Little Rock School District

2nd Grade Science (black, science only; green, literacy connections in science; blue, health connections in science)

Month/SLEs August	Content/Skills Vocabulary	Essential Questions	Assessments Notebook Prompts	Lab Experiences	Strategies/Resources
HW.9.2.1 Describe rules and consequences of choices LS.2.2.5 identify the major parts and functions of the skeletal system PEL.2.1.2 Recognize the major bones in the skeletal system: • Cranium • Vertebrate • Ribs • Humerus • Radius • Ulna • Pelvis • Femur • Fibula • Tibia • phalanges NS.1.2.1 Communicate observations orally, in writing, and in graphic organizers: T-charts, pictographs, Venn diagrams, bar graphs NS.1.2.2 Develop questions that guide scientific inquiry NS1..2.8 Apply lab safety rules as they relate to specific science lab activities	**Inquiry Focus:** *Locate* **Vocabulary:** *Skeleton* Science Process Skills (These will be used and reinforced each month throughout the year.) • Observe • Compare • Classify • Sequence • Measure • Make and Use Models • Hypothesize • Infer • Draw Conclusions • Predict • Investigate and Experiment • Communicate Scientific Method (Science Inquiry will be used each month throughout the year.) Use tools to measure length, capacity, mass, temperature, and elapsed time. (Science tools will be used each month through the year.)	*What is the function of the skeletal system?*	*What is the function of the skeletal system?* *HW.6.2.1 Compose a chart identifying the following systems:* • *Digestive* • *Circulatory* • *Respiratory* • *Muscular* • *Skeletal* • *Nervous*	Give students practice using the following science tools: • hand lens • magnifying box • forceps • measuring tools • dropper • balance Pel.3.2.1 Understand that the heart produces a pulse when beating Use Lab Manual activities to provide practice with tools.	Give students frequent practice in asking questions that can be answered through inquiry. Allow them to develop a plan to answer their own questions. Lab Manual (LM) pp13-18 Textbook pp 1- 24

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Month/SLEs September	Content/Skills	Essential Questions	Assessments Notebook Prompts	Lab Experiences	Strategies/Resources
ESS8.2.5 Chart weather conditions everyday ESS.8.2.6 Demonstrate safety procedures related to severe weather ESS.8.2.7 Describe characteristics of cumulus, stratus, and cirrus clouds PS.5.2.1 Classify objects based on two or more properties HW.11.2.10 Demonstrate procedures for obtaining emergency assistance and information	**Inquiry Focus:** • *classify* **Vocabulary:** • *cumulus* • *stratus* • *cirrus*	*How does weather affect the way we live?* *How do clouds help predict the weather?*	*Illustrate three types of clouds and explain their formation.* *Compare the three forms of matter.*	Cloud in a Bottle activity. Cotton Ball Clouds The students will make a model of the three types of clouds using cotton balls. Label them. Practice safety procedures related to severe weather. (tornado drill, lightning, etc) Daily Inquiry - Bean Sort or similar sorting activity. Investigate: Kinds of matter p289	***Harcourt Science Level Readers:*** *Weather (Below Level)* *Weather and Water (On Level)* *Rain or Shine (Advanced Level)* *Trade Books* *The Cloud Book by Tomie de Paola* *It Looked Like Spilt Milk by Bernard Shaw* *Cloudy with a Chance of Meatballs by Judi Barrett* Add on to Calendar Math. Chart weather conditions every day, including temperature. (Celsius and Fahrenheit) Harcourt Science Support for Arkansas SLE's for science Lesson 7 pg. 22-26 Textbook – Chapter 7 Weather Lesson 1: How does weather change? Pp220-221 Lesson 2: Why do we measure weather? Pp228-235 Lesson 3: What is the water cycle? Pp236-242

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Month/SLEs September	Content/Skills	Essential Questions	Assessments Notebook Prompts	Lab Experiences	Strategies/Resources
					Cloud in a Bottle Cotton Ball Clouds Daily inquiry - Classify objects into categories. Chapter 9: Observing and classifying matter Lesson 1: What is Matter? P288 -295 Lesson 2: What are solids? p296-303 Lesson 3: What are liquids? p304 -309 Lesson 4: What are gases? p310 - 315

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Month/SLEs October	Content/Skills Vocabulary	Essential Questions	Assessments Notebook Prompts	Lab Experiences	Strategies/Resources
ESS.8.2.9 Read a Celsius thermometer ESS.10.2.1 Illustrate four moon phases: • full • half • crescent • new ESS.10.2.2 Model the movement of Earth and its moon ESS.10.2.3 Contrast the visibility of the sun and moon HW.9.2.4 Demonstrate methods of communication for specific situations PS.7.2.2 Compare temperatures using the Celsius scale NS.1.2.4 Estimate and measure length and temperature using International System of Units (SI)	Inquiry Focus: • *Contrast* Vocabulary: • *moon phases* • *orbit*	*Identify the relationship between the earth and the moon.*	*Why does the moon seem to change?* *Differentiate between Celsius and Fahrenheit.*	Chart the phases of the moon. Insta-lab Model Moon Phases LM p 82 Model how the moon orbits the earth United Streaming Video: The Sky Above: A First Look (Watch part about the moon.)	Textbook: Chapter 8 Lesson 3: Why does the moon seem to change? Pp264 – 269 Insta-Lab Textbook p267 Model Moon Phases Reading support and Homework p61 Lesson 2: What causes day and night? P258-263 LM p82 Model how the moon orbits the earth. Materials needed: 2 foam balls, craft sticks

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Month/SLEs November	Content/Skills	Essential Questions	Assessments Notebook Prompts	Lab Experiences	Strategies/Resources
ESS.8.2.1 Conduct investigations to distinguish among the following components of soil: • clay • sand • silt • humus ESS.8.2.2 Recognize and discuss the different properties of soil: • color • texture • ability to retain water • ability to support plant growth PS.7.2.2 Compare temperatures using the Celsius scale PEL.5.2.3 Cooperate with others to complete assigned task. NS.1.2.3 Conduct scientific investigations as a class and in teams NS.1.2.5 Collect measurable empirical evidence in teams and as individuals	**Inquiry Focus:** *recognize* **Vocabulary:** • *properties* • *soil*	*Why is soil different from place to place?*	*Analyze the types of soil. Which type is best for plant growth? Explain your thoughts*	Soil Lesson	Soil lesson Soil data sheet United Streaming video segment: Getting to Know Soil Textbook: Chapter 5 Soil teacher's guide

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Month/SLEs December	Content/Skills	Essential Questions	Assessments Notebook Prompts	Lab Experiences	Strategies/Resources
PS.7.2.3 Demonstrate methods of using electricity to produce light, heat, and sound NS.1.2.7 Use age appropriate equipment and tools in scientific investigations	**Inquiry Focus:** *demonstrate* **Vocabulary:** *electricity*	*What is heat?*	*Explain the transfer of heat and how heat is measured*	TE/SE What is Heat? p373 Electric Circuit www.hspscience.com Just Passing Through	Textbook: Chapter 11 Lesson 1: What is Energy p356 – 365

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Month/SLEs January	Content/Skills	Essential Questions	Assessments Notebook Prompts	Lab Experiences	Strategies/Resources
PS.6.2.1 Investigate the relationship between force and motion PEL.1.2.8 Catch a ball overhand PEL.1.2.10 Step forward and strike a stationary object NS.1.2.4 Estimate and measure length and temperature using International System of Units (SI)	**Inquiry Focus:** *investigate* **Vocabulary:** • *force* • *motion*	*What is the relationship between force and motion?*	*What is the relationship between force and motion?*	Balancing and Weighing Teacher's guide – Lessons 1 – 16	*Harcourt Science Level Readers:* *Motion (Below)* *On the move! (On)* *Easy does it! (Advanced)* Balancing and Weighing Teacher's Guide Science Module Student Books (optional) Balance and Weighing Kit

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Month/SLEs February	Content/Skills	Essential Questions	Assessments Notebook Prompts	Lab Experiences	Strategies/Resources
PS.7.2.1 Classify materials as transparent, translucent, or opaque (e.g., plastic wrap, wax paper, and aluminum foil) LS.2.2.1 Classify animals into major groups according to their structure: • mammals • birds • fish	**Inquiry Focus:** *classify* **Vocabulary:** • *vertebrate* • *mammals*	*How can materials be classified?* *How can animals be classified?*	*Compare and contrast opaque and translucent.* *Compare and contrast mammals and birds.*	Observe pictures of animals and classify. Animal Semantic Map Observe pictures of animals to fill in chart.	*Harcourt Science Level Readers:* *Living and Nonliving Things (Below)* *Living Things (On)* *Way to Grow! (Advanced)* Harcourt Science Support for Arkansas SLE's for science Lesson 9, pg.32-34 Lesson: The Animal Kingdom Classification Chart Textbook: Chapter 2 Lesson 1: What are mammals? What are Birds pg. 56-63 Animal semantic map (keep to use for next lesson.) Lesson 2: What are reptiles, amphibians, and fish? Pg 64-71

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Month/SLEs March	Content/Skills	Essential Questions	Assessments Notebook Prompts	Lab Experiences	Strategies/Resources
LS.2.2.2 Differentiate among herbivores, carnivores, and omnivores LS.3.2.1 Illustrate embryonic development (e.g., chicken) HW.6.2.2 Examine physical characteristics that are shared by self and family LS.3.2.2 Compare and contrast embryonic development and incomplete metamorphosis	**Inquiry Focus:** *illustrate* **Vocabulary:** • *herbivore* • *carnivore* • *omnivore* • *embryonic*	*Discuss the ways animals are classified.*	*What distinguishes embryonic development from incomplete metamorphosis?* *Compare and contrast herbivores/carnivores/omnivores.*	Observe pictures of animal skulls. Looking at the teeth determine if herbivore, carnivore or omnivore. Observe the life cycle of the butterfly or tadpole.	*Harcourt Science Level Readers:* *Animals (Below)* *Animal Life cycles (On)* *Changing Shapes (Advanced)* What animals need Lesson 3: What are some animal life cycles? Butterfly larva/tadpoles

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Month/SLEs April	Content/Skills	Essential Questions	Assessments Notebook Prompts	Lab Experiences	Strategies/Resources
LS.2.2.6 Describe the function of the following plant parts: • leaves • stems • flowers • roots LS.2.2.3 Identify basic needs of most plants: • nutrients • water • light • air • temperature • space LS.2.2.4 Compare different types of flowering plants and conifers ESS.8.2.4 Identify products derived from natural resources ESS.8.2.3 Conduct investigations to determine which soil best supports bean plant growth HW.8.2.2 Identify sources of Pollution	**Inquiry Focus:** *compare* **Vocabulary:** • *nutrients* • *conifer*	*How do the different parts of a plant help it to grow and reproduce?*	*Why is a cactus able to survive in the desert where there is little water?* *Prompt (if your school does not have a garden) Choose a site at your school for a community garden. Write a letter to someone in your school community and explain why you chose that site.* *Prompt (if your school already has a garden) Choose one of the issues that may affect your community garden:* • *Use and care of the garden* • *Including the garden produce in school lunches* • *Vandalism* *Another issue affecting your garden*	Growing a Seed Use record data sheet to predict what will happen to the bean plant and what actually happens to the bean plant in different types of soil. Students may use a science notebook/journal to record the change in the bean plant daily. • Measure • Draw and label • Describe Optional Labs Parts of a Plant: pg. LM 35 and LM 36 in Lab Manual. Life Cycle of a Bean Plant: pg. LM 39 and LM 40 in Lab Manual. Harcourt Investigate pg. 185 – ways we use water	*Harcourt Science Level Readers:* *Plants (Below)* *Plant Life Cycles (On)* *Surprises in Grandma's Garden (Advanced)* *Natural Resources (Below)* *Our Natural Resources (On)* *What do We Need? (Advanced)* *Trade Books:* *One Bean by: Anne Rockwell* *From Seed to Plant by: Gail Gibbons* *Tops and Bottoms by Janet Stevens* Harcourt Science Support for Arkansas SLE's for science Lesson 6 pg.20-21 Textbook: Chapter 3 Lessons 1-3 Lab activity: Growing a Seed Lab Manual: pgs. LM 35-36 and LM 39-40

Month/SLEs April	Content/Skills	Essential Questions	Assessments Notebook Prompts	Lab Experiences	Strategies/Resources
					Flowering plants and conifers may be researched on the internet if background information is needed. Harcourt Science chapter 6 lesson 1 – How can people use natural resources?

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Month/SLEs May/June	Content/Skills	Essential Questions	Assessments Notebook Prompts	Lab Experiences	Strategies/Resources
LS.4.2.1 Compare and contrast living and extinct species HW.7.2.1 Define disease LS.4.2.2 Describe characteristics of various habitats HW.11.2.9 Discuss safety procedures for life time activities	**Inquiry Focus:** *contrast* **Vocabulary:** • *extinct* • *habitats*	*How can animals be classified?*	*Are all environments the same? Why or why not? Explain.* *What would happen if an animal were removed from its habitat and taken to a different one?*	Harcourt Investigation p.119 – build a terrarium p. 127 – how color helps a butterfly	*Harcourt Science Level Readers:* *Living Things in Their Environments (Below)* *Home Sweet Home (On)* *Helping Our World (Advanced)* Harcourt Science Chapter 4 Lesson 1 – What is an Environment? Lesson 2 – How Do Living Things Survive in Different Places?