

Unit:Science-5.2

Content Area: **Science**
Course(s):
Time Period: **Trimester 1**
Length: **Ongoing**
Status: **Published**

Brief Summary of Unit

Children will observe and discuss matter and energy. Children will observe and discuss matter and energy. They will use their senses to observe, explore, investigate and draw conclusions about matter.

In this course, students are provided with opportunities to develop skills that pertain to a variety of careers. When completing this course, students can make informed choices and pursue electives that further their study and contribute toward the formation of career interest.

Standards

The standards in this unit reflect a developmental progression across grades/ levels and make interdisciplinary connections across content areas including social sciences, technology, career readiness, cultural awareness and global citizenship.

MA.K-12.1: Make sense of problems and persevere in solving them.

MA.K-12.5: Use appropriate tools strategically.

LA.RST.6-8.3: Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

AL.PK.9.3.4	Reflect on, evaluate, and communicate what was learned (e.g., children in the class demonstrating and explaining their project to children in a younger group).
SCI.PK.5.2	Children observe and investigate matter and energy.
SCI.PK.5.2.1	Observe, manipulate, sort, and describe objects and materials (e.g., water, sand, clay, paint, glue, various types of blocks, collections of objects, simple household items that can be taken apart, or objects made of wood, metal, or cloth) in the classroom and outdoor environment based on size, shape, color, texture, and weight.
SCI.PK.5.2.2	Explore changes in liquids and solids when substances are combined, heated, or cooled (e.g., mixing sand or clay with various amounts of water; preparing gelatin; mixing different colors of tempera paint; and longer term investigations, such as the freezing and melting of water and other liquids).
SCI.PK.5.2.3	Investigate sound, heat, and light energy through one or more of the senses (e.g., comparing the pitch and volume of sounds made by commercially made and homemade instruments, recording how shadows change during the course of a day or over time, using flashlights or lamp light to make shadows indoors).

Transfer

Essential Questions

- How can I make an object move? Can I roll it, push it, pull it, or blow it?
- How can you make a material change? Can you mix it, shake it, pour it?
- How does something look, smell, taste, and feel?
- What are objects made of?

Essential Understandings

- Everything is made up of matter
- Some materials can change forms
- We have the power to make objects move

Students Will Know

- Materials and objects have a shape, weight, color, and size
- Materials can move and change

Students Will Be Skilled At

- Beginning to identify whether something is a liquid, solid, or gas
- Describing an object by attributes such as weight, shape, color, and size, texture, taste, smell etc.
- Experimenting with how to move objects in different ways

Evidence/Performance Tasks

This course is designed to promote skill attainment. Student progression and pace through which they proceed through the performance tasks is based on their affinity for and ability to reach skill attainment. The teacher will determine formative and summative skill attainment; alternative assessments will be incorporated for each student based on their strengths and challenges.

- Children will explore cause and effect (e.g. blowing on a cotton ball allows it to move while much more force is needed to move a heavier objects such as a block)
- Children will explore how things work
- Children will touch, manipulate and build with a variety of materials
- Children will use descriptive words when talking about a particular object (e.g. the big soft red ball)
- Children will use their language to identify a given object as a solid, liquid, or gas

Learning Plan

- Ask children to describe what they have learned about objects and how they can change to a friend
- Explore different ways that objects can be moved
- Plan lessons and activities that allow children to observe and investigate the properties of objects and how materials can change mixing paint colors to observe how new colors can be made observing how snow melts when brought into the classroom using apples to make applesauce exploring water, sand, rice, shaving cream charting children's height at the beginning and end of the year to show the change
- Provide a wide variety of blocks in the building area
- Provide science tools such as magnifying glasses, scales, measuring cups, magnets, etc. and encourage children to use them when working with various materials
- Teach children how to build and use ramps to make cars go up and down

Materials

The materials used in this course allow for integration of a variety of instructional, supplemental, and intervention materials that support student learners at all levels in the school and home environments. In addition to the materials below, the link connects to district approved textbooks and resources utilized in this course: [CORE BOOK LIST](#)

- Exploration tools (e.g. magnifying glasses, scales, magnets, cups, etc.)
- Objects that will help identify liquid, solid, and gas
- Sensory tables with various fillers
- Wide variety of blocks

Suggested Strategies for Modifications

This link includes content specific accommodations and modifications for all populations:

https://docs.google.com/spreadsheets/d/1vp4_sVkiJlcevefjdpDEpUQYy5Jja39vzPvk-fFJrjE/edit

- Allow for extra time and practice
- Incorporate multi-sensory strategies

- Provide 1:1 time and assistance
- Repeat directions and provide multiple examples
- Use visuals