

Science Fusion
Module D: Ecology and the Environment
Homeschool Pacing Guide

Options for Instruction: Two parallel paths meet the unit objectives, with a strong inquiry strand woven into each. Follow the Print Path, the Digital Path, or your customized combination of print, digital, and inquiry.

Note: Many of the Labs require specialized scientific equipment. Please check the materials list in the TE.

Unit 1: Interactions of Living Things

Pacing Guide			
SE = Student Edition Interactive Worktext			TE = Teacher Edition
Days	Activity Type	Print	Digital
Unit 1 Opener			
Lesson 1: Introduction to Ecology			
1-2 days	Big Idea	SE, pp. 1–3; *TE, pp. 10–11	
	Lesson	SE, pp. 4–13; *TE, pp. 20–24	Screens 1–10
1 day	Virtual Lab		Screens 1–13
1 day	Review	SE, pp. 14–15; *TE, p. 25	
	Assessment		◊ Lesson 1 Quiz
(Optional)	Enrichment	People in Science, SE, pp. 16–17; *TE, pp. 26–27	
(Optional)	Labs		† Quick Lab: Which Abiotic and Biotic Factors Are Found in an Ecosystem? † Quick Lab: Which Biome? † Field Lab: What’s in an Ecosystem?

Lesson 2: Roles in Energy Transfer			
1-2 days	Lesson	SE, pp. 18–27; *TE, pp. 36–40	Screens 1–10
1 day	Review	SE, pp. 28–29; *TE, p. 41	
	Assessment		◊ Lesson 2 Quiz
(Optional)	Labs		† Quick Lab: Making Compost † Quick Lab: Energy Role Game † Field Lab: Food Webs
Lesson 3: Population Dynamics			
1-2 days	Lesson	SE, pp. 30–39; *TE, pp. 50–54	Screens 1–15
1 day	Review	SE, pp. 40–41; *TE, p. 55	
	Assessment		◊ Lesson 3 Quiz
(Optional)	Labs		† Quick Lab: What Factors Influence a Population Change? † Quick Lab: Investigate an Abiotic Limiting Factor † Exploration Lab: How Do Populations Interact?
Lesson 4: Interactions in Communities			
1-2 days	Lesson	SE, pp. 42–49; *TE, pp. 64–67	Screens 1–10
1 day	Virtual Lab		Screens 1–15
1 day	Review	SE, pp. 50–51; *TE, p. 68	
	Assessment		◊ Lesson 4 Quiz
(Optional)	Labs		† Quick Lab: Prey Coloration † Quick Lab: Identifying Predators and Prey † Exploration Lab: Modeling the Predator-Prey Cycle

Unit 1 Review and Assessment			
(Optional)	Video-Based Project		A Trip Down Shark River
1 day	Review	SE, pp. 54–58; *TE, pp. 70–72	Online Unit Self Quiz
1 day	Assessment		◊ Unit 1 Test

* The digital Teacher’s Edition can be accessed through the Online Teacher Digital Management System at the Lesson Level.

TE: Lesson Level Resources > Lesson Teacher Support > Teacher Edition

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Lab Manuals: Lesson Level Resources > Lesson Inquiry Resources > Lab Manuals

† Lab Datasheets can be accessed through the online Student Edition at the lesson level.

Lab Datasheets: Lesson Level Resources > Lab Datasheet

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Unit 2: Earth’s Biomes and Ecosystems

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Days	Activity Type	Print	Digital
Unit 2 Opener			
Lesson 1: Land Biomes			
1-2 days	Big Idea	SE, pp. 59–61; *TE, pp. 84–85	
	Lesson	SE, pp. 62–71; *TE, pp. 94–98	Screens 1–15
1 day	Review	SE, pp. 72–73; *TE, p. 99	
	Assessment		◊ Lesson 1 Quiz
(Optional)	Labs		† Quick Lab: Climate Determines Plant Life † Quick Lab: Identify Your Land Biome † Field Lab: Survey of a Biome’s Biotic and Abiotic Factors

Lesson 2: Aquatic Ecosystems			
1-2 days	Lesson	SE, pp. 74–83; *TE, pp. 108–112	Screens 1–14
1 day	Review	SE, pp. 84–85; *TE, p. 113	
	Assessment		◊ Lesson 2 Quiz
(Optional)	Enrichment	Think Science, SE, pp. 86–87; *TE, pp. 114–115	
(Optional)	Labs		† Quick Lab: Life in Moving Water † Quick Lab: Light Penetration and Water Clarity
Lesson 3: Energy and Matter in Ecosystems			
1-2 days	Lesson	SE, pp. 88–97; *TE, pp. 124–128	Screens 1–11
1 day	Virtual Lab		Screens 1–13
1 day	Review	SE, pp. 98–99; *TE, p. 129	
	Assessment		◊ Lesson 3 Quiz
(Optional)	Labs		† Quick Lab: Pyramid of Energy † Quick Lab: Model the Carbon Cycle † Quick Lab: Condensation and Evaporation

Lesson 4: Changes in Ecosystems			
1-2 days	Lesson	SE, pp. 100–107; *TE, pp. 138–141	Screens 1–15
1 day	Virtual Lab		Screens 1–16
1 day	Review	SE, pp. 108–109; *TE, p. 142	
	Assessment		◊ Lesson 4 Quiz
(Optional)	Enrichment	S.T.E.M., SE, pp. 110–113; *TE, pp. 144–147	
(Optional)	Labs		† Quick Lab: Measuring Species Diversity † Quick Lab: Modeling Primary and Secondary Succession † Field Lab: Predicting How Succession Follows a Human Disturbance
Lesson 5: Human Activity and Ecosystems			
1-2 days	Lesson	SE, pp. 114–123; *TE, pp. 156–160	Screens 1–15
1 day	Review	SE, pp. 124–125; *TE, p. 161	
	Assessment		◊ Lesson 5 Quiz
(Optional)	Labs		† Quick Lab: Biodiversity All Around Us † Quick Lab: Investigate Acidity of Water † Field Lab: Field Investigation of Plant Quantity and Diversity
Unit 2 Review and Assessment			
(Optional)	Video-Based Project		The Producers of Florida Bay
1 day	Review	SE, pp. 128–132; *TE, pp. 162–164	Online Unit Self Quiz
1 day	Assessment		◊ Unit 2 Test

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Unit 3: Earth’s Resources

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Days	Activity Type	Print	Digital
Unit 3 Opener			
Lesson 1: Earth’s Support of Life			
1-2 days	Big Idea	SE, pp. 133–135; *TE, pp. 176–177	
	Lesson	SE, pp. 136–143; *TE, pp. 186–189	Screens 1–12
1 day	Review	SE, pp. 144–145; *TE, p. 190	
	Assessment		◊ Lesson 1 Quiz
(Optional)	Labs		† Quick Lab: How Water Forms on Earth’s Surface † Quick Lab: Temperature Variation on Earth † Exploration Lab: Modeling the Greenhouse Effect

Lesson 2: Natural Resources			
1-2 days	Lesson	SE, pp. 146–155; *TE, pp. 200–204	Screens 1–11
1 day	Review	SE, pp. 156–157; *TE, p. 205	
	Assessment		◊ Lesson 2 Quiz
(Optional)	Labs		† Quick Lab: Renewable or Not? † Quick Lab: Production Impacts † Field Lab: Natural Resources Used at Lunch
Lesson 3: Nonrenewable Energy Resources			
1-2 days	Lesson	SE, pp. 158–167; *TE, pp. 214–218	Screens 1–15
1 day	Virtual Lab		Screens 1–14
1 day	Review	SE, pp. 168–169; *TE, p. 219	
	Assessment		◊ Lesson 3 Quiz
(Optional)	Labs		† Quick Lab: Modeling Nonrenewable Resources † Quick Lab: Modeling Nuclear Fission

Lesson 4: Renewable Energy Resources			
1-2 days	Lesson	SE, pp. 170–179; *TE, pp. 228–232	Screens 1–15
1 day	Virtual Lab		Screens 1–14
1 day	Review	SE, pp. 180–181; *TE, p. 233	
	Assessment		◊ Lesson 4 Quiz
(Optional)	Enrichment	S.T.E.M., SE, pp. 182–185; *TE, pp. 234–237	
(Optional)	Labs		† Quick Lab: Design a Turbine † Quick Lab: Understanding Solar Panels † S.T.E.M. Lab: Modeling Geothermal Power
Lesson 5: Managing Resources			
1-2 days	Lesson	SE, pp. 186–193; *TE, pp. 246–249	Screens 1–18
1 day	Review	SE, pp. 194–195; *TE, p. 250	
	Assessment		◊ Lesson 5 Quiz
(Optional)	Labs		† Quick Lab: Managing a Resource † Quick Lab: The Impact of Resource Extraction
Unit 3 Review and Assessment			
(Optional)	Video-Based Project		Got Water?
1 day	Review	SE, pp. 198–202; *TE, pp. 252–254	Online Unit Self Quiz
1 day	Assessment		◊ Unit 3 Test

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Unit 4: Human Impact on the Environment

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Days	Activity Type	Print	Digital
Unit 4 Opener			
Lesson 1: Human Impact on Water			
1-2 days	Big Idea	SE, pp. 203–205; *TE, pp. 264–265	
	Lesson	SE, pp. 206–217; *TE, pp. 274–279	Screens 1–12
1 day	Review	SE, pp. 218–219; *TE, p. 280	
	Assessment		◊ Lesson 1 Quiz
(Optional)	Enrichment	People in Science, SE, pp. 220–221; *TE, pp. 282–283	
(Optional)	Labs		† Quick Lab: Ocean Pollution from Land † Quick Lab: Turbidity and Water Temperature † Field Lab: Investigating Water Quality

Lesson 2: Human Impact on Land			
1-2 days	Lesson	SE, pp. 222–229; *TE, pp. 292–295	Screens 1–13
1 day	Review	SE, pp. 230–231; *TE, p. 296	
	Assessment		◊ Lesson 2 Quiz
(Optional)	Labs		† Quick Lab: Investigating Human Impact on the Land † Quick Lab: Roots and Erosion
Lesson 3: Human Impact on the Atmosphere			
1-2 days	Lesson	SE, pp. 232–241; *TE, pp. 306–310	Screens 1–14
1 day	Virtual Lab		Screens 1–13
1 day	Review	SE, pp. 242–243; *TE, p. 311	
	Assessment		◊ Lesson 3 Quiz
(Optional)	Labs		† Quick Lab: Collecting Air Pollution Particles † Quick Lab: Identifying Sources of Indoor Air Pollution
Lesson 4: Protecting Earth’s Water, Land, and Air			
1-2 days	Lesson	SE, pp. 244–255; *TE, pp. 320–325	Screens 1–11
1 day	Virtual Lab		Screens 1–10
1 day	Review	SE, pp. 256–257; *TE, p. 326	
	Assessment		◊ Lesson 4 Quiz
(Optional)	Labs		† Quick Lab: Soil Erosion † Quick Lab: Investigate the Value of Recycling † Exploration Lab: Filtering Water

Unit 4 Review and Assessment			
1 day	Review	SE, pp. 260–264; *TE, pp. 328–330	Online Unit Self Quiz
1 day	Assessment		◊ Unit 4 Test

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Unit Test = Unit Level Resources > Unit Assessment > Unit Test