

Activity: Pepper and Soap Experiment

Authentic Learning Experience: Handwashing is essential to staying healthy and is part of everyone's daily routines. This Pepper and Soap Experiment from Ryan's World explores the purpose of proper handwashing to an abstract concept of germs. It is open-ended by allowing the child to experiment for as long as they want and in different ways, such as using glitter instead of pepper or various amounts of soap. Exploration is a natural way to question your thinking, allowing the child and the adult to engage in verbal conversations about what they see. The adult asking open-ended questions that require more than a yes or no response encourages the child to use critical thinking skills and better understand their metacognition. These questions can also guide the child through exploration, allowing them to implement the experiment independently or with minimal assistance to direct their own learning. The authentic learning experience extends to the child's ability to question and test their own thinking in this activity and daily life.

Developmentally Appropriate Practices: Children learn by exploring their world around them. When they cannot see something, it may be too abstract to understand. This pepper and soap experiment provides the child a visual representation of germs allowing for them to make a connection to washing their hands if they could see the microorganisms. Moreover, the pepper, aka germs, repelling from the soap demonstrates to the child the living microorganisms do not like soap. With the Pepper and Soap experiment, the child will use scientific inquiry skills, such as making hypotheses, questioning, observing, testing their theories, and reporting their results, which are foundational for critical thinking development. Handwashing is also part of our daily lives and by providing a visual of the germs, it sparks curiosity and excitement of what will

happen when soap is placed into the bowl, creating interest. The Pepper and Soap Experiment can be implemented using the child's home language or materials from their environment, making it more culturally meaningful.

Teaching Strategies Gold Objectives for Development and Learning: The Pepper and Soap Experiment is appropriate for the development of preschoolers as the children will learn about living things and using scientific inquiry, which aligns with the TSG objectives of Science and Technology as identified below:

- 24. Uses scientific inquiry skills
- 25. Demonstrates knowledge of the characteristics of living things

Additional TSG Objectives:

Cognitive

- 11. Demonstrates positive approaches to learning
 - d. Shows curiosity and motivation
- 14. Uses symbols and images to represent something not present
 - a. Thinks symbolically