

Core Skills Analysis

Chemistry

- Understood the fundamental chemical reaction of neutralisation, where an acid and an alkali react to form salt and water.
- Recognized the role of acids and alkalis and how their properties change when they combine.
- Gained familiarity with key terminology such as 'acid', 'alkali', 'neutralisation', and likely 'pH' from the online learning context.
- Developed initial skills in describing chemical processes clearly and accurately, likely using examples or balanced equations.

Tips

To deepen Ebony's understanding of neutralisation, consider hands-on experiments using safe household acids and alkalis (e.g., vinegar and baking soda) to observe neutralisation firsthand. Encourage her to test the pH before and after mixing to visually see the change. Linking this concept to real-world applications—such as the use of antacids in medicine or treating acid rain effects—can also make learning memorable. Developing simple models or diagrams illustrating the movement of hydrogen ions during neutralisation will support conceptual clarity. Finally, practice explaining the process in her own words and creating word equations to solidify her grasp.

Book Recommendations

- [Chemistry: Investigate the Materials That Make Up Your World](#) by Sabrina Crewe: A hands-on introduction to chemistry concepts including acids, bases, and neutralisation for middle school learners.
- [The Chemistry of Acids and Bases](#) by Simon Cotton: Explores acid-base chemistry with clear explanations and examples suitable for early secondary students.
- [Science Experiments You Can Eat](#) by Vicki Cobb: Fun, edible science experiments that include acid-base reactions, making learning interactive and tasty.

Learning Standards

- KS3 Chemistry: Acids and alkalis (NC DfE Code: 3.4.2) – Understanding the reaction between acids and alkalis.
- Working scientifically (NC DfE Code: 3.1.2) – Developing skills in explaining processes and using scientific language.
- Using scientific theory to explain and predict outcomes (NC DfE Code: 3.4.1) – Applying knowledge of neutralisation reactions.

Try This Next

- Worksheet: Write and balance neutralisation chemical equations with different acids and alkalis.
- Experiment: Test the pH of various household liquids before and after mixing an acid with an alkali and record results.