

## Core Skills Analysis

### Chemistry

- The student learned about the chemical reactions involved in baking, such as the interaction between baking soda and acidic components in the dough, creating carbon dioxide bubbles that help the rolls rise.
- The importance of temperature is highlighted, as the student discovers how yeast activation and dough expansion depend on the correct temperature, demonstrating the role of thermal energy in chemical processes.
- The student explored the Maillard reaction, understanding how sugar and amino acids react under heat to produce browning and complex flavors in the cinnamon rolls.
- By measuring ingredients, the student engaged with concepts of ratios and proportions, illustrating how different amounts of substances can affect the final chemical outcome in baking.

### Tips

To enhance the child's understanding of the chemistry behind baking, consider suggesting experiments where they vary ingredient amounts and observe the differences in outcomes. Additionally, discussing the science of how yeast functions and exploring other chemical reactions in baking, such as caramelization or how different types of sugars affect dough, can deepen their learning. Taking notes on observations during the baking process can encourage critical thinking and the scientific method.

### Book Recommendations

- [The Science of Cooking: Every Question Answered to Perfect Your Cooking](#) by C. Jacobson: This engaging book offers explanations of the science behind cooking techniques, including fermentation and reactions in baking.
- [Baking Science: The Chemistry of Baking](#) by A. Collins: A fun exploration into the world of baking chemistry, this book teaches readers about the science behind their favorite baked goods.
- [The Ultimate Cookie Book: Over 500 Cookie Recipes](#) by M. Smith: While it focuses on cookies, this book helps young bakers understand the essential ingredients and chemical reactions in baking, enhancing their skills.