2022/2023

Science 4

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 DYNAMIC EARTH

- Earth's surface is constantly broken down and reformed.
- Maps can be used to describe patterns of Earth's features.
- Humans can reduce the impacts of natural processes.

2 ENERGY

- Energy exists in different forms
- Usable energy can be made from different types of sources.
- The faster and heavier an object is the more energy it will transfer in a collision.

3 CITIES FOR THE FUTURE

- Cities can be designed to be healthier and sustainable.
- Devices can be automated by programming with code.
- There are positives and negatives for the planet and biosphere in using renewable and nonrenewable resources.

4 LIFE STRUCTURES AND SENSES

- Reflected light allows objects to be seen.
- The system of human vision is made up of many parts.
- Organisms are adapted to their environment and respond in different ways.

REPORTED STANDARDS

Knowledge & Understanding

- Apply concepts
- Identify patterns
- Describe cause & effect
- Systems & parts

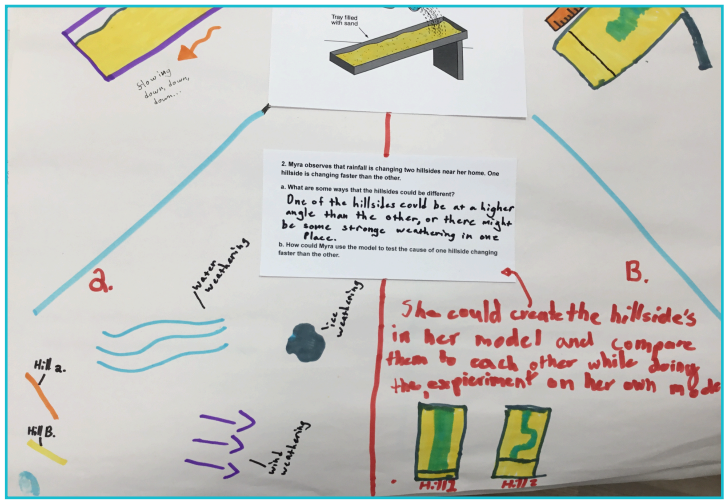
Practices

- 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.