle, and crust → 6.10(C) describe how metamorphic, igneous, and sedimentary rocks form and change through geologic processes in the rock cycle Gr 8 Assessed Curriculum: 6.10B	Recurring Themes and Concepts: → 6.5(D) examine and model the parts of a system and their interdependence in the function of the system; Science & Engineering Practices: → 6.1(F) construct appropriate tables, graphs, maps, and charts using repeated trials and means to organize data; → 6.1(G) develop and use models to represent phenomena, systems, processes, or solutions to engineering problems; → 6.5(D) examine and model the parts of a system and their interdependence in the function of the system
<u>Essential ELPS:</u> → Learning Strategies 1C - use strategic learning techniques such as concept mapping, drawing, memorizing, comparing, contrasting, and reviewing to acquire grade-level vocabulary → Listening 2G - understand the general meaning, main points, and important details of spoken language ranging from situations in which topics, language, and contexts are familiar to unfamiliar → Speaking 3D - speak using grade-level content area vocabulary in context → Reading 4F - use visual and contextual support to develop vocabulary and background knowledge → Writing 5G - narrate, describe, and explain with increasing specificity and detail to fulfill content areas' writing needs	
PLC Q2 - Unit 4 Assessment Guidance	
Unit Assessment Resources	Other Assessment Resources
→ Structure of Earth Assessment- Aware with Answer Key → Structure of Earth Assessment - Blueprint → Structure of Earth Assessment - Test Booklet	→ Middle School Science STAAR Science Reference Materials (Gr 8) → STAAR New Item Type Examples → Gr 8 STAAR Assessed Curriculum 2025-2026 → Gr 8 STAAR Blueprint 2025-2026 → Gr 8 SCR Scoring Rubric & Guides → Gr 6 Science Supplemental Aids 2025-2026
Performance Task Resources	
→ n/a	

[Unit Guide]

Tools for Instruction		
Teacher Resources → TEA TEKS Guide → Lead4Ward Field Guides - Content & SEPs → Lead4Ward Instructional Strategies Playlist → ELlevation	Student Resources → HMH Resources (link to book) → PhET Lab Simulations → Gr 6 Science Supplemental Aid Resources	Additional Tools → Periodic Table of Elements → Visual Non Glossary → Science - Digital Resources → MS Science - Internalization Guidance → [Template] PDSA: DO - MiNT Science → [SCI 6.10B] Standard Internalization

Tier One	Bundle 1: Layers of Earth		
	Description: Students model and describe the layers of Earth, including the inner core, outer core, mantle, and crust (6.10B)		
	Pacing: 4 Days		
	TEKS/I Can Statements (Q1)	Check for Understanding (Q2)	
	Connecting the Content Standards & SEPs I can model and describe the layers of Earth, including the inner core, outer core, mantle, and crust (6.10B, 6.1F, 6.1G) → Students draw/use models to identify the layers of Earth including the inner core, outer core, mantle, and crust. → Students describe the composition and characteristics of each layer of the Earth	→ [CFU 1] Earth Layers (SCRs) → [CFU 1] Earth Layers-Aware Answer Key → [CFU 1] Earth Layers- Test Booklet	
		Activities (Q1)	Resources (Q1)
		→ [Activity] Lab: Edible Earth Layers → [Activity] Lab: Scale Model	→ [Resource] Teach: Earth Layers → [Resource] Notetaker: Earth Layers
		Additional Practice (Q3)	Challenge (Q4)
		→ [Additional Practice] Earth Layers Cut & Paste	→ [Challenge] Lithosphere & Asthenosphere → [Challenge] Hexagonal Thinking Activity 6.10
	Additional Tools	Academic Vocabulary	
	→ GR6 Materials List by Unit	→ Asthenosphere → Crust	Lithosphere Outer Core Mantle Inner Core

Bundle 2: Earth Spheres

Description: Students use pictures, scenarios, and models to differentiate between the biosphere, hydrosphere, atmosphere, and geosphere and identify components of each system (6.10A)

Pacing: 4 Days

TEKS/I Can Statements (Q1)

Connecting the Content Standards & SEPs

I can use pictures, scenarios, and models to differentiate between the biosphere, hydrosphere, atmosphere, and geosphere and identify components of each system (6.10A/6.1F/6.5D)

- Students draw and/or use maps to differentiate between the Earth's spheres
- Students use charts to identify and describe the components of each system
- Students model the spheres to show the components working as a system within the Earth

Check for Understanding (Q2)

- [\[CFU 2\] Earth Spheres \(SCRs\)](#)
- [\[CFU 2\] Earth Spheres-Aware Answer Key](#)
- [\[CFU 2\] Earth Spheres- Test Booklet](#)

Activities (Q1)

- [\[Activity\] Lab: Earth Spheres Gallery Walk](#)
- [\[Activity\] Lab: Earth Spheres Images](#)

Resources (Q1)

- [\[Resource\] Teach: Earth Spheres](#)
- [\[Resource\] Notetaker: Earth Spheres](#)

Additional Practice (Q3)

- [\[Additional Practice\] Earth Spheres](#)

Challenge (Q4)

- [\[Challenge\] Earth Spheres Interactions](#)
- [\[Challenge\] Hexagonal Thinking Activity 6.10](#)

Additional Tools

- [GR6 Materials List by Unit](#)

Academic Vocabulary

- | | | |
|----------------|-------------|---------------|
| → Earth sphere | Biosphere | Hydrosphere |
| → Atmosphere | Geosphere | Biodiversity |
| → Ecosystem | Groundwater | Surface Water |
| → Watershed | | |

Tier One	Bundle 3: The Rock Cycle			
	Description: Students use models and descriptions to identify the three main types of rocks and explain how metamorphic, igneous, and sedimentary rocks form and change through geologic processes in the rock cycle (6.10C)			
	Pacing: 5 Days			
	TEKS/I Can Statements (Q1)		Check for Understanding (Q2)	
	Connecting the Content Standards & SEPs I can describe how metamorphic, igneous, and sedimentary rocks form and change through geological processes in the rock cycle. (6.10C/6.1G/6.5D) → Students identify each of the three main types of rocks based on their characteristics → Students draw and/or use models to represent the geological processes that form each type of rock - sedimentary, metamorphic, and igneous → Students create a model of the rock cycle and describe how the processes function as a system within the geosphere		→ [CFU 3] Rock Cycle (SCRs) → [CFU 3] Rock Cycle-Aware Answer Key → [CFU 3] Rock Cycle- Test Booklet	
			Activities (Q1)	Resources (Q1)
			→ [Activity] My Journey in the Rock Cycle - Student Sheet → [Activity] My Journey in the Rock Cycle - Teacher Set Up → [Activity] Lab: Rock Cycle Starbursts	→ [Resource] Teach: Rock Cycle → [Resource] Notetaker: Rock Cycle → [Resource] Rock Cycle Factsheet
			Additional Practice (Q3)	Challenge (Q4)
	Additional Tools		Academic Vocabulary	
	→ GR6 Materials List by Unit		→ Cementation → Igneous Rock → Sedimentary Rock → Metamorphic Rock → Deposition	Compaction Lava Sediment Sedimentation Erosion Magma Rock Cycle Weathering

