

In this unit, students will be introduced to the concepts of matter, physical and chemical changes, and elements and compounds.

What's the story?

Students will explore how **matter** can be **transformed by physical and chemical changes**, resulting in the extraordinary diversity of our physical world. The unit is written as a **detective story** rather than as a standard informational text, combining literary and informational characteristics into a single text.

What will my student learn?

Students will learn concepts about **matter and its different states**. They will also learn about **physical and chemical reactions and changes, elements, and compounds**. These concepts are introduced gradually through the context of the protagonist's experiences, teaching students **practical examples** of these ideas.

Students will look beyond their Reader to **additional sources** to better understand the concepts introduced. They will also have the opportunity to integrate skills learned, such as how to **read and analyze** informational and literary texts, how to use information to **explain concepts and ideas**, and how to **write for different audiences and purposes**.

Conversation starters

Ask your student questions about the unit to promote discussion and continued learning:

1. What are the three states of water? What can cause water to change in state?
Follow up: What does all matter have in common?
2. Why are all compounds molecules, but all molecules are not compounds?
Follow up: Can you give me some examples of compounds? What about molecules?
3. You have learned that matter can move between different states. How does that help you understand fossil creation?
Follow up: What are the different physical properties of a fossil?
4. What is a mixture? What is a solution? And a compound?
Follow up: Can you give me an example of each? What do they have in common? What is different about them?
5. What is the difference between a physical and a chemical reaction?
Follow up: How do they impact chemical composition? How do they impact the physical properties of matter? What about heat or light? Are physical and chemical changes reversible?