

<b>Second Grade Science Course Overview</b>	
<b>Course Description</b>	
<b>Credits</b>	<b>Prerequisites</b>
NA	NA
<b>Board Approved</b>	<b>Revised</b>
Pending Board Approval 5/24/21	NA
<b>Required Assessments</b>	
District-wide, standards-based assessments identified	
<b>Textbooks/Resources</b>	
<a href="https://mysteryscience.com/lessons/seasonal/spring">https://mysteryscience.com/lessons/seasonal/spring</a>	
<b>AASD Science Goals for K-12 Students</b>	<b>As a result of successfully completing this course, students will be able to...</b>
<p><b>AASD Science Goals</b></p> <ul style="list-style-type: none"> <li>• Students will demonstrate an understanding of key science concepts and apply them to their world.</li> <li>• Students will demonstrate knowledge and understanding that scientific knowledge is continually undergoing revision and refinement based on new experiments and data.</li> <li>• Students will demonstrate knowledge and understanding that the process of science is based on questioning and providing empirical evidence to support claims.</li> <li>• Students will apply scientific concepts and processes to evaluate consequences and make informed, responsible choices (regarding self, others, environment).</li> <li>• Students will demonstrate an understanding that science and technology are critical in order to provide and evaluate alternative solutions to problems in our world.</li> <li>• Students will engage in STEM experiences as both scientists and engineers in order to prepare for postsecondary and career readiness.</li> </ul> <p><b>AASD Science Mission Statement</b></p> <p><b>AASD Science Guiding Principles</b></p>	<ul style="list-style-type: none"> <li>• Use science and engineering practices, crosscutting concepts, and an understanding of <i>Animal Adventures</i> to make sense of phenomena and solve problems.</li> <li>• Use science and engineering practices, crosscutting concepts, and an understanding of <i>Plant Adventures</i> to make sense of phenomena and solve problems.</li> <li>• Use science and engineering practices, crosscutting concepts, and an understanding of <i>Work of Water</i> to make sense of phenomena and solve problems.</li> <li>• Use science and engineering practices, crosscutting concepts, and an understanding of <i>Material Magic</i> to make sense of phenomena and solve problems.</li> </ul>
<b>Essential Questions</b>	
<p><i>What thought-provoking questions will foster inquiry, meaning-making, and transfer?</i></p> <p><b>Unit 1</b></p> <ul style="list-style-type: none"> <li>• How many different kinds of animals are there? (2-LS4-1)</li> <li>• Why do frogs say “ribbit”? (2-LS4-1)</li> <li>• How could you get more birds to visit a bird feeder? (2-LS4-1, K-2-ETS1-1, K-2-ETS1-2, K-2-ETS1-3)</li> </ul> <p><b>Unit 2</b></p> <ul style="list-style-type: none"> <li>• How did a tree travel halfway around the world? (2-LS2-2)</li> <li>• Could a plant survive without light? (2-LS2-1)</li> <li>• Why do trees grow so tall? (2-LS2-1)</li> <li>• Should you water a cactus? (2-LS12-1, 2-LS4-1)</li> <li>• Where do plants grow best? (2-LS2-1, 2-LS4-1)</li> </ul> <p><b>Unit 3</b></p> <ul style="list-style-type: none"> <li>• If you floated down a river, where would you end up? (2-ESS2-2, 2-ESS2-3)</li> <li>• Why is there sand at the beach? (2-ESS2-2)</li> <li>• What’s strong enough to make a canyon? (2-ESS1-1, 2-ESS2-1, 2-ESS2-2)</li> <li>• How can you stop a landslide? (2-ESS2-1, K-2-ETS1-1, K-2-ETS1-2, K-2-ETS1-3)</li> <li>•</li> </ul> <p><b>Unit 4</b></p> <ul style="list-style-type: none"> <li>• Why do we wear clothes? (2-PS1-1, 2-PS1-2, K-2-ETS1-2, K-2-ETS1-3)</li> <li>• Can you really fry an egg on a hot sidewalk? (2-PS1-1, 2-PS1-2)</li> <li>• Why are so many toys made out of plastic? (2-PS1-1, 2-PS1-2, 2-PS1-4)</li> </ul>	

- What materials might be invented in the future? (2-PS1-1, 2-PS1-2, K-2-ETS1-2, K-2-ETS1-3)
- Could you build a house out of paper? (2-PS1-1, 2-PS1-3, K-2-ETS1-2, K-2-ETS1-3)

## Unit Overview

### Unit #1 - Animal Adventures

This unit helps students develop a sense of wonder for biodiversity: the sheer range and variety of animals found on earth. Students gain practical experience in identifying animals and sorting them into scientific groups, and apply their knowledge in an engineering design challenge. This unit introduces two critically important concepts in biology: "habitat" and "species", foundational concepts which will be revisited and refined at higher grade levels.

**Instructional Standards:** 2-LS4-1, K-2-ETS1-1, K-2-ETS1-2, K-2-ETS1-3

**Assessed Standards:**

### Unit #2 - Plant Adventures

This unit develops the idea that plants are truly alive and face challenges every bit as dramatic as those of animals. Students will learn that plants have needs, and will reason from evidence to understand how plants meet their needs.

**Instructional Standards:** 2-LS2-1, 2-LS2-2, 2-LS4-1

**Assessed Standards:**

### Unit #3 - Work of Water

This unit helps students develop the idea that water is a powerful force that reshapes the earth's surface. Students see that water isn't just something we drink. It carries sand to create beaches, carves out canyons and valleys and, as ice, scrapes entire areas flat.

**Instructional Standards:** 2-ESS1-1, 2-ESS2-1, 2-ESS2-2, 2-ESS2-3, K-2-ETS1-1, K-2-ETS1-2, K-2-ETS1-3

**Assessed Standards:**

### Unit #4 - Material Magic

This unit develops the idea that by taking advantage of the properties of materials, we can solve many problems in our lives. Students will develop an appreciation for the manmade materials of everyday objects, and learn to recognize that those materials are chosen based on their properties. Through hands-on investigation, students will explore the material properties involved in meeting basic needs (such as clothing and cooking). They'll consider the solid and liquid states of matter to understand why plastic was invented. The unit ends with a brainstorming activity about futuristic inventions that might be possible using new materials.

**Instructional Standards:** 2-PS1-1, 2-PS1-2, 2-PS1-3, 2-PS1-4, K-2-ETS1-1, K-2-ETS1-2, K-2-ETS1-3

**Assessed Standards:**