


# Mystery Science Alignment with Ohio's Learning Standards for Science (2018)

**Mystery Science - Ohio Alignment**
Mystery Science aligns to the new Ohio's Learning Standards for Science (2018). Each lesson (exploration & activity) is designed to take one hour per week. To view each lesson's alignment to three-dimensional learning (disciplinary core ideas, science and engineering practices, and crosscutting concepts) view our NGSS Alignment document. Mini-lessons are 5-minute videos that answer K-5 student questions and can be used as a jumping off point to engage learners for a full lesson planned by the teacher.

***Lesson Extensions.*** Extensions are available for each lesson and offer an opportunity for students to continue their science content learning. They include assessments and a curated collection of additional activity suggestions, online resources, project ideas, and readings to help extend the learning.

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# Kindergarten

Mystery Science aligns to Ohio's Learning Standards for Science (2018). Each lesson (exploration & activity) is designed to take one hour per week. Extensions can expand upon each lesson. To view each lesson's alignment to 3 dimensional learning (disciplinary core ideas, science and engineering practices, and crosscutting concepts) view our NGSS Alignment document. Mini-lessons are 5-minute videos that answer K-5 student questions and can be used as a jumping off point to engage learners for a full lesson planned by the teacher.

| Strand | Topic | Ohio's Learning Standards | Mystery Science Unit | Mystery Science Lessons |
|---|---|---|---|---|
| **Life Science** | *Physical & Behavioral Traits of Living Things* | **K.LS.1** Living things have specific characteristics and traits. | Plant & Animal Superpowers | **Lesson 1:** Why do birds have beaks?<br>**Lesson 2, Read Along:** Why do baby ducks follow their mother?<br>**Lesson 3:** Why are polar bears white?<br>**Lesson 4, Read Along:** Why do family members look alike?<br>**Lesson 5:** Why don't trees blow down in the wind?<br>**Lesson 6, Read Along:** What do sunflowers do when you're not looking? |
| | | **K.LS.2** Living things have physical traits and behaviors, which influence their survival. | | |
| **Earth & Space Science** | *Daily & Seasonal Changes* | **K.ESS.1** Weather changes are long-term and short term. | Weather Watching | **Lesson 1:** Have you ever watched a storm?<br>**Lesson 2, Read Along:** How can you get ready for a big storm?<br>**Lesson 3:** What will the weather be like on your birthday?<br>**Lesson 4, Read Along:** How do you know what to wear for the weather? |
| | | **K.ESS.2** The Moon, Sun, and stars can be observed at different times of the day or night. | Spinning Sky | **Lesson 1:** Could a statue's shadow move?<br>**Lesson 2, Read Along:** What does your shadow do when you're not looking?<br>**Lesson 3:** How can the sun help you if you get lost?<br>**Lesson 4:** Why do you have to go to bed early in the summer?<br>**Lesson 5:** Why do the stars come out at night?<br>**Lesson 6, Read Along:** How can stars help you if you get lost? |
| **Physical Science** | *Properties of Everyday Objects & Materials* | **K.PS.1** Objects and materials can be sorted and described by their properties. | Lights & Sounds | **Lesson 1:** How do they make silly sounds in cartoons?<br>**Lesson 2, Read Along:** Where do sounds come from?<br>**Lesson 3:** What if there were no windows?<br>**Lesson 4, Read Aloud:** Can you see in the dark?<br>**Lesson 5:** How could you send a secret message to someone far away?<br>**Lesson 6, Read Aloud:** How do boats find their way in the fog? |
| | | **K.PS.2** Some objects and materials can be made to vibrate to produce sound. | | |

# Grade 1

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| **Life Science** | *Basic Needs of Living Things* | **1.LS.1** Living things have basic needs, which are met by obtaining materials from the physical environment. | Plant & Animal Secrets | **Lesson 1:** Why do woodpeckers peck wood?<br>**Lesson 2, Read Along:** Where do animals live?<br>**Lesson 3:** How can you find animals in the woods?<br>**Lesson 4, Read Along:** How do animals make their homes in the forest?<br>**Lesson 5:** How do plants and trees grow?<br>**Lesson 6, Read Along:** Why would you want an old log in your backyard? |
| | | **1.LS.2** Living things survive only in environments that meet their needs. | Plant Adventures | **Lesson 1:** How did a tree travel halfway around the world?<br>**Lesson 2:** Could a plant survive without light?<br>**Lesson 3:** Why do trees grow so tall?<br>**Lesson 4:** Should you water a cactus?<br>**Lesson 5:** Where do plants grow best? |
| **Earth & Space Science** | *Sun, Energy, & Weather* | **1.ESS.1** The Sun is the principal source of energy. | Weather Watching<br>Mini-lessons | **Lesson 5:** How could you warm up a frozen playground?<br>**Lesson 6, Read Along:** How could you walk barefoot across hot parement without burning your feet?<br>**Mini-Lesson:** Why does it get cold in winter? |
| | | **1.ESS.2** Water on Earth is present in many forms. | | *Ohio specific standard* |
| **Physical Science** | *Motion & Materials* | **1.PS.1** Properties of objects and materials can change. | Force Olympics | **Lesson 1:** What's the biggest excavator?<br>**Lesson 2, Read Along:** Why do builders need so many big machines?<br>**Lesson 3:** How can you knock down a wall made of concrete?<br>**Lesson 4, Read Along:** How can you knock down the most bowling pins?<br>**Lesson 5:** How can we protect a mountain town from falling rocks?<br>**Lesson 6:** How could you invent a trap? |
| | | **1.PS.2** Objects can be moved in a variety of ways, such as straight, zigzag, circular, and back and forth. | | |

# Grade 2

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| **Life Science** | *Interactions within Habitats* | **2.LS.1** Living things cause changes on Earth. | | *Ohio specific standard* |
| | | **2.LS.2** All organisms alive today result from their ancestors, some of which may be extinct. Not all kinds of organisms that lived in the past are represented by living organisms | Animals Through Time | **Lesson 1:** Where can you find whales in a desert?<br>**Lesson 2:** How do we know what dinosaurs looked like?<br>**Lesson 3:** Can you outrun a dinosaur? |
| **Earth & Space Science** | *The Atmosphere* | **2.ESS.1** The atmosphere is primarily made up of air. | Stormy Skies | **Lesson 1:** Where do clouds come from?<br>**Lesson 2:** How can we predict when it's going to storm?<br>**Lesson 3:** Why are some places always hot?<br>**Lesson 4:** How can you keep a house from blowing away in a windstorm? |
| | | **2.ESS.2** Water is present in the atmosphere. | | |
| | | **2.ESS.3** Long- and short-term weather changes occur due to changes in energy. | | |
| **Physical Science** | *Changes in Motion* | **2.PS.1** Forces change the motion of an object. | Invisible Forces | **Lesson 1:** How could you win a tug-of-war against a bunch of adults?<br>**Lesson 2:** What makes bridges so strong?<br>**Lesson 3:** How can you go faster down a slide?<br>**Lesson 4:** What can magnets do?<br>**Lesson 5:** How can you unlock a door using a magnet? |




MYSTERY science

# Grade 3

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| **Life Science** | *Behavior, Growth, & Changes* | **3.LS.2** Individuals of the same kind of organism differ in their inherited traits. These differences give some individuals an advantage in surviving and/or reproducing. | Animal Adventures | **Lesson 1:** How many different kinds of animals are there?<br>**Lesson 2:** Why do frogs say "ribbit"?<br>**Lesson 3:** How could you get more birds to a bird feeder? |
| | | **3.LS.1** Offspring resemble their parents and each other. | Animals Through Time | **Lesson 4:** What kind of animals might there be in the future?<br>**Lesson 5:** Can selection happen without people?<br>**Lesson 6:** Why do dogs wag their tails? |
| | | **3.LS.3** Plants and animals have life cycles that are part of their adaptations for survival in their natural environments. | Power of Flowers* | **Lesson 1:** Why do plants grow flowers?<br>**Lesson 2:** Why do plants give us fruit?<br>**Lesson 3:** Why are some apples red and some green?<br>**Lesson 4:** How could you make the biggest fruit in the world? |
| **Earth & Space Science** | *Earth's Resources* | **3.ESS.1** Earth's nonliving resources have specific properties | Work of Water | **Lesson 1:** If you floated down a river, where would you end up?<br>**Lesson 2:** Why is there sand at the beach?<br>**Lesson 3:** What's strong enough to make a canyon?<br>**Lesson 4:** How can you stop a landslide? |
| | | **3.ESS.2** Earth's resources can be used for energy. | | *Ohio specific standards* |
| | | **3.ESS.3** Some of Earth's resources are limited. | | |
| **Physical Science** | *Matter & Forms of Energy* | **3.PS.1** All objects and substances in the natural world are composed of matter. | Material Magic | **Lesson 1:** Why do we wear clothes?<br>**Lesson 2:** Can you really fry an egg on a hot sidewalk?<br>**Lesson 3:** Why are so many toys made out of plastic?<br>**Lesson 4:** What materials might be invented in the future?<br>**Lesson 5:** Could you build a house out of paper? |
| | | **3.PS.2** Matter exists in different states, each of which has different properties. | | |
| | | **3.PS.3** Heat, electrical energy, light, sound, and magnetic energy are forms of energy. | | *Ohio specific standard* |

* Tip: Power of Flowers picks up where Plant Adventures (Ohio grade 1) leaves off. If your students haven't learned about what plants need for survival, or need a refresher, we suggest you teach Plant Adventures first.




MYSTERY science

# Grade 4

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| **Life Science** | *Earth's Living History* | **4.LS.2** Fossils can be compared to one another and to present-day organisms according to their similarities and differences. | | *Ohio specific standard* |
| | | **4.LS.1** Changes in an organism's environment are sometimes beneficial to its survival and sometimes harmful. | Animals Through Time | **Lesson 7:** What's the best way to get rid of mosquitoes?<br>**Lesson 8:** How long can people (and animals) survive in outer space? |
| **Earth & Space Science** | *Earth's Surface* | **4.ESS.1** Earth's surface has specific characteristics and landforms that can be identified. | Watery Planet | **Lesson 1:** How much water is in the world?<br>**Lesson 2:** When you turn on the faucet, where does the water come from?<br>**Lesson 3:** Can we make it rain?<br>**Lesson 4:** How can you save a town from a hurricane? |
| | | **4.ESS.2** The surface of Earth changes due to weathering. | The Birth of Rocks | **Lesson 1:** Could a volcano pop up where you live?<br>**Lesson 2:** Why do some volcanoes explode?<br>**Lesson 3:** Will a mountain last forever?<br>**Lesson 4:** How could you survive a landslide? |
| | | **4.ESS.3** The surface of Earth changes due to erosion and deposition. | | |




MYSTERY science

## Grade 4, continued

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| **Physical Science** | *Electricity, Heat, & Matter* | **4.PS.1** When objects break into smaller pieces, dissolve, or change state, the total amount of matter is conserved. | Chemical Magic | **Lesson 1:** Are magic potions real?<br>**Lesson 2:** Could you transform something worthless into gold?<br>**Lesson 3:** What would happen if you drank a glass of acid?<br>**Lesson 4:** What do fireworks, rubber, and silly putty have in common?<br>**Lesson 5:** Why do some things explode? |
| | | **4.PS.2** Energy can be transferred from one location to another or can be transformed from one form to another. | Energizing Everything | **Lesson 6:** What if there were no electricity?<br>**Lesson 7:** How long did it take to travel across the country before cars and planes?<br>**Lesson 8:** Where does energy come from? |

# Grade 5

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| **Life Science** | *Inter-connections within Ecosystems* | **5.LS.1** Organisms perform a variety of roles in an ecosystem. | Web of Life | **Lesson 1:** Why would a hawk move to New York City?<br>**Lesson 2:** What do plants eat?<br>**Lesson 3:** Where do fallen leaves go?<br>**Lesson 4:** Do worms really eat dirt?<br>**Lesson 5:** Why do you have to clean a fish tank but not a pond?<br>**Lesson 6:** Why did the dinosaurs go extinct? |
| | | **5.LS.2** All of the processes that take place within organisms require energy. | Human Machine | **Lesson 1:** Why do your biceps bulge?<br>**Lesson 4:** How does your brain control your body? |
| **Earth & Space Science** | *Cycles & Patterns in the Solar System* | **5.ESS.1** The solar system includes the Sun and all celestial bodies that orbit the Sun. Each planet in the solar system has unique characteristics. | Spaceship Earth | **Lesson 1:** How fast does the Earth spin?<br>**Lesson 2:** Who set the first clock?<br>**Lesson 3:** How can the Sun tell you the season?<br>**Lesson 4:** Why do the stars change with the seasons?<br>**Lesson 5:** Why does the moon change shape?<br>**Lesson 6:** What are the wandering stars?<br>**Lesson 7:** Why is gravity different on other planets?<br>**Lesson 8:** Could there be life on other planets? |
| | | **5.ESS.2** The Sun is one of many stars that exist in the universe. | | |
| | | **5.ESS.3** Most of the cycles and patterns of motion between the Earth and Sun are predictable. | | |




MYSTERY science

## Grade 5, continued

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| **Physical Science** | *Light, Sound, & Motion* | **5.PS.1** The amount of change in movement of an object is based on the mass of the object and the amount of force exerted. | Energizing Everything | **Lesson 1:** How is your body similar to a car?<br>**Lesson 2:** What makes roller coasters go so fast?<br>**Lesson 3:** Why is the first hill of a roller coaster always the highest?<br>**Lesson 4:** Could you knock down a building using only dominoes?<br>**Lesson 5:** Can you build a chain reaction machine? |
| | | **5.PS.2** Light and sound are forms of energy that behave in predictable ways. | Human Machine<br><br>Waves of Sound | **Lesson 2:** What do blind people see?<br>**Lesson 3:** How can some animals see in the dark?<br><br>**Lesson 1:** How far can a whisper travel?<br>**Lesson 2:** What would happen if you screamed in outer space?<br>**Lesson 3:** Why are some sounds high and some sounds low? |