# **Core Skills Analysis**

### Science

- Observed physical properties of bubbles such as shape, size, and how they reflect light.
- Explored surface tension and how it allows bubbles to form and hold their shape temporarily.
- Noted the effect of air and movement in creating and sustaining bubbles.
- Gained experiential understanding of the states of matter, primarily liquids turning into a thin film trapping air.

### Art

- Engaged with color and light through the iridescent reflections seen on bubble surfaces.
- Experimented with shapes and patterns formed by bubbles individually and as clusters.
- Encouraged creativity in blowing bubbles of different sizes and designs.
- Enhanced fine motor skills and hand-eye coordination when manipulating bubble wands.

#### **Physical Development**

- Developed gross motor skills by moving arms and hands to blow bubbles and chase them.
- Improved coordination and timing to catch or pop bubbles gently.
- Stimulated sensory input through tactile experience of bubbles and visual tracking.
- Encouraged outdoor physical activity promoting overall health and well-being.

#### Tips

Playing with bubbles is a delightful way to introduce scientific concepts and develop motor skills while fostering creativity. To deepen understanding, encourage children to experiment with different bubble solutions (like adding sugar or glycerin) to observe how these change bubble longevity and strength. Introduce playful comparisons by measuring and recording bubble sizes or observing how bubbles behave on various surfaces and in different weather conditions. Pair the activity with art by having children paint or draw their favorite bubble patterns or colors. Finally, combine physical play with storytelling to make bubble time more engaging—challenge children to create imaginative games or stories inspired by bubble adventures.

#### **Book Recommendations**

- <u>Bubbles</u>, <u>Bubbles</u> by Jackie Silberg: A fun and rhythmic book that explores the magic and joy of bubbles, perfect for young children.
- <u>The Bubble Book</u> by Tomie dePaola: A charming story that highlights different aspects and wonders of bubbles through simple text and illustrations.
- <u>Science Experiments with Bubbles and Rainbows</u> by Scott R. Robinson: An engaging guide for kids to explore the science behind bubbles and light phenomena with easy experiments.

## **Learning Standards**

- NGSS 2-PS1-1: Plan and conduct investigations to describe and classify different kinds of materials by their observable properties.
- CCSS.ELA-LITERACY.RI.K.3: With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text.
- CCSS.MATH.CONTENT.K.MD.A.2: Directly compare two objects with a measurable attribute in common to see which object has 'more of' / 'less of' the attribute.
- Physical Education Standard PE.K-2.3: Demonstrate fundamental motor skills used in a variety of physical activities.

## **Try This Next**

- Create a worksheet to record bubble sizes, count bubbles created in timed intervals, and note observations of bubble behavior under different conditions.
- Design a drawing task encouraging children to illustrate various bubble colors and reflections observed, emphasizing artistic details.