

# Science 3

Explore the Wonder

## Overview

The science program has a phenomenological approach using natural events or experiences to launch the inquiry. Activities foster questioning and students explore ways to plan and organize their own investigations.



## Science Concepts

Students engage with concepts through hands-on investigations, reading scientific articles and texts and debating their ideas with others.

1

### FORCES

- Movement is evidence of a force.
- Larger forces cause objects to move further.
- The distance between magnets affects the attraction.

2

### TOY DESIGN

- Engineers design within constraints to find solutions.
- Designs are tested and refined before they are finished.
- Unbalanced forces make objects move, balanced forces keep objects still.

3

### LIFECYCLES, TRAITS & ENVIRONMENT

- Life cycles of different organisms have common features.
- Traits are passed to offspring from parents and can be influenced by the environment.
- Variations in characteristics may give advantages in surviving.

4

### WEATHER & CLIMATE

- Weather is a system of interacting parts.
- Climate is the pattern of average weather over many years.
- There are different climates across regions of the Earth.

## REPORTED STANDARDS



### Knowledge & Understanding

- Apply concepts
- Identify patterns
- Describe cause & effect



### Practices

- Make observations
- Ask questions
- Develop models



### Scientific Communication

- Communicate scientific Information
- Construct scientific explanations



Independent, partner and group learning is emphasized; everyone's thoughts are important with all voices contributing to learning.



## Standards

Integrating concepts, practices and crosscutting themes using the Next Generation Science Standards. Understanding is developed through practices such as questioning and underpinned by the crosscutting themes of patterns, systems and cause and effect. Throughout, there are opportunities for inquiry and authentic discovery. Building upon curiosity and a natural tendency towards experimentation, students begin to devise test situations, collect and organize data to support their claims.

## Home Connections

Science is everywhere and students are encouraged to explore phenomena in class and outside lessons with connections being encouraged between home and school. Additional activities are available on the Science Learning Links on the ASL website. Children have opportunities to share their connections, inspire others and help to further our science community learning.

Elaine came to ASL in 1991, starting out in HS Science. Moving to the Lower School, she taught in most elementary grades as a classroom teacher before moving to her passion of teaching science. She has studied endangered giant tortoises in Arizona, hippos in Kenya and loves to be out in the wild.

Kojo has worked at ASL since 2014 after attending school at ASL, Kindergarten through High School. He discovered his affinity for science when he took robotics as an elective, and his passion for education when he began mentoring robotics at ASL. He has taught robotics to Lower School and Middle School students for eight years.

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