Centerville-Abington Elementary Curriculum Mapping
Science – 3rd Grade
1st Nine Weeks
Tiffany Leger

Unit Chapter Lesson	Indiana Standard(s)	Key Concepts	Resources/Activities	Vocabulary	Assessments
Unit 4, Lesson 1, Part 1	3.PS.3 3.PS.4	How are sounds made? How does sound travel? Is there sound in space?	Introduction (Materials: Textbook p. 18-19) Exploring sounds lab p. 20-21 (Materials: paper, plastic rulers, rubber bands, cardboard boxes) Read p. 22-23: How sounds are made/How sounds travel. Take notes in note taking guide.	vibrate sound wave	p. 22-23 formative assessment

Unit 4, Lesson 1, Part 2	3.PS.3 3.PS.4	How do sounds compare? How are pitch and volume the same and different? How do musicians use pitch and volume?	Read p. 24-27: How do sounds compare? Take notes in note taking guide. Structured Inquiry: How can you change the pitch of a wind instrument? (Materials: Textbook p. 30-31, scissors, 10 straws per student, ruler, and masking tape) Guided Inquiry/Open Inquiry: How can you change the pitch of a rubber band? (Materials: Textbook p. 32-33, rubber bands, glass bottles, water, mallet) Review vocabulary: amplitude, wavelength, and frequency. (Materials: Vocabulary Flipbook/Sound vocabulary review worksheet)	energy (NCA) pitch (NCA) volume amplitude frequency wavelength	Formative Assessment p. 24-25 Formative Assessment p. 26-27 Student results from sound vocabulary review worksheet.

Unit 4, Lesson 2	3.PS.3 3.PS.4	Can sound travel through all forms of matter? What form of matter can sound travel through the quickest?	Read p. 40-41: Do sounds move through all materials at the same speed? Take notes in note taking guide. Structured Inquiry: How does sound move through different kinds of material? (Materials: Textbook p. 46-47, 3 plastic bags per group, tuning fork, water, and a wooden block)	matter solid liquid gas	Formative Assessment p. 40-41
Unit 4 Project	3.PS.3 3.PS.4 3-5.E.1 3-5.E.2 3-5.E.3	How can you create an instrument that makes loud/soft volume sounds and high/low/pitch sounds?	Students will make a plan for their project and test ideas. They will present their final instrument to the class and demonstrate its ability to create high/low pitch sounds and loud/soft volume sounds.	Engineering	Instrument Rubric

Review Unit 4, Lessons 1 and 2	3.PS.3 3.PS.4	Review previously learned content	Sound Energy Scavenger Hunt (Materials: Sound energy scavenger hunt recording sheet, scavenger hunt cards, clipboards) Sound Energy Study Guide Sound Energy Kahoot Review Game Sound Energy Jeopardy Review Game		End of Unit Assessment: Sound

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2nd Nine Weeks

Unit Chapter Lesson	Indiana Standard(s)	Key Concepts	Resources/Activities	Vocabulary	Assessments
Unit 5, Lesson 2, Part 1	3.PS.2	How do we make work easier? What are simple machines?	Answer introductory questions. Do explore activity on p. 220-221: How can a simple machine help you lift objects? (Materials: clay, thick marker, ruler, 2 small cups, large blocks, 1-gram cubes) Read p. 222-223: How do we make work easier? Complete definition page, work/not work page, and identifying the 6 simple machine page in note taking guide.	hypothesis work force simple machine	p. 222-223 Formative Assessment

Unit 5, Lesson 2, Part 2	3.PS.2	Describe the 6 types of simple machines and give examples of each.	Read p. 224 and 225: What are levers? Complete the lever and wheel and axle pages in note taking guide. Read p. 226-227: What are pulleys? Complete the pulley notebook page in note taking guide. Read p. 228-229: What are inclined planes? Complete the inclined plane, screw, and wedge pages in note taking guide.	lever wheel and axle pulley inclined plane screw wedge	p. 224-225 Formative Assessment p. 226-227 Formative Assessment p. 228-229 Formative Assessment

Unit 5, Lesson 2, Review	3.PS.2	What have we learned about simple machines?	Complete the 2 name that simple machine worksheets. Complete the simple machine sort. p. 239—Vocabulary Review Simple Machines Scavenger Hunt Simple Machines Article and Questions Simple Machines Review Game Simple Machines Challenge (http://nationalgeographic.org/activity/simple-machine-challenge/)		Cumulative Assessment
Unit 4	3-5.E.1 3-5.E.2 3-5.E.3	How can I solve a problem using the design process?	Focus on Skills p. 232-233. Complete response worksheet.	design process engineering	
Daily Science	3.ESS.4	How does something become a fossil? Where is the best place to look for fossils? How do scientists know how old a fossil is? Why are fossils of ocean animals found on mountains today?	Students should complete 1 packet per week during Social Studies instruction to help prepare them for the upcoming unit.	decay fossil sediment cast minerals mold trace fossil amber resin	Unit Review—Comprehension Questions (Daily Science p. 92) Either/Or Questions (Daily Science p. 93) Day 5 sheet from each weekly packet

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3rd Nine Weeks

Unit Chapter Lesson	Indiana Standard(s)	Key Concepts	Resources/Activities	Vocabulary	Assessments
Unit 2, Lesson 1	3.ESS.3	What are minerals? What are rocks? What are the three types of rocks, and how are they formed?	Answer introductory questions on p. 77 and complete the Explore activity on p. 78 and 79: How do a mineral's color and mark compare? (Materials: minerals and white tiles) Read p. 80-81: What are minerals? Take notes in note taking guide. Read p. 82-85: What are rocks? Take notes in note taking guide. Complete the rock cycle crayon experiment. (Materials: Foil, crayons, popsicle sticks or plastic knives, hot water) Do Focus on Skills activity p. 88-91. (Materials: clay, mat or tray, ruler, wood block)	mineral color streak luster hardness rocks igneous rocks sedimentary rocks metamorphic rocks	Formative Assessment p. 80-81 Formative Assessment p. 82-85 Crayon experiment response sheet

Unit 2, Lesson 2	3.ESS.3	What are some properties of rocks? Where can you find different sized rocks?	Answer introductory questions p. 93. Complete the explore activity on p. 94-95: How do you sort rocks? (Materials: rock mixture, 4 sieves of different sizes, ruler, paper towels, and a hand lens.) Read p. 96-97: What are some properties of rocks? Take notes in note taking guide. Read p. 98-99: Where can you find different sizes of rocks? Take notes in note taking guide. Complete vocabulary review activity p. 107	property boulders pebbles glacier silt	Formative Assessment p. 96-97 Formative Assessment p. 98-99

Unit 3, Lesson 1	3.ESS.4	How are fossils formed? What do fossils tell us about living things of the past?	Complete the Explore activity on p. 116-117: How do scientists learn about living things of the past? (Materials: model T. rex, Edmontosaurus, shark, and horse teeth, and colored pencils) Read p. 118-119: How are fossils formed? Take notes in note taking guide. Read p. 120-121: What do fossils tell us about living things of the past? Take notes in note taking guide. Do Make Your Own Fossil Activity: Daily Science p. 95 (Materials: plaster of Paris, petroleum jelly, water, bowel, leaves, shells, and cardboard)	fossil	Formative Assessment p. 118-119 Formative Assessment p. 120-121
Review Unit 2/3	3.ESS.3 3.ESS.4	What do I already know about rocks, minerals, and fossils?	Rocks and Minerals Scavenger Hunt Play Kahoot Review Game		Cumulative Test

Daily Science (during Social Studies instruction)	3.LS.3 3.LS.1	What adaptations do plants and animals have to survivive? What do plants need to survive? How are baby plants and animals similar to their parents?	Students should complete one weekly packet from Big Idea 1 and Big Ideas 2 (Week 2 and 3 only) per week to help them understand animals and plant adaptations and to prepare for the upcoming unit)	mammal automatically evaporate spine migrate route habitat predator	Day 5 from each weekly packet

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4th Nine Weeks

Unit Chapter Lesson	Indiana Standard(s)	Key Concepts	Resources/Activities	Vocabulary	Assessments
Unit 5, Lesson 1	3.LS.2 3.LS.3	What are plants? How do roots and stems help plants? Why are leaves important? How can you classify plants?	Answer introductory questions on p. 157. Complete the Explore activity on p. 158 and 159: How are plants alike? (Materials: hand lens and 3 different plants) Read p. 160-161: What are plants? Take notes in note taking guide. Read p. 162-163: How do roots and stems help plants? Take notes in note taking guide. Read p. 164-165: Why are leaves important. Take notes in note taking guide. Read p. 166-167: How can you classify plants? Take notes in note taking guide. Complete Be a Scientist Activity on p. 170-171: What do plants need to survive? Materials: 2 identical plants, measuring cup, and a ruler)	structures (NCA) plants roots nutrients stem leaf leaf veins flower	Formative Assessment p. 160-161 Formative Assessment p. 162-163 Formative Assessment p. 164-165 Formative Assessment p. 166-167

Unit 5, Lesson 2	3.LS.2 3.LS.3	What do plants need? What affects the growth of garden plants? How do seed plants grow? How do plants make seeds? What is a plants life cycle?	Complete introductory questions p. 175. Complete the Explore activity on p. 176-177: What are flowers and fruits made of? (Materials: flowers from 2 different plants, hand lens, tweezers, and the halves of 2 different fruits) Read p. 178-179: What do plants need? Take notes in note taking guide. Read p. 180-181: What affects the growth of garden plants? Take notes in note taking guide. Read p. 182-183: How do seeds grow? Take notes in note taking guide. Read p. 184-185: How do plants make seeds? Take notes in note taking guide. Read p. 186-187: What is a plant's life cycle? Take notes in note taking guide. Do Focus on Skills activity p. 190-191. (Materials: 2 milk cartons, measuring cups, soil, fertilizer, bean seeds, graduated cylinder, metric ruler) Do Vocabulary Review Activity p. 195	thrive seed fruit pollination life cycle cones	Formative Assessment p. 178-179. Formative Assessment p. 180-181 Formative Assessment p. 182-183 Formative Assessment p. 184-185 Formative Assessment p. 186-187 Cumulative Assessment--Plants

Additional Resources	3.LS.4 3.LS.1	Why do animals live in groups? How are babies like their mothers?	Students will complete and discuss an interactive notebook activity about why animals live in groups. They will use this information to help create and argument for why their animal lives in a group. Teachers will also use this instruction to discuss similarities among baby animals and their parents.		Students will complete the project about a particular group of animals that lives in a group.

3rd Grade Science Standards and Descriptions

Physical Science (PS)
3.PS.1 *Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.*
3.PS.2 *Identify types of simple machines and their uses. Investigate and build simple machines to understand how they are used.*
3.PS.3 *Generate sound energy using a variety of materials and techniques, and recognize that it passes through solids, liquids, and gases (i.e. air).*
3.PS.4 *Investigate and recognize properties of sound that include pitch, loudness (amplitude), and vibration as determined by the physical properties of the object making the sound.*

Earth and Space Science (ESS)
3.ESS.1 *Obtain and combine information to determine seasonal weather patterns across the different regions of the*

Earth and Space Science (ESS)
United States.
3.ESS.2 *Develop solutions that could be implemented to reduce the impact of weather related hazards.*
3.ESS.3 *Observe the detailed characteristics of rocks and minerals. Identify and classify rocks as being composed of different combinations of minerals.*
3.ESS.4 *Determine how fossils are formed, discovered, layered over time, and used to provide evidence of the organisms and the environments in which they lived long ago.*

Life Science (LS)
3.LS.1 *Analyze evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.*
3.LS.2 *Plan and conduct an investigation to determine the basic needs of plants to grow, develop, and reproduce.*
3.LS.3 *Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.*
3.LS.4 *Construct an argument that some animals form groups that help members survive.*

Engineering (E)
3-5.E.1 *Identify a simple problem with the design of an object that reflects a need or a want. Include criteria for success and constraints on materials, time, or cost.*
3-5.E.2 *Construct and compare multiple plausible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.*
3-5.E.3 *Construct and perform fair investigations in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.*