Third Grade Science Course Overview

Course Description

Credits	Prerequisites
NA	NA
Board Approved	**Revised**
Pending Board Approval 5/24/21	NA

Required Assessments

District-wide, standards-based assessments identified

Textbooks/Resources

https://mysteryscience.com/lessons/seasonal/spring

AASD Science Goals for K-12 Students	As a result of successfully completing this course, students will be able to...
AASD Science Goals ● *Students will demonstrate an understanding of key science concepts and apply them to their world.* ● *Students will demonstrate knowledge and understanding that scientific knowledge is continually undergoing revision and refinement based on new experiments and data.* ● *Students will demonstrate knowledge and understanding that the process of science is based on questioning and providing empirical evidence to support claims.* ● *Students will apply scientific concepts and processes to evaluate consequences and make informed, responsible choices (regarding self, others, environment).* ● *Students will demonstrate an understanding that science and technology are critical in order to provide and evaluate alternative solutions to problems in our world.* ● *Students will engage in STEM experiences as both scientists and engineers in order to prepare for postsecondary and career readiness.* **AASD Science Mission Statement** **AASD Science Guiding Principles**	● Use science and engineering practices, crosscutting concepts, and an understanding of *Animals Through Time* to make sense of phenomena and solve problems. ● Use science and engineering practices, crosscutting concepts, and an understanding of *Power of Flowers* to make sense of phenomena and solve problems. ● Use science and engineering practices, crosscutting concepts, and an understanding of *Stormy Skies* to make sense of phenomena and solve problems. ● Use science and engineering practices, crosscutting concepts, and an understanding of *Invisible Forces* to make sense of phenomena and solve problems.

Essential Questions

What thought-provoking questions will foster inquiry, meaning-making, and transfer?

Unit 1

- Where can you find whales in the desert? (**3-LS4-1, 3-LS4-4**)
- How do we know what dinosaurs looked like? (**3-LS4-1**)
- Can you outrun a dinosaur? (**3-LS4-1**)
- What kinds of animals might there be in the future? (**3-LS3-1, 3-LS4-2**)
- Can selection happen without people? (**3-LS3-1, 3-LS4-2, 3-LS4-3, 3-LS4-4**)
- Why do dogs wag their tails? (**3-LS2-1**)
- What's the best way to get rid of mosquitos? (**3-LS4-3, 3-LS4-4, 3-5-ETS1-2**)
- How long can people (and animals) survive in outer space? (**3-LS3-2**)

Unit 2

- Why do plants grow flowers (**3-LS1-1**)
- Why do plants give us fruit? (**3-LS1-1**)
- Why are some apples red and some green? (**3-LS3-1**)
- How could you make the biggest fruit in the world? (**3-LS3-1**)

Unit 3

- Where do clouds come from? (**Foundational 3-ESS2-1**)
- How can we predict when it's going to storm? (**Foundational 3-ESS2-1**)
- Why are some places always hot? (**3-ESS2-1, 3-ESS2-2**)
- How can you keep a house from blowing away in a windstorm? (**3-ESS3-1, 3-5-ETS1-1, 3-5-ETS1-2, 3-5-ETS1-3**)
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Unit 4

- How could you win a tug-of-war against a bunch of adults? (**3-PS2-1**)
- What makes bridges so strong? (**3-5-ETS1-1, 3-5-ETS1-2, 3-5-ETS1-3, Foundational 3-PS2-1**)
- How can you go faster down a slide? (**3-PS2-1, 3-PS2-2**)
- WHat can magnets do? (**3-PS2-3, 3-PS2-4**)
- How could you unlock a door using a magnet? (**3-PS2-3, 3-PS2-4, 3-5-ETS1-1, 3-5-ETS1-2, 3-5-ETS1-3**)

Unit Overview

Unit #1 - Animals Through Time

In this unit students will develop an appreciation for how animals and the places they live (their habitats) are not constant - they have changed over time. Fossils give us a window to the animals and habitats of the past. Selective breeding shows us not only how some animals of the past became domesticated, but allows us to imagine how they might look in the future.

Instructional Standards: 3-LS2-1, 3-LS3-1, 3-LS3-2, 3-LS4-1, 3-LS4-2, 3-LS4-3, 3-LS4-4, 3-5-ETS1-2

Assessed Standards:

Unit #2 - Power of Flowers

This unit develops the idea that by studying how plants reproduce and pass their traits, we human beings have figured out how to make food plants even more useful to us. Students first discover how plants reproduce by exploring the process of pollination and fruiting. Then students are introduced to the process of plan domestication (selection of traits based on inheritance and variation).

Instructional Standards: 3-LS1-1, 3-LS3-1

Assessed Standards:

Unit #3 - Stormy Skies

This unit develops the idea that by paying careful attention to clouds, wind, and other weather clues around us, we can predict the daily weather and make sense of why places on earth look and feel the way they do.

Instructional Standards: 3-PS2-1, Foundational for 3-PS2-1, 3-PS2-2, 3-PS2-3, 3-PS2-4, Foundational for 3-ESS2-1, 3-ESS2-2, 3-ESS3-1, 3-5-ETS1-1, 3-5-ETS1-2, 3-5-ETS1-3

Assessed Standards:

Unit #4 - Invisible Forces

This introductory forces unit will give students a new understanding of the invisible pushes and pulls that operate in the world around them. They will realize that understanding forces will let them do surprising things-from building a sturdy bridge from paper to using the pull of a rubber band to send a cardboard “hopper” flying. What students learn in this unit will connect to the world around them, leading them to think about such things as the force of friction as they slide down a playground slide or the invisible force that makes magnets cling to the refrigerator. Hands-on activities focus on engineering, investigation, and discovery.

Instructional Standards: 3-PS2-1, Foundational for 3-PS2-1, 3-5-ETS1-1, 3-5-ETS1-2, 3-5-ETS1-3, 3-PS2-1, 3-PS2-2, 3-PS2-3, 3-PS2-4

Assessed Standards: