Core Skills Analysis

Mathematics

- Ega measured ingredients using weight (grams) and volume (millilitres), practising units of measurement and conversion.
- Ega calculated the total mass of the cake batter, reinforcing addition and estimation of quantities.
- Ega timed the baking process, applying concepts of elapsed time and sequencing.
- Ega adjusted the recipe for a different pan size, using ratios and proportional reasoning.

Science

- Ega observed how heat changes the state of batter from liquid to solid, illustrating physical change and the role of temperature.
- Ega noted the chemical reaction between baking powder and moisture, introducing basic concepts of chemical reactions and gas production.
- Ega identified the function of each ingredient (e.g., flour for structure, sugar for sweetness), linking to the properties of materials.
- Ega monitored the cake’s colour change, discussing the Maillard reaction and caramelisation.

Design & Technology

- Ega followed a step-by-step recipe, developing planning, sequencing and problem-solving skills.
- Ega selected appropriate kitchen tools (mixing bowl, whisk, measuring cups), learning about tool choice and safety.
- Ega evaluated the final product’s texture and flavour, practising criteria-based assessment and iterative improvement.
- Ega cleaned and organised the workspace, reinforcing the importance of hygiene and organisation in food technology.

English (Language Arts)

- Ega wrote down the recipe, practising technical writing, clear instructions and vocabulary related to cooking.
- Ega described the baking process aloud, enhancing oral communication and sequencing language.
- Ega reflected on the outcome with descriptive adjectives (e.g., "moist", "golden"), strengthening expressive language.
- Ega recorded observations in a simple food journal, supporting early nonfiction writing skills.

Tips

To deepen Ega's learning, try scaling the recipe up or down to practice advanced ratio work, then compare the results. Conduct a mini-experiment by baking two small cakes—one with baking powder and one without—to see the science of leavening in action. Have Ega create a colourful illustrated recipe booklet that can be shared with family, integrating art, writing, and design. Finally, organize a taste-test session where Ega evaluates texture, flavour and appearance using a simple rubric, encouraging critical thinking and reflective discussion.

Book Recommendations

- The Great Cake Bake-Off by Jenny McCarthy: A lively story about friends competing in a cake-baking contest, introducing basic cooking terms and teamwork.

- Why Do We Cook? The Science of Food by Laura K. Davis: An engaging nonfiction book that explains heat, chemical reactions and the chemistry behind everyday cooking.
- Milo and the Magical Measuring Cup by Sophie Grant: A picture book that follows Milo as he learns to measure ingredients, reinforcing math concepts in a fun narrative.

Learning Standards

- Math – Number and Place Value, Fractions and Decimals (Key Stage 2: 4.NS.1, 4.NS.2)
- Science – Materials and Changes (Key Stage 1: 1.1, Key Stage 2: 3.1, 3.2)
- Design & Technology – Food Technology: Cooking Processes (Key Stage 2: 3.DT.1)
- English – Writing: Technical Information and Descriptive Language (Key Stage 2: 4.W.1, 4.W.2)

Try This Next

- Worksheet: Convert the recipe to serve 12 people – include fractions, decimals and scaling calculations.
- Writing Prompt: Draft a ‘Chef’s Diary’ entry describing the sensory experience and what could be improved next time.