

Objective

By the end of this lesson, you will be able to understand the basic concepts of Chemistry and its relevance in everyday life.

Materials and Prep

- Pencil and paper
- Access to the internet or a library for research

No prior knowledge is required for this lesson.

Activities

1. Research and define key terms: Begin by researching and writing down the definitions of important Chemistry terms such as atoms, elements, compounds, and reactions.
2. Create an element superhero: Choose an element from the periodic table and create a superhero character based on its properties. Include a description of the superhero's powers and abilities related to the element.
3. Chemical reactions in everyday life: Look around your home and identify at least three examples of chemical reactions that occur in everyday life. Write down the reactions and explain why they are important.
4. Experiment with acids and bases: Conduct a simple experiment to test the pH of different household substances using pH paper or cabbage juice indicator. Record your observations and classify each substance as acidic, basic, or neutral.

Sixth Grade Talking Points

- "Chemistry is the branch of science that deals with the properties, composition, and behavior of matter."
- "Atoms are the building blocks of matter. They are incredibly tiny particles that make up everything around us."
- "Elements are substances that are made up of only one type of atom. There are over a hundred known elements."
- "Compounds are substances made up of two or more different elements chemically combined. They have different properties than the elements they are made of."
- "Chemical reactions occur when substances combine or break apart to form new substances. They involve the rearrangement of atoms."
- "Chemical reactions are happening all the time in our everyday lives, from cooking food to burning fuel in cars."
- "Acids and bases are two important types of substances with different properties. Acids taste sour and can be found in foods like lemons, while bases taste bitter and can be found in soaps."
- "The pH scale is used to measure how acidic or basic a substance is. It ranges from 0 to 14, with 7 being neutral."