

Ohio Kindergarten Hands-On Science Investigations

| OH | | Unit 1 | Unit 2 | Unit 3 | Unit 4 | Unit 5 | Unit 6 |
|--------------|-----------------|---|---|---|---|---|---|
| Kindergarten | State Standards | Objects and materials can be sorted and described by their properties. Observe and ask questions about the natural environment; • Plan and conduct simple investigations; • Employ simple equipment and tools to gather data and extend the senses; • Use appropriate mathematics with data to construct reasonable explanations; • Communicate about observations, investigations and explanations; and • Review and ask questions about the observations and explanations of others. | Weather changes are long-term and short-term. | Objects and materials can be sorted and described by their properties. Some objects and materials can be made to vibrate to produce sound. | Living things are different from nonliving things. Living things have physical traits and behaviors, which influence their survival. | The moon, sun and stars can be observed at different times of the day or night. | Living things are different from nonliving things. Living things have physical traits and behaviors, which influence their survival. |
| | Key Concepts | Five Senses | Weather and Seasons | properties of materials sound | Animals: Living/nonliving Animal Groups parent/offspring Animal needs (body parts) Adaptation | Objects in the Sky: Sun, Moon, and Stars Environmental responsibility | Plants Parts Lifecycle Adaptation |
| | Anchor Text: | Anchor Text: Me and My Senses by Joan Sweeney | Anchor Text: The Magic School Bus Rides the Wind by Anne Capeci | Anchor Text: Rookie Read-About Science: All About Sound by Lisa Trumbauer | Anchor Text: Who has These Feet? by Laura Hulbert, Erik Brooks | Anchor Text: Moonbear's Shadow by Frank Asch | Anchor Text: Seed Soil Sun by Cris Pterson |
| | Investigation | Activity: Play the Senses Guessing Game https://www.education.com/activity/article/Senses_Guessing_Game/ | Activity: Make a Weather Vane https://www.stevespanglerscience.com/lab/experiments/weather-vane/ | Activity: Sound and Vibration https://www.kcedventures.com/blog/the-science-of-sound-waves-an-awesome-experiment-for-kids | Activity: Blubber Gloves https://www.stevespanglerscience.com/lab/experiments/blubber-gloves/ https://carrotsareorange.com/animal-science-experiment/ | Activity: Shadow https://www.education.com/science-fair/article/shadow-science/ http://sciencenetlinks.com/media/filer/2011/10/07/cooler-act1.pdf | Activity: Plant needs https://www.education.com/science-fair/article/plants-need-sunlight-water/ |

Ohio First Grade Hands-On Science Investigations

| OH | | Unit 1 | Unit 2 | Unit 3 | Unit 4 | Unit 5 |
|-------------|-----------------|---|---|---|---|--|
| First Grade | State Standards | Observe and ask questions about the natural environment; • Plan and conduct simple investigations; • Employ simple equipment and tools to gather data and extend the senses; • Use appropriate mathematics with data to construct reasonable explanations; • Communicate about observations, investigations and explanations; and • Review and ask questions about the observations and explanations of others. | Living things have basic needs, which are met by obtaining materials from the physical environment. Living things survive only in environments that meet their need | The physical properties of water can change. | The physical properties of water can change. Properties of objects and materials can change. | The sun is the principal source of energy. Living things survive only in environments that meet their need |
| | Key Concepts | Think Like a Scientist Keep an Apple Healthy Apple Sink or Float (in the Word doc already) | Animals: Basic Needs Shelters Animal Groups Habitats | Weather: water changes, precipitation thermometer, sun, etc. | Properties of Matter: Solids, Liquids, Gases | Sun and Solar Energy Plants Plant growth Earth's resources, environment |
| | Anchor Text: | Anchor Text: Rookie Read-About- Scientists Ask Questions by Ginger Garrett | Anchor Text: Animal Homes by Sally Hewitt | Anchor Text: Rookie Read-About Science-Weather and Seasons: Where Do Puddles Go? | Anchor Text: Investigators: Materials: Melt It, Shape It: Glass by May Nelson | Anchor Text: Learn About Weather: Sun by Christopher Hernandez |
| | Investigation | Activity: Keep an Apple Healthy https://www.coffeecupsandcrayons.com/apple-science-experiment/ | Activity: STEM Lab: Basic Needs and Habitats https://betterlesson.com/lesson/629786/stem-lab-basic-needs-and-habitats | Activity: Let's Hear it for Water! http://www.ccssoh.us/Downloads/1ESS2%20Let's%20Hear%20It%20for%20Water!2.pdf | Activity: Chocolate Experiment http://www.onceuponalearningadventure.com/2012/04/chocolate-lovers-lesson-on-matter-with.html | Activity: Create a Solar Oven (page 7-8) https://www.educationfund.org/file_download/inline/de3b74a0-4721-4d6e-b0bc-6431b8688e51 |

Ohio Second Grade Hands-On Science Investigations

| OH | | Unit 1 | Unit 2 | Unit 3 | Unit 4 | Unit 5 |
|--------------|-----------------|--|--|---|---|---|
| Second Grade | State Standards | The atmosphere is made up of air. Water is present in the air. Long- and short-term weather changes occur due to changes in energy. | Living things cause changes on Earth | Observe and ask questions about the natural environment; • Plan and conduct simple investigations; • Employ simple equipment and tools to gather data and extend the senses; • Use appropriate mathematics with data to construct reasonable explanations; • Communicate about observations, investigations and explanations; and • Review and ask questions about the observations and explanations of others. | Forces change the motion of an object. | Living things cause changes on Earth. Some kinds of individuals that once lived on Earth have completely disappeared, although they were something like others that are alive today. |
| | Key Concepts | Weather Water Circle Air and Wind | Living thing cause changes to earth STEM an or worm compost bin | What do scientists do? Scientific Method | Position and Motion Magnets Simple Machine (lego) | Animal Habitats Endangered Species (fossils) |
| | Anchor Text: | Anchor Text: Fly Guy Presents Weather by Tedd Arnold | Anchor Text: Diary of a Worm by Doreen Cronen | Anchor Text: Ben Franklin's Big Splash by Barb Rosenstock | Anchor Text: Let's Read and Find Out Science: What Makes a Magnet? by Franklyn M. Branley | Anchor Text: World Discovery Science Reader: Fossils by Kris Hirschmann |
| | Investigation | Activity: Make a Weather Station http://www.ciese.org/curriculum/weatherproj2/en/lesson1.shtml | Activity: Create a Worm Farm https://www.education.com/science-fair/article/compost-project-worms/ More resources: http://www.calrecycle.ca.gov/Education/curriculum/worms/98activities.pdf | Activity: Skittle Science Lab http://thesciencepenguin.com/2013/09/skittles-experiment.html | Activity: What's so Attractive about Magnets? http://www.ccsch.us/Downloads/2PS1b%20Whats%20so%20attractive%20about%20magnets.pdf | Activity: Fossil Simulation https://www.uen.org/lessonplan/view/10288 |