

Exploring Changes in Liquids and Solids

Content Area: **Science**
Course(s):
Time Period: **Undefined**
Length: **All Year**
Status: **Published**

Unit Overview

Essential Questions

What is a solid?

What is a liquid?

How do solids/liquids change?

Content

Liquids and solids

Skills

Observing

Predicting

Pouring

Describing

Comparing

Sorting

Vocabulary

Assessments

Teacher observation and question

Student response

Lessons/Learning Scenarios

1. working with shaving cream on the table
2. making playdough
3. adding water to sand table
4. water play with cups, tubes, containers with lids, water pumps, etc.
5. making jello
6. freezing water to ice, then using ice for painting with powdered paint
7. freezing juice for popsicles
8. freezing liquid in different sized containers
9. mixing paint
10. painting with water on the pavement on a sunny day
11. using eye droppers in colored water to make coffee filter or paper towel art
12. absorbing colored water in paper towels or spraying water on paper towels that have been marked with markers
13. pouring water or using a hose with tubes/pipes

Standards

SCI.PK.5.1.1	Display curiosity about science objects, materials, activities, and longer-term investigations in progress (e.g., ask who, what, when, where, why, and how questions during sensory explorations, experimentation, and focused inquiry).
SCI.PK.5.1.2	Observe, question, predict, and investigate materials, objects, and phenomena during classroom activities indoors and outdoors and during any longer-term investigations in progress. Seek answers to questions and test predictions using simple experiments or research media (e.g., cracking a nut to look inside; putting a toy car in water to determine whether it sinks).
SCI.PK.5.1.3	Use basic science terms (e.g., observe, predict, experiment) and topic-related science vocabulary (e.g., words related to living things [fur, fins, feathers, beak, bark, trunk, stem]; weather terms [breezy, mild, cloudy, hurricane, shower, temperature]; vocabulary related to simple machines [wheel, pulley, lever, screw, inclined plane]; words for states of matter [solid, liquid]; names of basic tools [hammer, screwdriver, awl, binoculars, stethoscope, magnifier]).

SCI.PK.5.1.4	Communicate with other children and adults to share observations, pursue questions, make predictions, and/or conclusions.
SCI.PK.5.1.5	Represent observations and work through drawing, recording data, and “writing” (e.g., drawing and “writing” on observation clipboards, making rubbings, charting the growth of plants).
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.5.4.1	Explore and describe characteristics of soil, rocks, water, and air (e.g., sorting rocks by shape and/or color, observing water as a solid and a liquid, noticing the wind’s effect on playground objects).
SCI.PK.5.5.1	Identify and use basic tools and technology to extend exploration in conjunction with science investigations (e.g., writing, drawing, and painting utensils, scissors, staplers, magnifiers, balance scales, ramps, pulleys, hammers, screwdrivers, sieves, tubing, binoculars, whisks, measuring cups, appropriate computer software and website information, video and audio recordings, digital cameras, tape recorders).

Resources
