Core Skills Analysis

Art

- Explored color mixing by observing how different food coloring shades blend when added to milk.
- Engaged in hands-on experimentation with liquid paint-like materials, fostering creativity and sensory exploration.
- Developed a sense of aesthetics by arranging drops of food coloring to observe patterns and color diffusion.
- Practiced fine motor skills through controlled pipetting or dropping food coloring into the milk.

English

- Expanded vocabulary related to science and kitchen activities, such as 'ingredients', 'mixture', and 'measurement'.
- Developed verbal communication skills by describing the experiment process and explaining observations.
- Enhanced listening comprehension through following step-by-step instructions during the experiment.
- Encouraged storytelling or explanation to narrate what is happening in the experiment, boosting language skills.

History

- Introduced basic concepts of scientific exploration as a historical practice of discovery.
- Connected current science experiments to past inventors and scientists who explored chemistry and mixtures.
- Learned about the evolution of household products such as dishwashing liquid and their uses over time.
- Developed curiosity about how everyday items have been used historically to understand natural phenomena.

Math

- Gained experience in measuring liquids using simple tools, enhancing understanding of volume and quantity.
- Practiced counting drops of food coloring or estimating proportions of milk to soap.
- Explored concepts of cause and effect through quantitative observation (how much soap causes more reaction).
- Understood sequences and order by adding ingredients in a particular measurement and sequence.

Physical Education

- Refined hand-eye coordination through controlled dropping of food coloring.
- Practiced fine motor skills and dexterity in handling small tools like droppers or pipettes.
- Developed patience and steadiness required to carefully measure and add ingredients.
- Engaged in sitting posture and concentration during a focused tabletop activity.

Science

- Explored chemical reactions by observing how dishwashing liquid interacts with milk and food coloring.
- Learned about surface tension and how soap breaks it, causing colors to move and mix.
- Developed skills in hypothesis making and testing by predicting what will happen when

ingredients mix.
- Observed scientific phenomena directly, fostering curiosity about everyday chemistry.

Social Studies

- Understood basic concepts of experimentation as a social method for discovering new knowledge.
- Learned how scientific inquiry is part of community knowledge and everyday life.
- Developed an appreciation for careful observation and sharing discoveries, reflecting social communication.
- Reflected on the use of familiar household items in new ways, connecting home life with learning.

Tips

To deepen Lola's understanding, encourage her to predict and record results before and after mixing ingredients, introducing basic scientific journaling. Extend learning by experimenting with different liquids (e.g., water, oil) and comparing results to understand properties like density and solubility. Incorporate storytelling by asking her to explain what she thinks is happening with the colors and the milk’s reaction, blending science with language arts. For math, use measuring cups or droppers with marked volumes to explore concepts of volume and fractions in a fun, tangible way.

Book Recommendations

- Milk, Milk, Messy Milk by Lindsay Buck: A colorful picture book exploring the wonders of milk and what happens when it mixes with other substances.
- Experiment! Magic Milk by Debbie Lawrence: A simple science experiment book for kids that explains the magic behind colorful milk experiments and surface tension.
- What’s the Matter in Mr. Whiskers’ Room? by Michael Elsohn Ross: An introduction to basic states of matter and mixtures with fun examples and easy language.

Learning Standards

- Science Understanding (ACSSU031) - Recognise that science involves exploring and observing the world using senses.
- Science as a Human Endeavour (ACSHE034) - Participate in simple science investigations involving observations and predictions.
- Maths Measurement and Geometry (ACMMG019) - Use direct and indirect comparisons to describe and order objects.
- English (ACELA1455) - Use language to express needs, ideas, and sequences.
- Health and Physical Education (ACPPS001) - Develop fine motor skills needed for manipulating tools.

Try This Next

- Create a worksheet for Lola to label each ingredient (milk, food coloring, dishwashing liquid) and predict what will happen when they mix.
- Design a simple quiz asking why dishwashing liquid causes colors to move in milk, focusing on surface tension concepts.
- Draw and color a step-by-step comic strip illustrating the experiment and Lola’s observations.
- Conduct a follow-up experiment swapping ingredients, such as vinegar or oil, and note differences.

Growth Beyond Academics

Lola’s excited and curious expression reflects a high engagement with the experiment, showing

enthusiasm and confidence exploring science independently. Her willingness to experiment and discuss outcomes promotes resilience and patience. This activity likely also encourages pride in discovery and boosts communication skills through verbalizing her findings.