

**Main Ideas, Key Points,
Questions:**

After watching the video segment, write down key points, main ideas and big questions.

Objective(s):

- *To investigate the signs of a chemical change.*
- *To conduct an investigation to demonstrate the law of conservation of matter*
- *To learn and practice the steps needed to balance chemical equations.*

Notes:

During the video segment, use words, phrases or drawings to take notes.

Summary:

*After watching the video segment, write at least three sentences explaining what you learned.
You can ask yourself: "If I was going to explain this to someone else, what would I say?"*

After watching the video and performing any associated labs and/or experiments, you should be able to answer the following:

1. A chemical change occurs when a new chemical substance is formed. List four signs that a chemical change has occurred.

You should all now conduct an experiment measuring the mass of sodium bicarbonate and acetic acid before and after a reaction. Once you have completed this investigation, continue with the video.

2. Define matter.
3. What is the law of conservation of matter?
4. What do we mean if we say a chemical equation is balanced?
5. What does the mnemonic device **Br I N Cl H O F** help us remember?

Here is a chemical equation.



The part of the equation to the left of the arrow shows the reactants while the part to the right of the arrow shows the products.

6. Count the atoms on the left and right sides of the equation:

LEFT SIDE	RIGHT SIDE
How many Na _____	How many Na _____
How many H _____	How many H _____
How many C _____	How many C _____
How many O _____	How many O _____

7. Explain the meaning of these abbreviations: (aq), (s), (l), (g)

8. What is a coefficient?

9. Write an equation for the reaction of magnesium and oxygen to produce magnesium oxide.