

Core Skills Analysis

Science

- Alijah learned about chemical reactions by mixing corn starch and dish soap, observing how they combine to create a new substance, which is a fundamental concept in elementary chemistry.
- The activity introduced Alijah to the concept of viscosity, as the consistency of the final product can be altered by changing the ratios of the ingredients, demonstrating a hands-on understanding of fluids.
- Through exploration, Alijah gained insights into the properties of solids and liquids, witnessing how the putty can behave like both depending on how force is applied.
- Alijah developed observational skills by noting the texture, color, and stretchiness of the silly putty, promoting scientific inquiry and critical thinking.

Mathematics

- While measuring the ingredients, Alijah practiced basic measurement skills and fractions, understanding the importance of precise ratios for achieving the desired consistency.
- The process of mixing ingredients allowed Alijah to engage in hands-on problem solving, strategizing how to correct the mixture when it didn't achieve the intended texture.
- Alijah used concepts of estimation when determining how much of each ingredient to use, fostering numerical reasoning and quantitative skills.
- The activity could encourage Alijah to explore patterns when varying the proportions, laying the groundwork for future learning in algebraic thinking.

Art

- By creating colorful silly putty, Alijah tapped into his creative expression, experimenting with colors and textures, which is a crucial element of artistic learning.
- Alijah practiced fine motor skills during the mixing and kneading of the putty, which enhances dexterity and control, essential for art and craft activities.
- The tactile nature of the putty provided an opportunity for sensory exploration, stimulating creativity and engagement through hands-on art-making.
- Understanding the aesthetic qualities of his homemade silly putty allows Alijah to appreciate the relationship between science and art, as both involve experimentation and creativity.

Tips

To further enhance Alijah's learning experience, parents and teachers could encourage him to conduct additional experiments with different ratios of corn starch and dish soap to create variations of silly putty, fostering a deeper understanding of materials science. Exploring the science of polymers, which relates to how silly putty behaves, could be a fascinating avenue for him, perhaps through watching videos or reading simple science articles. Another idea is to introduce a discussion on other everyday items with similar properties, such as slime, to broaden his scientific vocabulary and understanding. Engaging Alijah in documenting his experiments and findings in a science journal could also encourage him to articulate his understanding and observations.

Book Recommendations

- [Silly Putty](#) by Eileen B. deJong: This delightful children's book explores the whimsical world of silly putty through fun facts and interactive activities that engage young minds.
- [The Science Book for Kids](#) by Catherine Ripley: An engaging introduction to basic science concepts

using fun experiments and projects, perfect for young inquisitive minds like Alijah's.

- [Art with Glue and Paint](#) by Patricia Martin: This book teaches children how to create amazing art using various materials, including gooey and textured substances like silly putty.

Learning Standards

- Next Generation Science Standards (NGSS) - K-PS2-1: Plan and conduct an investigation to compare the effects of different strengths or directions of pushes and pulls on the motion of an object.
- Common Core State Standards (CCSS) - 3.MD.2: Measure and estimate liquid volumes and masses of objects using standard units of grams, kilograms, and liters.
- National Core Arts Standards - VA:Cr1.1.3: Engage in opportunities to initiate, shape, and complete artistic work.