

## Core Skills Analysis

### Science

- Alexa observed the process of diffusion firsthand by watching how the colored pigments spread when sprayed with water, helping her understand the concept of particles moving from high to low concentration.
- She learned cause and effect by seeing how adding water caused the colors to blend and move across the paper.
- This activity introduced basic scientific observation skills, encouraging Alexa to notice changes over time and describe what she saw happening to the colors.
- Alexa practiced fine motor skills by coloring and then spraying water, integrating sensory input with scientific exploration.

### Tips

To deepen Alexa's understanding of diffusion, try experimenting with different materials such as sugar cubes in water or food coloring in oil to see how substances spread differently depending on the medium. Engage her in simple explanations relating to everyday examples, like smells spreading in a room or tea mixing in water. Extend the activity to include drawing or describing what she observes, which will build both science communication and literacy skills. Finally, encourage Alexa to make predictions before each experiment to foster critical thinking and curiosity.

### Book Recommendations

- [What Is Diffusion?](#) by Caroline H. Arnold: A child-friendly introduction to the concept of diffusion with colorful pictures and simple text that explains how things spread out.
- [Mix It Up!](#) by Herbert P. Ginsburg: This book explores mixing colors and materials, tying into sensory and scientific discovery suitable for young children.
- [Experiment with Color](#) by Lisa Burke: Offers fun and safe experiments with color mixing and observation, perfect for preschool and early elementary students.

### Learning Standards

- CCSS.ELA-LITERACY.RI.K.1 – With prompting, identify the main topic and retell key details of a text about diffusion concepts.
- NGSS K-PS1-2 – Use observations to describe patterns and make predictions about materials and their interactions.
- CCSS.ELA-LITERACY.SL.K.5 – Add drawings or other visual displays to descriptions to clarify ideas about diffusion observed.

### Try This Next

- Create a worksheet where Alexa can draw predictions and outcomes of color spread on different textures (paper towel vs. regular paper).
- Ask Alexa to write or dictate a short story about a color's journey as it spreads through water, encouraging creative writing and sequencing.

### Growth Beyond Academics

This activity likely fostered Alexa's curiosity and sense of wonder as she witnessed color spreading magically. It also encouraged patience and focus as she observed gradual changes. The hands-on nature may have boosted confidence in her ability to engage in scientific exploration independently.