

Science Fusion
Module H: Matter and Energy
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: Matter

Pacing Guide			
SE = Student Edition Interactive Worktext			TE = Teacher Edition
Days	Activity Type	Print	Digital
Unit 1 Opener			
Lesson 1: Introduction to Matter			
1-2 days	Big Idea	SE, pp. 1–3; *TE, pp. 14–15	
	Lesson	SE, pp. 4–15; *TE, pp. 24–29	Screens 1–10
1 day	Review	SE, pp. 16–17; *TE, p. 30	
	Assessment		◊ Lesson 1 Quiz
(Optional)	Enrichment	Think Science, SE, pp. 18–19; *TE, pp. 32–33	
(Optional)	Labs		† Quick Lab: Mass and Weight † Quick Lab: Finding Volume by Displacement † Quick Lab: How Much Mass? † Exploration Lab: Comparing Buoyancy

Lesson 2: Properties of Matter			
1-2 days	Lesson	SE, pp. 20–31; *TE, pp. 42–47	Screens 1–10
1 day	Virtual Lab		Screens 1–13
1 day	Review	SE, pp. 32–33; *TE, p. 48	
	Assessment		◊ Lesson 2 Quiz
(Optional)	Labs		† Quick Lab: Comparing Two Elements † Quick Lab: Observing Physical Properties † Exploration Lab: Identifying an Unknown Substance
Lesson 3: Physical and Chemical Changes			
1-2 days	Lesson	SE, pp. 34–43; *TE, pp. 58–62	Screens 1–10
1 day	Review	SE, pp. 44–45; *TE, p. 63	
	Assessment		◊ Lesson 3 Quiz
(Optional)	Enrichment	S.T.E.M., SE, pp. 46–49; *TE, pp. 64–67	
(Optional)	Labs		† Quick Lab: Physical or Chemical Change? † Quick Lab: Properties of Combined Substances
Lesson 4: Pure Substances and Mixtures			
1-2 days	Lesson	SE, pp. 50–61; *TE, pp. 76–81	Screens 1–10
1 day	Review	SE, pp. 62–63; *TE, p. 82	
	Assessment		◊ Lesson 4 Quiz
(Optional)	Labs		† Quick Lab: Observing Mixtures † Quick Lab: Identifying Elements and Compounds † Exploration Lab: Investigating Separating Mixtures

Lesson 5: States of Matter			
1-2 days	Lesson	SE, pp. 64–71; *TE, pp. 92–95	Screens 1–10
1 day	Review	SE, pp. 72–73; *TE, p. 96	
	Assessment		◊ Lesson 5 Quiz
(Optional)	Labs		† Quick Lab: Changing Volumes † Quick Lab: Can Crusher
Lesson 6: Changes of State			
1-2 days	Lesson	SE, pp. 74–85; *TE, pp. 106–111	Screens 1–18
1 day	Virtual Lab		Screens 1–13
1 day	Review	SE, pp. 86–87; *TE, p. 112	
	Assessment		◊ Lesson 6 Quiz
(Optional)	Labs		† Quick Lab: Investigating Conservation of Mass † Quick Lab: Modeling Particle Motion † Quick Lab: Boiling Water Without Heating It † Exploration Lab: Changes of State
Unit 1 Review and Assessment			
1 day	Review	SE, pp. 90–96; *TE, pp. 114–117	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

◊ Online Assessments can be assigned to students through the Online Teacher Digital Management System. After you have assigned a Lesson Quiz or Unit Test, the assignment will appear on your student's account in the Things to Do section. Students can then take the test online, and it will be scored automatically.

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Unit 2: Energy

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Days	Activity Type	Print	Digital
Unit 2 Opener			
Lesson 1: Introduction to Energy			
1-2 days	Big Idea	SE, pp. 97–99; *TE, pp. 128–129	
	Lesson	SE, pp. 100–109; *TE, pp. 138–142	Screens 1–15
1 day	Review	SE, pp. 110–111; *TE, p. 143	
	Assessment		◊ Lesson 1 Quiz
(Optional)	Labs		† Quick Lab: Setting Objects in Motion † Quick Lab: Conservation of Energy † Quick Lab: Bungee Jumping † S.T.E.M. Lab: Designing a Simple Device

Lesson 2: Temperature			
1-2 days	Lesson	SE, pp. 112–117; *TE, pp. 152–154	Screens 1–8
1 day	Virtual Lab		Screens 1–17
1 day	Review	SE, pp. 118–119; *TE, p. 155	
	Assessment		◊ Lesson 2 Quiz
(Optional)	Enrichment	Think Science, SE, pp. 120–121; *TE, pp. 156–157	
(Optional)	Labs		† Quick Lab: Exploring Temperature † Quick Lab: Understanding Temperature Scales
Lesson 3: Thermal Energy and Heat			
1-2 days	Lesson	SE, pp. 122–131; *TE, pp. 166–170	Screens 1–11
1 day	Virtual Lab		Screens 1–12
1 day	Review	SE, pp. 132–133; *TE, p. 171	
	Assessment		◊ Lesson 3 Quiz
(Optional)	Labs		† Quick Lab: Simple Heat Engine † Quick Lab: Observing Transfer of Energy † Quick Lab: Exploring Thermal Conductivity † Field Lab: Building a Solar Cooker

Lesson 4: Effects of Energy Transfer			
1-2 days	Lesson	SE, pp. 134–143; *TE, pp. 180–184	Screens 1–15
1 day	Review	SE, pp. 144–145; *TE, p. 185	
	Assessment		◊ Lesson 4 Quiz
(Optional)	Labs		† Quick Lab: Modeling Renewable Energy † Quick Lab: Designing a Vehicle Using Alternative Energy † Exploration Lab: Sustainable Resource Management
Unit 2 Review and Assessment			
(Optional)	Video-Based Project		Just Add Heat
1 day	Review	SE, pp. 148–152; *TE, pp. 186–188	Online Unit Self Quiz
1 day	Assessment		◊ Unit 2 Test

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Lab Datasheets: Lesson Level Resources > Lab Datasheet

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Unit 3: Atoms and the Periodic Table

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Days	Activity Type	Print	Digital
Unit 3 Opener			
Lesson 1: The Atom			
1-2 days	Big Idea	SE, pp. 153–155; *TE, pp. 198–199	
	Lesson	SE, pp. 156–165; *TE, pp. 208–212	Screens 1–11
1 day	Virtual Lab		Screens 1–13
1 day	Review	SE, pp. 166–167; *TE, p. 213	
	Assessment		◊ Lesson 1 Quiz
(Optional)	Labs		† Quick Lab: Investigate the Size of Atomic Particles † Quick Lab: Investigate Masses of Atomic Particles

Lesson 2: The Periodic Table			
1-2 days	Lesson	SE, pp. 168–177; *TE, pp. 222–226	Screens 1–10
1 day	Virtual Lab		Screens 1–15
1 day	Review	SE, pp. 178–179; *TE, p. 227	
	Assessment		◊ Lesson 2 Quiz
(Optional)	Labs		† Quick Lab: A Model Atom † Quick Lab: Predicting Properties † Quick Lab: Recognizing Patterns
Lesson 3: Electrons and Chemical Bonding			
1-2 days	Lesson	SE, pp. 180–187; *TE, pp. 236–239	Screens 1–18
1 day	Review	SE, pp. 188–189; *TE, p. 240	
	Assessment		◊ Lesson 3 Quiz
(Optional)	Enrichment	People in Science, SE, pp. 190–191; *TE, pp. 242–243	
(Optional)	Labs		† Quick Lab: What’s in a Change? † Quick Lab: Sharing Electrons † S.T.E.M. Lab: Build a Bohr Model
Lesson 4: Ionic, Covalent, and Metallic Bonding			
1-2 days	Lesson	SE, pp. 192–199; *TE, pp. 252–255	Screens 1–15
1 day	Review	SE, pp. 200–201; *TE, p. 256	
	Assessment		◊ Lesson 4 Quiz
(Optional)	Labs		† Quick Lab: Growing Crystals † Quick Lab: Modeling Bonding † Exploration Lab: Chemical Bonds

Unit 3 Review and Assessment			
1 day	Review	SE, pp. 204–208; *TE, pp. 258–260	Online Unit Self Quiz
1 day	Assessment		◊ Unit 3 Test

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

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Unit 4: Interactions of Matter

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Days	Activity Type	Print	Digital
Unit 4 Opener			
Lesson 1: Chemical Reactions			
1-2 days	Big Idea	SE, pp. 209–211; *TE, pp. 270–271	
	Lesson	SE, pp. 212–221; *TE, pp. 280–284	Screens 1–15
1 day	Virtual Lab		Screens 1–16
1 day	Review	SE, pp. 222–223; *TE, p. 285	
	Assessment		◊ Lesson 1 Quiz
(Optional)	Labs		† Quick Lab: Breaking Bonds in a Chemical Reaction † Quick Lab: Catalysts and Chemical Reactions

Lesson 2: Organic Chemistry			
1-2 days	Lesson	SE, pp. 224–235; *TE, pp. 294–299	Screens 1–15
1 day	Review	SE, pp. 236–237; *TE, p. 300	
	Assessment		◊ Lesson 2 Quiz
(Optional)	Enrichment	People in Science, SE, pp. 238–239; *TE, pp. 302–303	
(Optional)	Labs		† Quick Lab: Natural vs. Synthetic Fibers † Quick Lab: Investigate Organic Molecules † Exploration Lab: Investigate Carbon Bonding
Lesson 3: Nuclear Reactions			
1-2 days	Lesson	SE, pp. 240–253; *TE, pp. 312–318	Screens 1–17
1 day	Review	SE, pp. 254–255; *TE, p. 319	
	Assessment		◊ Lesson 3 Quiz
(Optional)	Labs		† Quick Lab: Modeling Isotopes and Radioactive Decay † Quick Lab: Modeling a Nuclear Chain Reaction
Unit 4 Review and Assessment			
1 day	Review	SE, pp. 258–262; *TE, pp. 320–322	Online Unit Self Quiz
1 day	Assessment		◊ Unit 4 Test

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

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Lesson Quiz = Lesson Level Resources > Lesson Assessment > Lesson Quiz

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

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Unit 5: Solutions, Acids, and Bases

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SE = Student Edition Interactive Worktext			TE = Teacher Edition
Days	Activity Type	Print	Digital
Unit 5 Opener			
Lesson 1: Solutions			
1-2 days	Big Idea	SE, pp. 263–265; *TE, pp. 332–333	
	Lesson	SE, pp. 266–273; *TE, pp. 342–345	Screens 1–12
1 day	Review	SE, pp. 274–275; *TE, p. 346	
	Assessment		◊ Lesson 1 Quiz
(Optional)	Labs		† Quick Lab: Investigate Solutions † Quick Lab: Solution Concentration † Exploration Lab: Investigate Solubility

Lesson 2: Acids, Bases, and Salts			
1-2 days	Lesson	SE, pp. 276–287; *TE, pp. 356–361	Screens 1–18
1 day	Review	SE, pp. 288–289; *TE, p. 362	
	Assessment		◊ Lesson 2 Quiz
(Optional)	Enrichment	S.T.E.M., SE, pp. 290–293; *TE, pp. 364–367	
(Optional)	Labs		† Quick Lab: Household Acids and Bases † Quick Lab: Making Salt † Exploration Lab: Acids, Bases, and Fruit Oxidation
Lesson 3: Measuring pH			
1-2 days	Lesson	SE, pp. 294–303; *TE, pp. 376–380	Screens 1–14
1 day	Virtual Lab		Screens 1–13
1 day	Review	SE, pp. 304–305; *TE, p. 381	
	Assessment		◊ Lesson 3 Quiz
(Optional)	Labs		† Quick Lab: Determining pH Levels † Quick Lab: Investigating Respiration with Chemical Indicators
Unit 5 Review and Assessment			
1 day	Review	SE, pp. 308–312; *TE, pp. 382–384	Online Unit Self Quiz
1 day	Assessment		◊ Unit 5 Test

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