

NGSS Performance Expectation		In this unit, youth:
2-PS1-2	Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.	Investigate which materials work well to make different types of bubbles.
K-2-ETS1-1	Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	Learn the characters in the story need bubble wands to make different kinds of bubbles. They explore how changing the technique (blowing or waving) and material affects the types of bubbles formed. They design bubble wands to solve the characters' problem.
K-2-ETS1-2	Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	Draw plans for their bubble wands, which they then create. They design the shape of the wand to produce specific types of bubbles.
K-2-ETS1-3	Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	Examine and analyze bubble wand designs to see how well they meet criteria.

Crosscutting Concept

Structure and Function

In this unit, youth explore how the structures of bubble wands affect the types of bubbles they produce. They investigate materials' properties (flexibility, hole size, absorbency) to determine how they function to make different types of bubbles (large, small, clusters, single bubble). Youth test and make decisions about wand structure to work with various shapes of bubble solution containers.