Alignment between HMH Journeys Reading Program and Diocese of Allentown Science Standards for First Grade

HMH Journeys | Diocesan Science Standards

Anchor Test	Additional Resources	Lesson #	Enduring Knowledge	Diocesan Knowledge Standards	Activity Suggestions	Some Lab Suggestions
The Storm	*Your Turn*	2	Enduring Knowledge 1: Use the scientific method, scientific tools, and safe lab procedures to solve problems.	Standards: Make purposeful observations using the appropriate senses. Generate questions based on observations. Identify strategies for gathering information (expert in field, books, observations, investigations, videos). Conduct simple investigations. Construct simple charts from data and observations. Share ideas through purposeful conversation. Communicate and present findings of observations (illustrations, models, writing).	ACTIVITY: Create a science handbook including Scientific Method & Scientific Process Skills. Observe objects using the appropriate senses. Classify items. Make a chart with data.	LAB: The first lab should be a step by step practice using the Scientific Method of something they know (brushing teeth) All labs should utilize the Scientific Method and Scientific Process Skills
	Informational Text: *Storms*	2	Enduring Knowledge 1: Use the scientific method, scientific tools, and safe lab procedures to solve problems.	Standards: Manipulate simple tools that aid in observation and data collection. Make accurate measurements with appropriate units for the measurement tool.	ACTIVITY: Include scientific instruments and tools, and their uses, in science handbook. D. Scientific Instruments and Tools help scientists observe, describe and record the world around them. Instruments and tools include: 1. Ruler 2. Pencil 3. Balance 4. Magnifying Lens 5. Safety Goggles 6. Flashlight 7. Globe	LAB: Review instrument and tool name and use during every lab.

Curious George at School	Informational Text: *School Long Ago*	3	Enduring Knowledge 1: Use the scientific method, scientific tools, and safe lab procedures to solve problems.	Standards: B. Scientists use Scientific Process Skills to solve problems. 1. Observing 2. Classifying 3. Measuring Length (inches, centimeters) Mass (ounces, grams) 4. Communication 5. Interdisciplinary Skills	VOCABULARY: (for teacher information) Hypothesis: an educated guess Procedure: the steps in an experiment Experiment: a fair test designed to answer a question Observations: noting and recording information Conclusion: the result of outcome Observing: ability to identify properties, structures, etc. through use of all senses Classifying: ability to group, match, compare by commonality Measuring: ability to find quantitative differences, to estimate, to calculate, etc. (standard & metric) Communication: ability to verbally relate experiences, information and procedures with clarity Wafting: waving a hand over a substance to draw a scent toward the nose Scientist: a person who asks questions and tries different ways to answer them	LAB: Generate questions of curiousity, make observations, collect facts, make charts.
Lucia's Neighborhood		4	Enduring Knowledge 2: All things on Earth can be classified as non-living or living.	Standards: Differentiate between living and non-living things. Recognize the characteristics of living things (organisms) and non-living things. Identify that both living and non-living things are matter. A. Identify differences between living and nonliving things. 1. Characteristics of all living things (organisms): Growth and death Reproduction (produce young) Respiration (the action of breathing) Made up of cells 2. characteristics of all non-living things: Not living and never having lived B. Identify examples of living (biotic) and non-living (abiotic) things. 1. Living things Frog, leaf, dead tree, wood 2. Non-living things gold, clock, bicycle, cement C. Both living and non-living things are matter.	ACTIVITY: Make a Venn diagram of living and non-living things. Make a list of biotic and abiotic things (in classroom, school, community, etc.) Living and non-living scavenger hunt	LAB: Observe samples of living and non-living things with hand lens and microscope. VOCABULARY: Organism: a living thing Biotic: living or having lived Abiotic: non-living or never having lived Matter: anything that has mass and takes up space

	Informational text*: City Zoo*	5	Enduring Knowledge 6: Animals (and humans) are living organisms.	Standards: Recognize that animals (and humans) are living things that have basic needs. Recognize that animals have life cycles and that they vary for different living things. Describe the major stages that characterize the life cycle of a specific animal. A. Animals have similar characteristics and basic needs: 1. Must eat plants or other animals for energy. 2. They must breathe (respiration). 3. They reproduce; make babies. 4. They use their senses to find out about the world around them. 5. Most animals can move their bodies.	ACTIVITY: KWL chart of similar characteristics and basic needs. Life cycle of animals sequence cards.	LAB: Observe the life cycle of specific animals (Example: butterflies, frogs, humans, etc.) VOCABULARY: organism: a living thing, life cycle: the series of changes in the life of an organism, reproduce: the process that produces new animals, zoologist: a scientist that studies animals
Jack and the Wolf		6	Enduring Knowledge 7: Some animals have backbones including mammals and reptiles.	Standards: Recognize that some animals have backbones, including mammals and reptiles. Classify animals according to the characteristics they share. A. Mammals 1. Warm blooded: body temperature stays the same. 2. Most have fur or hair on their bodies. 3. Give birth to live young. (exception: platypus & echidna lay eggs) 4. Feed their young milk. 5. They breathe with lungs. B. Reptiles 1. Cold blooded: depend on the sun and other heat sources for warmth. 2. Most have scales or scutes to cover and protect their skin. 3. Most lay eggs with thick shells; some give birth to live young	ACTIVITY: Make a Venn diagram of mammals and reptiles. Classify the features of each type of vertebrate. Read book: *What is a Vertebrate?* By Bobbie Kalman	LAB: Observe different parts of animals: feathers, fur, snake skin, bones, leather, etc. VOCABULARY: vertebrate: animal that have a backbone.
How Animals Communicate	Dig Deeper and *Final Copy*	7	Enduring Knowledge 9: Animals have different body parts, growth cycles, movements, needs, eating habits and body coverings.	Standards: Compare and contrast the characteristics of animals from different environments A. Body parts B. Growth cycles C. Movements D. Needs E. Eating Habits F. Body Coverings	ACTIVITY: Choose one specific animal from the four main categories (mammals, reptiles, insects and spiders) to explore, compare and contrast. Example: Mammal: cow Reptile: milk snake Insect: carpenter ant Spider: fishing spider	
	Informational Text: *Insect Messages*	7	Enduring Knowledge 8: Some animals do not have backbones including insects and spiders.	Standards: Recognize that some animals do not have backbones, including insects and spiders. Classify animals according to the characteristics they share. A. Insects: arthropods that have a hard body case that covers the whole body. B. Spiders: arthropods with joined legs and a hard body case.	ACTIVITY: Classify each type of invertebrate. VOCABULARY: invertebrate: animal without a backbone	LAB: Observe different insects and spiders

Musical Day	Informational Text*: Drums*	8	Enduring Knowledge 11: The properties of matter can be observed using the senses.	Standards: Identify the observable properties of matter, including color, shape, size/weight, texture, form, feel, position and speed.	ACTIVITY: Create a properties of matter booklet/chart. Guess the object game: partners give properties to each other to guess the item.	LAB: Observe different items ask questions and make predictions about properties.
Musical Day	Informational Text*: Drums*	8	Enduring Knowledge 15: Matter is made from different materials.	Standards: Compare and contrast different materials, including wood, metal and plastic. A. Material is a property of objects that describes the type of matter that an object is made from. 1. Wood 2. Metal 3. Plastic.	ACTIVITY: Cut out pictures in magazines and sort according to type of material. Predict from looking at the material of a simple tool or object what actions it might be used for.	LAB: Have students observe various materials. Record similarities and differences. Record the properties of the different materials. Have students make instruments from recyclable household items.
At Home in the Ocean	Informational Text*: Water*	11	Enduring Knowledge 13: The states of matter include solid, liquid and gas.	Standards: Identify objects and materials as solid, liquid, or gas. Recognize that solids have a definite shape. Recognize that liquids and gases take the shape of their container. Compare and contrast solids, liquids and gases based on the basic properties of each state of matter.	ACTIVITY: Create states of matter booklet, drawing pictures of each.	LAB: Have students pour the same amount of water into different shaped containers. Demonstrate air filling a balloon.
At Home in the Ocean	Informational Text*: Water*	11	Enduring Knowledge 14: Changes in states of matter generally result from changes in temperature.	Standards: Describe how water can be changed from one state to another by adding heat or taking away heat.	ACTIVITY: Have students observe thermometers and make a model; explain how to use. Have students keep an ice cube from melting.	LAB: Experiment with water changing form:Measure temperature of water when a liquid; record data. Measure temperature of water (ice) when a solid (freezing); record data. Measure temperature of water (at boiling) when a gas (evaporation); record data
The Rain Forest		12	Enduring Knowledge 3: Plants are living organisms and have basic needs: energy, nutrients, air and water.	Standards: Recognize that plants are living things that have basic needs. A. Plants have basic needs: 1. Energy (sun light) 2. Nutrients (food) 3. Air 4. Water	ACTIVITY: KWL chart of basic needs	LAB: Soy bean necklace VOCABULARY: energy: sunlight, nutrients: food, botanist: a scientist that studies plants

The Rain Forest		12	Enduring Knowledge 4: Plants are made of several parts: seeds, roots, stems, leaves, flowers or cones, and fruit.	Standards: Identify the structures in plants. Describe the function of each structure. A. Plants are made up of several parts: 1. Seeds 2. Roots 3. Stems 4. Leaves 5. Flowers or cones 6. Fruit B. The parts of a plant work together in a system to provide: 1. Food production 2. Support 3. Water transportation 4. Reproduction 5. Growth 6. Protection	ACTIVITY: Potato in jar, Leaf observation & classification, Flower, cone and fruit observation, Leaf rubbings, Plant seeds to grow in classroom	LAB: Observe parts of a plant, Stem function - Straw/paper flowers
The Rain Forest		12	Enduring Knowledge 5: Plants have a life cycle: seed to death.	Standards: Recognize that plants have life cycles and that they vary for different living things. A. Plants have a life cycle. 1. Plants begin life as a seed, develop into adults, reproduce, and eventually die.	ACTIVITY: Life cycle of plants sequence cards	LAB: Observe the life cycle of specific plants (Example: apple tree, pumpkin)
Seasons	Informational text: *Four Seasons for Animals*	13	Enduring Knowledge 14: Changes in states of matter generally result from changes in temperature.	Standards: Describe how water can be changed from one state to another by adding heat or taking away heat. A. States of matter can result from changes in temperature. 1. Heat:To increase (raise) the temperature of something. Heating can cause a solid to melt to a liquid. (ice becomes water) Further heating can cause a liquid to become a gas (evaporation). 2. Cool:To decrease (lower) the temperature of something; the heat is removed. Cooling can cause a liquid to change to a solid (water to ice), or a gas to change to a liquid (condensation). 3. Temperature is measured by a thermometer.	ACTIVITY: Have students observe thermometers and make a model; explain how to use. Have students keep an ice cube from melting	LAB: Experiment with water changing form: Measure temperature of water when a liquid; record data. Measure temperature of water (ice) when a solid (freezing); record data. Measure temperature of water (at boiling) when a gas (evaporation); record data.
	Informational Text: *Rules & Laws*	14	Enduring Knowledge 1: Use the scientific method, scientific tools, and safe lab procedures to solve problems.	Standards: C. Lab Safety is a set of rules that scientists practice to safely learn and study the world around them. These rules include: 1. I will follow directions 2. I will listen carefully 3. I will keep myself and others safe 4. I will clean my area after lab activities 5. I am a responsible scientist 6. Do not enter Science Lab without an adult 7. Do not eat or drink in the lab 8. Do not inhale; wafting permitted with teacher approval.	Activity: Have students and parents sign a Lab Safety Contract. Include lab safety rules in science handbook. Include scientific instruments and tools, and their uses, in science handbook. lab	LAB: The first lab should be a step by step practice using the Scientific Method of something they know (brushing teeth). All labs should utilize the Scientific Method and Scientific Process Skills. Review safety rules at the beginning of every lab. Review instrument and tool name and use during every lab.

Animal Groups	*Dig deeper,* and *Your Turn*	15	Enduring Knowledge 9: Animals have different body parts, growth cycles, movements, needs, eating habits and body coverings.	Standards: Compare and contrast the characteristics of animals from different environments A. Body parts B. Growth cycles C. Movements D. Needs E. Eating Habits F. Body Coverings	ACTIVITY: Choose one specific animal from the four main categories (mammals, reptiles, insects and spiders) to explore, compare and contrast. Example: Mammal: cow Reptile: milk snake Insect: carpenter ant Spider: fishing spider	

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