

6th Grade Science

Curriculum Map

GLCE Aligned

Rock Formation GLCE's

Glencoe Science

Texts F & G

1st 9 Weeks

Week	GLCE	Objective	Resources	Vocabulary
1	E.SE.06.11 Explain how physical and chemical weathering lead to erosion and the formation of soils and sediments	Students will be able to explain how weathering results in erosion and the formation of soils and sediments.	Student Edition: • (G) 36-41, 42 • (G)50-53 • (G)64-68 • Science Online 39 • National Geographic 43 LAB: • Design Your Own Lab 54-55	• erosion • weathering • soil
2 & 3	E.SE.06.12 Explain how waves, wind, water, and glacier movement shape and deposit sediments in other areas.	Students will be able to explain how sediments are deposited in other areas.	Student Edition: • (G) 64-68, 69-74 • (G) 76-81 • (G) 92-102, 112 • Science Online 74 LAB: • Launch Lab 63, 91 • Mini Lab 65 • LAB 75, 114-115 • Design Your Own Lab 82-83	• abrasions • thermal expansion & contraction • glaciers
4	E.SE.06.13 Explain that soil is a mixture, made up of weather-eroded rock and decomposed organic	Students will be able to explain how soil is a mixture.	Student Edition: • (G) 42-48 • Get Ready to Read • 36A-B • National Geographic 43	• minerals • sediments • gravel • sand

	material.		<u>LAB:</u> • Mini Lab 44	• clay • organic material
5	E.SE.06.14 Describe how soil samples can be characterized based on particle size and texture.	Students will be able to describe how soil samples can be classified.	Student Edition: • (G) 46-47 • Get Ready to Read 36B • Applying Math 46 <u>LAB:</u> • LAB 49	• particle size
6 & 7	E.SE.06.41 Describe formation of rock types (igneous, metamorphic, and sedimentary) and differences between the types using rock cycle model.	Students will be able to describe how rocks form and the difference between them.	Student Edition: • (F) 40-43 • (F) 45-48 • (F) 49-55 • Get Ready to Read 36B <u>LAB:</u> • LAB 44	• igneous • metamorphic • sedimentary • rock cycle
8	E.SE.06.62 Explain how a compass is used for navigation on land and sea.	Students will be able to explain how to use a compass for navigation.	Student Edition: • Brain Pop “Magnetism” • Self Check Quiz – Chapter 2 Sections 1 & 2 • Interactive Tutor – Chapter 2 • “Finding Your Way with a Compass” article <u>LAB:</u> • Making a Compass	• poles • navigation • gradual • formation

			(Activity in Group Folders)	
9	CLOSURE/ASSESSMENT/ REVIEW			

**Plate Tectonics &
Fossils GLCE's
Glencoe Science
Texts F & G
2nd 9 Weeks**

Week	GLCE	Objective	Resources	Vocabulary
1 - 3	E.SE.06.51 Explain plate tectonic movement & that the lithospheric plates move centimeters /year. E.SE.06.52 Demonstrate how major geological events [earthquakes, volcanic eruption, mountain building] result from these plate motions. E.SE.06.53 Describe layers of the Earth as lithosphere [crust and upper mantle] convecting mantle and a dense metallic core.	Use models to explain major geological events, plate tectonics, and layers of the Earth.	Student Edition: (F) Chapter 4, section 1-3 “KWL” foldable LAB: LAB “Seafloor Spreading Rates” (p. 105) Internet Lab “Predicting Tectonic Activity”	- continental drift - pangaea - plate tectonics - plate - lithosphere - asthenosphere - convection current - rock layers - upper Mantle - convecting mantle - earthquakes - volcanic eruptions - mountain building - crust - metallic core
4 - 6	E.ST.06.31 Explain how rocks and fossils are used to understand the age & geological history of the Earth (timelines & relative dating, rock layers).	Make observations of rock layers & fossils & compare them to modern life forms to demonstrate environmental	Student Edition: (G) Chapter 6 “Geological Time” (sections 1-3) - BrainPop “Fossils” LAB: Internet Lab “Discovering the past”	- geological history - timelines - relative dating

		change over time.		
7 & 8	E.ST.06.41 Explain how Earth processes (erosion, mountain building, and glacier movement) are used for the measurement of geologic time through observing rock layers.	Students will make observations of rock layers and fossils and compare them to modern life forms to demonstrate environmental change over time.	Student Edition: • (G) Chapter 3, sections 1-3 • BrainPop “Glaciers” and “Weathering” LAB: • LAB “Glacial Grooving” • Internet Lab “How do glaciers shape the land?”	• sediment • erosion • deposition • mass movement • slump • creep • glacier
9	E.ST.06.42 Describe how fossils provide important evidence of how life & environmental conditions have changed.	Students use units of geologic time to interpret the history of life on Earth.	Student Edition: • (G) Chapter 5, section 1 “Fossils” LAB: • Mini Lab “Predicting Fossil Preservation	• geologic time scale • fossils

**Matter &
Energy GLCE's
Glencoe Science
Texts K & M
3rd 9 Weeks**

Week	GLCE	Objective	Resources	Vocabulary
1	P.CM.06.11 Describe and illustrate changes in state, in terms of the arrangement and relative motion of the atoms or molecules.	Students will be able to describe changes in states of matter in terms of motion and arrangements of atoms and molecules.	Student Edition: • “Before You Read” Chart (pg. K40B) #1-6 • (K) Chapter 2, Section 1 • Read Section • Study Guide #1-15 pg. 11 • Transparency/Powerpoint Image and Questions • Venn Diagram/Foldable on States of Matter and their molecular arrangement • Students model molecular movement through their motion. • Online Interactive Tutor • Online Self Check Quiz • Bill Nye Clip • Brain Pop Clip “States of Matter” LAB: • Distilling Water	• atom • molecules • states of matter • <i>matter</i> • <i>solid</i> • <i>liquid</i> • <i>plasma</i> • <i>gas</i>
2	P.CM.06.11 Describe and illustrate changes in state, in terms of the arrangement and relative motion of the atoms or molecules.	Students will be able to master the meaning of the vocabulary. This will enrich the students’ understanding of how matter changes states and	Student Edition: • (K) Chapter 2, Section 2 • Read Section • Study Guide #1-6 pg. 12 • Transparency/Powerpoint Image and Questions	• <i>melting</i> • <i>boiling point</i> • <i>freezing</i> • <i>evaporation</i> • <i>condensation</i> • <i>phase change</i>

	P.CM.O6.12 Explain how mass is conserved as a substance changes from state to state in a closed system.	that the mass of the substance is still constant.	• Online Interactive Tutor • Online Self Check Quiz • Science Online – Freezing Point Study text pg. 49 • Brain Pop Clip “Matter Changing State” <u>LAB:</u> • Virtual Lab • Mini Lab text pg. 50	
3	P.CM.O6.12 Explain how mass is conserved as a substance changes from state to state in a closed system.	Students will be able to explain that the mass of an object stays the same, even when changing states.	Student Edition: • (K) Chapter 3, Section 2 • Read Section • Study Guide #1-14 pg. 16 • Transparency/Powerpoint Image and Questions • Online Interactive Tutor • Online Self Check Quiz • Brain Pop Clip “Property Changes”	• mass
4	P.EN.06.41 Explain how different forms of energy can be transferred from one place to another by radiation, conduction, or convection.	Students will be able to explain how heat energy is transferred from place to place by radiation, conduction, or convection.	Student Edition: • (M) Chapter 6, Section 2 • Read Section • Study Guide #1-14 pg. 58 • Transparency/Powerpoint Image and Questions • Online Interactive Tutor • Online Self Check Quiz <u>LAB:</u>	• heat transfer • conduction • convection • radiation • closed system

			• Virtual Lab • LAB text pg. 168	
5 - 8	P.EN.06.11 Identify kinetic or potential energy in everyday situations. P.EN.06.12 Demonstrate the transformation between potential and kinetic energy in simple mechanical systems. P.EN.06.42 Illustrate how energy can be transferred while no net loss or gain of energy is lost or gained in the transfer.	Students will be able to distinguish between kinetic and potential energies as found in everyday situations. The students will be able to show how potential energy can become kinetic energy and how kinetic energy can become potential energy.	Student Edition: • (M) Chapter 5, Section 1 • Read Section • Online Interactive Tutor • Online Self Check Quiz • Science Online – Energy Transformations • Brain Pop Clips “Energy”, “Kinetic Energy”, “Potential Energy” LAB: • Virtual Lab • LAB text pg. 138	• energy transfer • kinetic energy • potential energy • <i>law of conservation of energy</i>
9	CLOSURE/ASSESSMENT /REVIEW			

Ecosystems GLCE's

Glencoe Science Text E

4th 9 Weeks

Week	GLCE	Objective	Resources	Vocabulary
1 & 2	L.EC.06.11 Identify and describe examples of populations, communities, and ecosystems including the Great Lakes region.	Students describe the characteristics of populations and communities within Michigan ecosystems.	Student Edition: - Foldables Study Organizer (p. 7) (E) Chapter 1, Section 1 and 2 LAB: Mini-Lab Observing Seedling Competition (p. 13)	- ecosystem - population - community - competition - habitat
3	L.OL.06.51 Classify producers, consumers, and decomposers based on their source of food (the source of energy and building materials). L.OL.06.52 Distinguish between the ways in which consumers and decomposers obtain energy.	Students define and identify producers, consumers and decomposers in ecosystems that could be found in Michigan.	Student Edition: (E) Chapter 1, Section 3 LAB: LAB “Feeding Habits of Planaria” (p. 25)	- producers - consumers - decomposers - fungus - bacteria
4	L.EC.06.21 Describe common patterns of relationships between and among populations (competition, parasitism, symbiosis, predator/prey) L.EC.06.22 Explain how two populations of	Students identify various populations and how they can coexist. Students examine the effects of population changes and characteristics of parasitic relationships.	Student Edition: (E) Chapter 1, Section 3 - BrainPop “Population Growth”	- parasite - predator - prey - symbiosis

	organisms can be mutually beneficial and how that can lead to interdependency. L.EC.06.23 Predict and describe how changes in one population might affect other populations based upon their relationships in the food web.			
5	L.EC.06.31 Identify the living (biotic) and nonliving (abiotic) components of an ecosystem.	Students identify the biotic and abiotic factors in ecosystems.	Student Edition: • (E) Chapter 2 Foldable Study Organizer (p. 35) • (E) Chapter 2, Section 1 LAB: • LAB “Humus Farm” (p. 43) • Virtual Lab	• abiotic components • biotic components • food web • climate change
6 & 7	L.EC.06.31 Identify the living (biotic) and nonliving (abiotic) components of an ecosystem.	Students identify the biotic and abiotic factors in ecosystems.	Student Edition: • (E) Chapter 3, Section 1- 3 • Reading Chart (p. 64) • BrainPop “Ecosystems” LAB: • LAB “Studying A Land Ecosystem”	• biomes • tundra • forests • wetlands • ponds • lakes • tropical rainforest • desert • dunes • prairies

				coral reef
8 & 9	L.EC.06.41 Describe how human beings are part of the ecosystem of the Earth and that human activity can purposefully, or accidentally, alter the balance in ecosystems. L.EC.06.42 Predict and describe possible consequences of overpopulation of organisms, including humans, (for example: species extinction, resource depletion, climate change, pollution).	Students understand how human activities change environmental conditions and positively and negatively impact ecosystems.	Student Edition: “KWL” Foldable on Biodiversity - BrainPop “Global Warming” - Chapter 5, Sections 1 and 2 - Internet WebQuest: What effect does air pollution have on asthma? <u>LAB:</u> LAB “Oily Birds”	- pollution - resource depletion - species extinction - environmental impact - balance in ecosystems - source of Energy