

**SUGGESTED PACING**

**SCIENCE INQUIRY AND APPLICATION**

**Content Statements:** During the years of grades 5-8, all students must use the following scientific processes, with appropriate laboratory safety techniques, to construct their knowledge and understanding in all science content areas:

- Identify questions that can be answered through scientific investigations
- Design and conduct a scientific investigation
- Use appropriate mathematics, tools and techniques to gather data and information
- Analyze and interpret data
- Develop descriptions, models, explanations and predictions
- Think critically and logically to connect evidence and explanations
- Recognize and analyze alternative explanations and predictions
- Communicate scientific procedures and explanations

**STRAND: EARTH AND SPACE SCIENCE (ESS)**

**Topic: Rocks, Minerals and Soil**

This topic focuses on the study of rocks, minerals and soil, which make up the lithosphere. Classifying and identifying different types of rocks, minerals and soil can decode the past environment in which they formed.

**Content Statements:**

- Minerals have specific, quantifiable properties.
- Minerals are naturally occurring, inorganic solids that have a defined chemical composition.
- Minerals have properties that can be observed and measured. Minerals form in specific environments.

**Content Statement:**

- Igneous, metamorphic and sedimentary rocks have unique characteristics that can be used for identification and/or classification.
- Most rocks are composed of one or more minerals, but there are a few types of sedimentary rocks that contain organic material, such as coal. The composition of the rock, types of mineral present, mineral arrangement, and/or mineral shape and size can be used to identify the rock and to interpret its history of formation, breakdown (weathering) and transport (erosion).

**Content Statement:**

- Igneous, metamorphic and sedimentary rocks form in different ways.
- Magma or lava cools and crystallizes to form igneous rocks.
- Heat and pressure applied to existing rock forms metamorphic rocks.
- Sedimentary rock forms as existing rock weathers chemically and/or physically and the weathered material is compressed and then lithifies.
- Each rock type can provide information about the environment in which it was formed.

**Content Statement:**

- Soil is unconsolidated material that contains nutrient matter and weathered rock.
- Soil formation occurs at different rates and is based on environmental conditions, types of existing bedrock and rates of weathering.
- Soil forms in layers known as horizons. Soil horizons can be distinguished from one another based on properties that can be measured.

**Content Statement:**

- Rocks, minerals and soils have common and practical uses.
- Nearly all manufactured material requires some kind of geologic resource.
- Most geologic resources are considered nonrenewable. Rocks, minerals and soil are examples of geologic resources that are nonrenewable.

**PRINT RESOURCES**

*ScienceFusion*

- Unit 1, TE pages 16-115
- Unit 2, TE pages 115-246
- Unit 2, Lab Manual pages 93-215
- Unit 2, Assessment Guide pages 38-76

**DIGITAL RESOURCES**

*ScienceFusion*

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|---|---|
| <ul style="list-style-type: none"> <li>• Unit 1, Digital Lessons</li> <li>• Unit 2, Lesson 1 Digital Lesson</li> <li>• Unit 2, Lesson 2 Digital Lesson</li> <li>• Unit 2, Lesson 3 Digital Lesson</li> <li>• Unit 2, Lesson 3 Virtual Lab</li> <li>• Unit 2, Lesson 4 Digital Lesson</li> </ul> | <ul style="list-style-type: none"> <li>• Unit 2, Lesson 5 Digital Lesson</li> <li>• Unit 2, Lesson 6 Digital Lesson</li> <li>• Unit 2, Lesson 6 Virtual Lab</li> <li>• Unit 2, Lesson 7 Digital Lesson</li> <li>• Unit 2, Lesson 7 Virtual Lab</li> </ul> |
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<b>SCIENCE AND ACADEMIC VOCABULARY</b>	
<p><b>Unit 1:</b> Control, Data, Dependent Variable, Empirical Evidence, Evidence, Experiment, Hypothesis, Independent Variable, Observation, Pseudoscience, Theory, Variable</p> <p><b>Unit 2:</b> Atom, Biomass, Cleavage, Composition, Compound, Conservation, Crystal, Deposition, Element, Energy Resource, Erosion, Fission, Fossil Fuel, Geothermal Energy, Humus, Hydroelectric Energy, Igneous Rock, Luster, Material Resource, Matter, Metamorphic Rock, Mineral, Natural Resources, Nonrenewable Resource, Nuclear Energy, Renewable Resource, Rift Zone, Rock, Rock Cycle, Sedimentary Rock, Soil, Soil Horizon, Soil Profile, Solar Energy, Stewardship, Streak, Subsidence, Texture, Uplift, Weathering, Wind Energy</p>	
<b>DIFFERENTIATION</b>	<b>FIELD EXPERIENCE CONNECTIONS</b>
<p>Leveled Inquiry</p> <ul style="list-style-type: none"> <li>Unit 2 TE pages 120, 134, 150, 166, 184, 200, 214, 230</li> </ul> <p>Response to Intervention</p> <ul style="list-style-type: none"> <li>Unit 2 TE page 121</li> </ul> <p>Differentiated Instruction (Basic, ELL, and Advanced)</p> <ul style="list-style-type: none"> <li>Unit 2 TE pages 137, 153, 169, 181, 187, 203, 217, 226, 233</li> </ul>	
<b>INQUIRY SKILLS</b>	
<ul style="list-style-type: none"> <li>Analyzing Components</li> <li>Analyzing Procedures</li> <li>Applying Concepts</li> <li>Building/Constructing Models</li> <li>Classifying Samples</li> <li>Collecting Evidence</li> </ul>	<ul style="list-style-type: none"> <li>Collecting Samples</li> <li>Comparing Results/Data</li> <li>Developing Procedures</li> <li>Drawing Conclusions</li> <li>Evaluating Models</li> </ul>
	<ul style="list-style-type: none"> <li>Explaining Processes</li> <li>Making Inferences</li> <li>Making Observations</li> <li>Organizing Data</li> <li>Practicing Lab Techniques</li> </ul>
<b>HANDS-ON INQUIRY AND APPLICATION</b>	
<ul style="list-style-type: none"> <li>Unit 2, Lesson 1 Quick Lab 1: Renewable or Not? - LM pages 93-96</li> <li>Unit 2, Lesson 1 Quick Lab 2: Production Impacts - LM pages 97-99</li> <li>Unit 2, Lesson 1 Quick Lab 3: Investigating Local Geologic Resources - LM pages 100-104</li> <li>Unit 2, Lesson 1 Field Lab 1: Natural Resources Used at Lunch - LM pages 105-114</li> <li>Unit 2, Lesson 2 Quick Lab 1: Cooling Rate and Crystal Size - LM pages 115-117</li> <li>Unit 2, Lesson 2 Quick Lab 2: Scratch Test - LM pages 118-120</li> <li>Unit 2, Lesson 2 Quick Lab 3: Investigating Minerals for Integrated Circuits - LM pages 121-124</li> <li>Unit 2, Lesson 2 Quick Lab 4: Identifying Minerals Using a Dichotomous Key - LM pages 125-129</li> <li>Unit 2, Lesson 2 Exploration Lab 1: Intrinsic Identification of Minerals - LM pages 130-139</li> <li>Unit 2, Lesson 3 Quick Lab 1: Crayon Rock Cycle - LM pages 140-143</li> <li>Unit 2, Lesson 3 Quick Lab 2: Modeling Weathering - LM pages 144-417</li> <li>Unit 2, Lesson 4 Quick Lab 1: Stretching Out - LM pages 148-150</li> <li>Unit 2, Lesson 4 Quick Lab 2: Observing Rocks - LM pages 151-154</li> <li>Unit 2, Lesson 4 STEM Lab 1: Modeling Rock Formation - LM pages 155-164</li> <li>Unit 2, Lesson 5 Quick Lab 1: Observing Life in Soil - LM pages 165-169</li> <li>Unit 2, Lesson 5 Quick Lab 2: Modeling a Soil Profile - LM pages 170-173</li> <li>Unit 2, Lesson 5 Quick Lab 3: Observing the Impact of Earthworms on Soil - LM pages 174-177</li> <li>Unit 2, Lesson 5 Field Lab 1: Comparing Soil Characteristics - LM pages 178-186</li> <li>Unit 2, Lesson 6 Quick Lab 1: Modeling Nonrenewable Resources - LM pages 187-190</li> <li>Unit 2, Lesson 6 Quick Lab 2: Modeling Nuclear Fission - LM pages 191-194</li> <li>Unit 2, Lesson 7 Quick Lab 1: Design a Turbine - LM pages 195-198</li> <li>Unit 2, Lesson 7 Quick Lab 2: Understanding Solar Panels - LM pages 199-203</li> <li>Unit 2, Lesson 7 STEM Lab 1: Modeling Geothermal Power - LM pages 204-215</li> <li>STEM - TE pages 178-181</li> </ul>	

ASSESSMENTS/PROGRESS MONITORING	ASSESSMENT GUIDE
<ul style="list-style-type: none"> <li>• Formative and Summative Assessment               <ul style="list-style-type: none"> <li>○ Unit 2, Lesson 1 - TE page 139</li> <li>○ Unit 2, Lesson 2 - TE page 155</li> <li>○ Unit 2, Lesson 3 - TE page 171</li> <li>○ Unit 2, Lesson 4 - TE page 189</li> <li>○ Unit 2, Lesson 5 - TE page 205</li> <li>○ Unit 2, Lesson 6 - TE page 219</li> <li>○ Unit 2, Lesson 7 - TE page 235</li> </ul> </li> <li>• Visual Summary and Lesson Review               <ul style="list-style-type: none"> <li>○ Unit 2, Lesson 1 - TE page 146</li> <li>○ Unit 2, Lesson 2 - TE page 162</li> <li>○ Unit 2, Lesson 3 - TE page 177</li> <li>○ Unit 2, Lesson 4 - TE page 196</li> <li>○ Unit 2, Lesson 5 - TE page 211</li> <li>○ Unit 2, Lesson 6 - TE page 225</li> <li>○ Unit 2, Lesson 7 - TE page 241</li> </ul> </li> <li>• Unit 2 Review - TE page 242-245</li> </ul>	<ul style="list-style-type: none"> <li>• Unit 2 Pretest - AG pages 38-39</li> <li>• Lesson 1 Quiz: Natural Resources - AG page 40</li> <li>• Lesson 1 Alternative Assessment: Natural Resources - AG page 41</li> <li>• Lesson 2 Quiz: Minerals - AG page 42</li> <li>• Lesson 2 Alternative Assessment: Minerals - AG page 43</li> <li>• Lesson 3 Quiz: The Rock Cycle - AG page 44</li> <li>• Lesson 3 Alternative Assessment: The Rock Cycle - AG page 45</li> <li>• Lesson 4 Quiz: Three Classes of Rock - AG page 46</li> <li>• Lesson 4 Alternative Assessment: Three Classes of Rock - AG page 47</li> <li>• Lesson 5 Quiz: Soil Formation - AG page 48</li> <li>• Lesson 5 Alternative Assessment: Soil Formation - AG page 49</li> <li>• Lesson 6 Quiz: Nonrenewable Energy Resources - AG page 50</li> <li>• Lesson 6 Alternative Assessment: Nonrenewable Energy Resources - AG page 51</li> <li>• Lesson 7 Quiz: Renewable Energy Resources - AG page 52</li> <li>• Lesson 7 Alternative Assessment: Renewable Energy Resources - AG page 53</li> <li>• Performance-Based Assessment: Teacher Edition - AG page 54</li> <li>• Performance-Based Assessment: Student Edition - AG page 55</li> <li>• Unit 2 Review - AG pages 57-62</li> <li>• Unit 2 Test A - AG pages 63-69</li> <li>• Unit 2 Test B - AG pages 70-76</li> </ul>
<b>ACADEMIC CONNECTIONS TO OTHER DISCIPLINES:</b>	
<ul style="list-style-type: none"> <li>• Architecture Connection - TE page 188</li> <li>• Art Connection - TE page 170</li> <li>• Chemistry Connection - TE page 188</li> <li>• Do the Math - TE page 159</li> <li>• Do the Math - TE page 191</li> <li>• Do The Math - TE page 221</li> <li>• Earth Science Connection - TE page 138</li> <li>• Ecology Connection - TE page 154</li> <li>• Ecology Connection - TE page 170</li> </ul>	<ul style="list-style-type: none"> <li>• Health Connection - TE page 218</li> <li>• Life Science Connection - TE page 234</li> <li>• Physical Science Connection - TE page 218</li> <li>• Real World Connection - TE page 138</li> <li>• Real World Connection - TE page 204</li> <li>• Social Studies Connection - TE page 154</li> <li>• Social Studies Connection - TE page 204</li> </ul>

**SUGGESTED PACING**

**STRAND: LIFE SCIENCE (LS)**

**Topic: Cellular to Multicellular**

This topic focuses on the study of the basics of Modern Cell Theory. All organisms are composed of cells, which are the fundamental unit of life. Cells carry on the many processes that sustain life. All cells come from pre-existing cells.

**Content Statements:**

- Cells are the fundamental unit of life.
- All living things are composed of cells. Different body tissues and organs are made of different kinds of cells. The ways cells function are similar in all living organisms.

**Content Statements:**

- All cells come from pre-existing cells.
- Cells repeatedly divide resulting in more cells and growth and repair in multicellular organisms.

**Content Statements:**

- Cells carry on specific functions that sustain life.
- Many basic functions of organisms occur in cells. Cells take in nutrients and energy to perform work, like making various molecules required by that cell or an organism.
- Every cell is covered by a membrane that controls what can enter and leave the cell.
- Within the cell are specialized parts for the transport of materials, energy capture and release, protein building, waste disposal, information feedback and movement.

**Content Statements:**

- Living systems at all levels of organization demonstrate the complementary nature of structure and function.
- The level of organization within organisms includes cells, tissues, organs, organ systems and whole organisms.
- Whether the organism is single-celled or multicellular, all of its parts function as a whole to perform the tasks necessary for the survival of the organism.
- Organisms have diverse body plans, symmetry and internal structures that contribute to their being able to survive in their environments.

**PRINT RESOURCES**

*ScienceFusion*

- Unit 3, TE pages 247-238
- Unit 3, Lab Manual pages 216-294
- Unit 3, Assessment Guide pages 77-109
- Unit 4, TE pages 239-438
- Unit 4, Lab Manual pages 295-361
- Unit 4, Assessment Guide pages 110-142

**DIGITAL RESOURCES**

*ScienceFusion*

- Unit 3, Lesson 1 Digital Lesson
- Unit 3, Lesson 2 Digital Lesson
- Unit 3, Lesson 3 Digital Lesson
- Unit 3, Lesson 3 Virtual Lab
- Unit 3, Lesson 4 Digital Lesson
- Unit 3, Lesson 5 Digital Lesson
- Unit 3, Lesson 5 Virtual Lab
- Unit 4, Lesson 1 Digital Lesson
- Unit 4, Lesson 1 Virtual Lab
- Unit 4, Lesson 2 Digital Lesson
- Unit 4, Lesson 3 Digital Lesson
- Unit 4, Lesson 4 Digital Lesson
- Unit 4, Lesson 5 Digital Lesson

**SCIENCE AND ACADEMIC VOCABULARY**

Active Transport, Algae, Angiosperm, Animalia, Archaea, Atom, Bacteria, Binary Fission, Carbohydrate, Cell, Cell Membrane, Cell Wall, Cellular Respiration, Chlorophyll, Chloroplast, Consumer, Cytoplasm, Cytoskeleton, Diffusion, Domain, Endocytosis, Endoplasmic Reticulum, Endoskeleton, Eukarya, Eukaryote, Exocytosis, Exoskeleton, Function, Fungi, Genus, Golgi Complex, Gymnosperm, Homeostasis, Host, Hyphae, Invertebrate, Lichen, Lipid, Lysosome, Mitochondrion, Mitosis, Molecule, Mycorrhiza, Nucleic Acid, Nucleus, Organ, Organ System, Organelle, Organism, Osmosis, Passive Transport, Phospholipid, Photosynthesis, Plantae, Pollen, Producers, Prokaryote, Protein, Protista, Ribosome, Seed, Species, Spore, Structure, Tissue, Vacuole, Vascular System, Vertebrate, Virus

**DIFFERENTIATION**

Leveled Inquiry

- Unit 3 TE pages 250, 262, 276, 290, 306, 324
- Unit 4 TE pages 342, 354, 370, 388, 404, 424

Response to Intervention

- Unit 3 TE page 251
- Unit 4 TE page 343

Differentiated Instruction (Basic, ELL, and Advanced)

- Unit 3 TE pages 265, 279, 293, 302, 309, 321, 327
- Unit 4 TE pages 357, 373, 384, 391, 407, 421, 427

**FIELD EXPERIENCE CONNECTIONS**

INQUIRY SKILLS		
<ul style="list-style-type: none"> <li>• Analyzing Criteria</li> <li>• Analyzing Samples</li> <li>• Applying Concepts</li> <li>• Building/Constructing Models</li> <li>• Calculating Ratios</li> <li>• Classifying Materials</li> <li>• Comparing Results</li> <li>• Describing Patterns</li> </ul>	<ul style="list-style-type: none"> <li>• Developing Methods</li> <li>• Drawing Conclusions</li> <li>• Evaluating Procedures</li> <li>• Examining Structures</li> <li>• Explaining Results</li> <li>• Identifying Variables</li> <li>• Interpreting Observations/Results</li> <li>• Making Hypotheses</li> </ul>	<ul style="list-style-type: none"> <li>• Making Inferences</li> <li>• Making Observations</li> <li>• Making Predictions</li> <li>• Observing Characteristics</li> <li>• Organizing Results</li> <li>• Practicing Lab Techniques</li> <li>• Recognizing Patterns</li> </ul>
HANDS-ON INQUIRY AND APPLICATION		
<ul style="list-style-type: none"> <li>• Unit 3, Lesson 1 Quick Lab 1: How Do Tools that Magnify Help Us Study Cells?: LM pages 216-219</li> <li>• Unit 3, Lesson 1 Quick Lab 2: Investigating Cell Size: LM pages 220-223</li> <li>• Unit 3, Lesson 1 Exploration Lab 1: Using a Microscope to Explore Cells: LM pages 224-233</li> <li>• Unit 3, Lesson 2 Quick Lab 1: Analyzing Cell Components: LM pages 234-237</li> <li>• Unit 3, Lesson 2 Quick Lab 2: Molecules for Life Processes: LM pages 238-245</li> <li>• Unit 3, Lesson 3 Quick Lab 1: Comparing Cells: LM pages 246-248</li> <li>• Unit 3, Lesson 3 Quick Lab 2: Making a 3-D Cell Model: LM pages 249-252</li> <li>• Unit 3, Lesson 3 Quick Lab 3: Cell Walls and Wilting: LM pages 253-256</li> <li>• Unit 3, Lesson 4 Quick Lab 1: Evaluating Specialization: LM pages 257-260</li> <li>• Unit 3, Lesson 4 Quick Lab 2: Observing Plant Organs: LM pages 261-264</li> <li>• Unit 3, Lesson 4 Exploration Lab 1: The Organization of Organisms: LM pages 265-274</li> <li>• Unit 3, Lesson 5 Quick Lab 1: Investigate Microorganisms: LM pages 275-278</li> <li>• Unit 3, Lesson 5 Quick Lab 2: Homeostasis and Adaptations: LM pages 279-282</li> <li>• Unit 3, Lesson 5 Exploration 1: Diffusion: LM pages 283-294</li> <li>• Unit 4, Lesson 1 Quick Lab 1: Using a Dichotomous Key: LM pages 295-298</li> <li>• Unit 4, Lesson 1 Quick Lab 2: Investigate Classifying Leaves: LM pages 299-302</li> <li>• Unit 4, Lesson 1 Exploration Lab 1: Developing Scientific Names: LM pages 303-310</li> <li>• Unit 4, Lesson 2 Quick Lab 1: Observing Bacteria: LM pages 311-314</li> <li>• Unit 4, Lesson 2 Quick Lab 2: Modeling Viral Replication: LM pages 315-316</li> <li>• Unit 4, Lesson 2 Field Lab 1: Culturing Bacteria from the Environment: LM pages 317-326</li> <li>• Unit 4, Lesson 3 Quick Lab 1: What Do Protists Look Like?: LM pages 327-331</li> <li>• Unit 4, Lesson 3 Quick Lab 2: Observing a Mushroom's Spores and Hyphae LM 332-335</li> <li>• Unit 4, Lesson 3 Exploration Lab 1: Survey of Reproduction in Protists and Fungi: LM pages 336-346</li> <li>• Unit 4, Lesson 4 Quick Lab 1: Investigating Flower Parts: LM pages 347-350</li> <li>• Unit 4, Lesson 4 Quick Lab 2: Observing Transport: LM pages 351-354</li> <li>• Unit 4, Lesson 5 Quick Lab 1: Form and Motion: LM pages 355-358</li> <li>• Unit 4, Lesson 5 Quick Lab 2: Characteristics of Animals: LM pages 359-361</li> <li>• STEM Unit 3: TE pages 318-321</li> <li>• STEM Unit 4: TE pages 418-421</li> </ul>		
ASSESSMENTS/PROGRESS MONITORING		
<ul style="list-style-type: none"> <li>• Formative and Summative Assessment <ul style="list-style-type: none"> <li>○ Unit 3, Lesson 1 – TE page 267</li> <li>○ Unit 3, Lesson 2 – TE page 281</li> <li>○ Unit 3, Lesson 3 – TE page 295</li> <li>○ Unit 3, Lesson 4 – TE page 311</li> <li>○ Unit 3, Lesson 5 – TE page 329</li> <li>○ Unit 4, Lesson 1 – TE page 359</li> <li>○ Unit 4, Lesson 2 – TE page 375</li> <li>○ Unit 4, Lesson 3 – TE page 393</li> <li>○ Unit 4, Lesson 4 – TE page 409</li> <li>○ Unit 4, Lesson 5 – TE page 429</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Visual Summary and Lesson Review <ul style="list-style-type: none"> <li>○ Unit 3, Lesson 1 – TE page 272</li> <li>○ Unit 3, Lesson 2 – TE page 286</li> <li>○ Unit 3, Lesson 3 – TE page 301</li> <li>○ Unit 3, Lesson 4 – TE page 317</li> <li>○ Unit 3, Lesson 5 – TE page 335</li> <li>○ Unit 4, Lesson 1 – TE page 367</li> <li>○ Unit 4, Lesson 2 – TE page 382</li> <li>○ Unit 4, Lesson 3 – TE page 400</li> <li>○ Unit 4, Lesson 4 – TE page 416</li> <li>○ Unit 4, Lesson 5 – TE page 435</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Unit 3 Review – TE page 336-338</li> <li>• Unit 4 Review – TE page 436-438</li> </ul>

**ASSESSMENT GUIDE**

**Unit 3**

- Unit 3, Pretest : AG pages 77-78
- Lesson 1 Quiz: The Characteristics of Cells: AG pages 79
- Lesson 1 Alternative Assessment: The Characteristics of Cells: AG page 80
- Lesson 2 Quiz: Chemistry of Life: AG page 81
- Lesson 2 Alternative Assessment: Chemistry of Life: AG page 82
- Lesson 3 Quiz: Cell Structure and Function: AG page 83
- Lesson 3 Alternative Assessment: Cell Structure and Function: AG page 84
- Lesson 4 Quiz: Levels of Cellular Organization: AG page 85
- Lesson 4 Alternative Assessment: Levels of Cellular Organization: AG page 86
- Lesson 5 Quiz: Homeostasis and Cell Processes: AG page 87
- Lesson 5 Alternative Assessment: Homeostasis and Cell Processes: AG page 88
- Performance-Based Assessment: Teacher Edition: AG page 89
- Performance-Based Assessment: Student Edition: AG page 90-91
- Unit 3 Review : AG pages 92-95
- Unit 3 Test A: AG pages 96-102
- Unit 3 Test B: AG pages 103-109

**Unit 4**

- Unit 4 Pretest: AG pages 110-111
- Lesson 1 Quiz: Classification of Living Things: AG page 112
- Lesson 1 Alternative Assessment: Classification of Living Things: AG page 113
- Lesson 2 Quiz: Archaea, Bacteria, and Viruses: AG page 114
- Lesson 2 Alternative Assessment: Archaea, Bacteria, and Viruses: AG page 115
- Lesson 3 Quiz: Protists and Fungi: AG page 116
- Lesson 3 Alternative Assessment: Protists and Fungi: AG page 117
- Lesson 4 Quiz: Introduction to Plants: AG page 118
- Lesson 4 Alternative Assessment: Introduction to Plants: AG page 119
- Lesson 5 Quiz: Introduction to Animals: AG page 120
- Lesson 5 Alternative Assessment: Introduction to Animals: AG page 121
- Performance-Based Assessment: Teacher Edition: AG page 122
- Performance-Based Assessment: Student Edition: AG pages 123-124
- Unit 4 Review: AG pages 125-128
- Unit 4 Test A: AG pages 129-135
- Unit 4 Test B: AG pages 136-142

**ACADEMIC CONNECTIONS TO OTHER DISCIPLINES:**

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| <ul style="list-style-type: none"> <li>• Social Studies Connection: TE page 266</li> <li>• Health Connection: TE page 266</li> <li>• Health Connection: TE page 280</li> <li>• Real World Connection: TE page 280</li> <li>• Technology Connection: TE page 294</li> <li>• Art Connection: TE page 294</li> <li>• Health Connection: TE page 310</li> <li>• Engineering Connection: TE page 310</li> <li>• Physical Education Connection: TE page 328</li> <li>• Language Arts Connection: TE page 328</li> </ul> | <ul style="list-style-type: none"> <li>• Social Studies Connection: TE page 358</li> <li>• Earth Science Connection: TE page 358</li> <li>• Real World Connection: TE page 374</li> <li>• Language Arts Connection: TE page 374</li> <li>• Health Connection: TE page 392</li> <li>• Math Connection: TE page 392</li> <li>• Fine Arts Connection: TE page 408</li> <li>• Real World Connection: TE page 408</li> <li>• Health Connection: TE page 428</li> <li>• Math Connection: TE page 428</li> </ul> |
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**SUGGESTED PACING**

**STRAND: PHYSICAL SCIENCE (PS)**

**Topic: Matter and Motion**

This topic focuses on the study of foundational concepts of the particulate nature of matter, linear motion, and kinetic and potential energy.

**Content Statements:**

- All matter is made up of small particles called atoms.
- Each atom takes up space, has mass and is in constant motion. Mass is the amount of matter in an object.
- Elements are a class of substances composed of a single kind of atom.
- Molecules are the combination of two or more atoms that are joined together chemically.
- Compounds are composed of two or more different elements. Each element and compound has properties, which are independent of the amount of the sample.

**Content Statements:**

- Changes of state are explained by a model of matter composed of atoms and/or molecules that are in motion.
- When substances undergo changes of state, neither atoms nor molecules themselves are changed in structure.
- Thermal energy is a measure of the motion of the atoms and molecules in a substance.
- Mass is conserved when substances undergo changes of state.

**Content Statements:**

- There are two categories of energy: kinetic and potential.
- Objects and substances in motion have kinetic energy.
- Objects and substances can have energy as a result of their position (potential energy).

**Content Statements:**

- An object's motion can be described by its speed and the direction in which it is moving.
- An object's position and speed can be measured and graphed as a function of time.

**PRINT RESOURCES**

*ScienceFusion*

- Unit 5, TE pages 439-500
- Unit 5, Lab Manual pages 362-408
- Unit 5, Assessment Guide pages 143-171
- Unit 6, TE pages 501-617
- Unit 6, Lab Manual pages 409-504
- Unit 6, Assessment Guide pages 172-209

**DIGITAL RESOURCES**

*ScienceFusion*

- Unit 5, Lesson 1 Digital Lesson
- Unit 5, Lesson 2 Digital Lesson
- Unit 5, Lesson 2 Virtual Lab
- Unit 5, Lesson 3 Digital Lesson
- Unit 5, Lesson 3 Virtual Lab
- Unit 6, Lesson 1 Digital Lesson
- Unit 6, Lesson 2 Digital Lesson
- Unit 6, Lesson 2 Virtual Lab
- Unit 6, Lesson 3 Digital Lesson
- Unit 6, Lesson 3 Virtual Lab
- Unit 6, Lesson 4 Digital Lesson
- Unit 6, Lesson 5 Digital Lesson
- Unit 6, Lesson 6 Digital Lesson
- Unit 6, Lesson 6 Virtual Lab

**SCIENCE AND ACADEMIC VOCABULARY**

Atom, Atomic Number, Boiling, Chemical Property, Chemical Symbol, Compound, Condensation, Degree, Density, Deposition, Electron, Element, Energy, Energy Transformation, Evaporation, Freezing, Gas, Heterogeneous, Homogeneous, Kinetic Energy, Kinetic Theory Of Matter, Law Of Conservation Of Energy, Liquid, Mass, Matter, Mechanical Energy, Melting, Mixture, Molecule, Motion, Neutron, Physical Property, Position, Potential Energy, Proton, Pure Substance, Reference Point, Solid, Speed, Sublimation, Temperature, Thermometer, Vector, Velocity, Volume, Weight

**DIFFERENTIATION**

Leveled Inquiry

- Unit 5 TE pages 442, 452, 468, 482
- Unit 6 TE pages 506, 518, 534, 552, 566, 582, 600

Response to Intervention

- Unit 5 TE page 443
- Unit 6 TE page 507

Differentiated Instruction (Basic, ELL, and Advanced)

- Unit 5 TE pages 455, 464, 471, 485
- Unit 6 TE pages 521, 537, 548, 555, 569, 585, 597, 603

**FIELD EXPERIENCE CONNECTIONS**

INQUIRY SKILLS		
<ul style="list-style-type: none"> <li>• Analyzing Results</li> <li>• Applying Concepts</li> <li>• Building/Constructing Models</li> <li>• Classifying Objects/Substances</li> <li>• Comparing Results</li> <li>• Controlling Variables</li> <li>• Creating Models</li> </ul>	<ul style="list-style-type: none"> <li>• Creating Sketches</li> <li>• Creating/Constructing Graphs</li> <li>• Describing Events</li> <li>• Developing Procedures</li> <li>• Drawing Conclusions</li> <li>• Explaining Results</li> <li>• Following Written Directions</li> </ul>	<ul style="list-style-type: none"> <li>• Identifying Patterns</li> <li>• Making Inferences</li> <li>• Making Observations</li> <li>• Performing Calculations</li> <li>• Practicing Lab Techniques</li> <li>• Recording Data</li> <li>• Working Independently</li> </ul>
HANDS-ON INQUIRY AND APPLICATION		
<ul style="list-style-type: none"> <li>• Unit 5, Lesson 1 Quick Lab 1: Setting Objects in Motion: LM pages 362-365</li> <li>• Unit 5, Lesson 1 Quick Lab 2: Conservation of Energy: LM pages 366-368</li> <li>• Unit 5, Lesson 1 Quick Lab 3: Bungee Jumping: LM pages 369-372</li> <li>• Unit 5, Lesson 1 S.T.E.M. Lab 1: Designing a Simple Device: LM pages 373-382</li> <li>• Unit 5, Lesson 2 Quick Lab 1: Exploring Temperature: LM pages 383-386</li> <li>• Unit 5, Lesson 2 Quick Lab 2: Understanding Temperature Scales: LM pages 387-390</li> <li>• Unit 5, Lesson 3 Quick Lab 1: Investigate Changing Positions: LM pages 391-394</li> <li>• Unit 5, Lesson 3 Quick Lab 2: Create a Distance-Time Graph: LM pages 395-398</li> <li>• Unit 5, Lesson 3 S.T.E.M. Lab 1: Investigate Average Speed: LM pages 399-408</li> <li>• Unit 6, Lesson 1 Quick Lab 1: Mass and Weight: LM pages 409-410</li> <li>• Unit 6, Lesson 1 Quick Lab 2: Finding Volume by Displacement: LM pages 411-412</li> <li>• Unit 6, Lesson 1 Quick Lab 3: How Much Mass?: LM pages 413-417</li> <li>• Unit 6, Lesson 1 Exploration Lab 1: Comparing Buoyancy: LM pages 418-430</li> <li>• Unit 6, Lesson 2 Quick Lab 1: Comparing Two Elements: LM pages 431-432</li> <li>• Unit 6, Lesson 2 Quick Lab 2: Observe Physical Properties: LM pages 433-436</li> <li>• Unit 6, Lesson 2 Exploration Lab 1: Identifying an Unknown Substance: LM pages 437-446</li> <li>• Unit 6, Lesson 3 Quick Lab 1: Model of an Atom: LM pages 447-450</li> <li>• Unit 6, Lesson 3 Quick Lab 2: Comparing Earth's Elements: LM pages 451-454</li> <li>• Unit 6, Lesson 4 Quick Lab 1: Observing Mixtures: LM pages 455-458</li> <li>• Unit 6, Lesson 4 Quick Lab 2: Identifying Elements and Compounds: LM pages 459-462</li> <li>• Unit 6, Lesson 4 Exploration Lab 1: Investigating Separating Mixtures: LM pages 463-474</li> <li>• Unit 6, Lesson 5 Quick Lab 1: Changing Volumes: LM pages 475-477</li> <li>• Unit 6, Lesson 5 Quick Lab 2: Can Crusher: LM pages 478-481</li> <li>• Unit 6, Lesson 6 Quick Lab 1: Investigating Conservation of Mass: LM pages 482-485</li> <li>• Unit 6, Lesson 6 Quick Lab 2: Modeling Particle Motion: LM pages 486-489</li> <li>• Unit 6, Lesson 6 Quick Lab 3: Boiling Water Without Heating It: LM pages 490-493</li> <li>• Unit 6, Lesson 6 Exploration Lab 1: Changes of State: LM pages 494-504</li> <li>• STEM: TE pages 594-597</li> </ul>		
ASSESSMENTS/PROGRESS MONITORING		
<ul style="list-style-type: none"> <li>• Formative and Summative Assessment               <ul style="list-style-type: none"> <li>○ Unit 5, Lesson 1 – TE page 457</li> <li>○ Unit 5, Lesson 2 – TE page 473</li> <li>○ Unit 5, Lesson 3 – TE page 487</li> <li>○ Unit 6, Lesson 1 – TE page 523</li> <li>○ Unit 6, Lesson 2 – TE page 539</li> <li>○ Unit 6, Lesson 3 – TE page 557</li> <li>○ Unit 6, Lesson 4 – TE page 571</li> <li>○ Unit 6, Lesson 5 – TE page 487</li> <li>○ Unit 6, Lesson 6 – TE page 605</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Visual Summary and Lesson Review               <ul style="list-style-type: none"> <li>○ Unit 5, Lesson 1 – TE page 463</li> <li>○ Unit 5, Lesson 2 – TE page 478</li> <li>○ Unit 5, Lesson 3 – TE page 494</li> <li>○ Unit 6, Lesson 1 – TE page 530</li> <li>○ Unit 6, Lesson 2 – TE page 546</li> <li>○ Unit 6, Lesson 3 – TE page 563</li> <li>○ Unit 6, Lesson 4 – TE page 579</li> <li>○ Unit 6, Lesson 5 – TE page 592</li> <li>○ Unit 6, Lesson 6 – TE page 612</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Unit 5 Review – TE page 498-500</li> <li>• Unit 6 Review – TE page 614-617</li> </ul>

## ASSESSMENT GUIDE

## Unit 5

- Unit 5 Pretest: AG pages 143-144
- Lesson 1 Quiz: Introduction to Energy: AG page 145
- Lesson 1 Alternative Assessment: Introduction to Energy: AG page 146
- Lesson 2 Quiz: Thermal Energy and Temperature: AG page 147
- Lesson 2 Alternative Assessment: Thermal Energy and Temperature: AG page 148
- Lesson 3 Quiz: Motion and Speed: AG page 149
- Lesson 3 Alternative Assessment: Motion and Speed: AG page 150
- Performance-Based Assessment: Teacher Edition: AG page 151
- Performance-Based Assessment: Student Edition: AG pages 152-153
- Unit 5 Review: AG pages 154-157
- Unit 5 Test A: AG pages 158-164
- Unit 5 Test B: AG pages 165-171

## Unit 6

- Unit 6 Pretest: AG pages 172-173
- Lesson 1 Quiz: Introduction to Matter: AG page 174
- Lesson 1 Alternative Assessment: Introduction to Matter: AG page 175
- Lesson 2 Quiz: Properties of Matter: AG page 176
- Lesson 2 Alternative Assessment: Properties of Matter: AG page 177
- Lesson 3 Quiz: Atoms and Elements: AG page 178
- Lesson 3 Alternative Assessment: Atoms and Elements: AG page 179
- Lesson 4 Quiz: Pure Substances and Mixtures: AG page 180
- Lesson 4 Alternative Assessment: Pure Substances and Mixtures: AG page 181
- Lesson 5 Quiz: States of Matter: AG page 182
- Lesson 5 Alternative Assessment: States of Matter: AG page 183
- Lesson 6 Quiz: Changes of State: AG page 184
- Lesson 6 Alternative Assessment: Changes of State: AG page 185
- Performance-Based Assessment: Teacher Edition: AG pages 186
- Performance-Based Assessment: Student Edition: AG pages 187-188
- Unit 6 Review: AG pages 189-194
- Unit 6 Test A: AG pages 195-201
- Unit 6 Test B: AG pages 202-209

## ACADEMIC CONNECTIONS TO OTHER DISCIPLINES:

- Fine Arts Connection: TE page 456
- Space Science Connection: TE page 456
- Earth Science Connection: TE page 472
- History Connection: TE page 472
- Math Connection: TE page 486
- Physical Education Connection: TE page 486
- Do the Math: TE page 491
- Do the Math: TE pages 496: 497
- Astronomy Connection: TE page 522
- History/Language Arts Connection: TE page 522
- Do the Math: TE page 527
- Environmental Science Connection: TE page 538
- Earth Science Connection: TE page 538
- Do the Math: TE page 545
- History Connection: TE page 556
- Language Arts: TE page 556
- Earth Science Connection: TE page 570
- Math Connection: TE page 570
- Engineering Connection: TE page 586
- Chemistry Connection: TE page 586
- Technology Connection: TE 604
- Astronomy Connection: TE 604