

# CHEMICAL REACTIONS

What are the signs of  
a chemical reaction?

# Physical Change vs. Chemical Change

- Physical changes occur when a chemical experiences a phase change or changes in appearance, but no chemical reaction has occurred.
- Chemical changes occur when a chemical goes through a chemical reaction. A new chemical is formed.

Physical  
or Chemical  
Changes?

How do we  
know when  
a chemical  
change has  
happen?



# Sign #1 ~ Gas Produced



- Gas production might be observed as bubbles rising in a liquid



- Expanding balloon
- Increased pressure in a closed container

# Sign #2 ~ Color Change

- A chemical changing from one color to another color



# Sign #3 - Temperature Change



- Temperatures that rise or fall quickly
- Fire or flash of light
- Phase change like freezing or melting

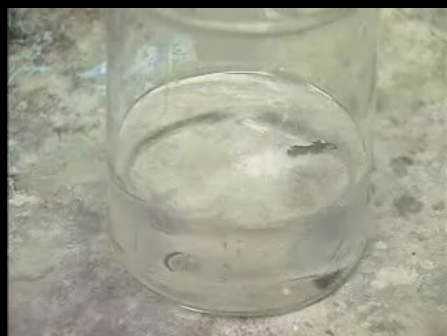
# Sign #4 ~ Odor or Taste Change

- New chemicals have new tastes and smells



# Sign #5 - New Product is Formed

Sodium + Chlorine → Salt



Flammable in  
water

+



Poison

→



Eatable

- The product is completely different than the reactants.

# Quiz Time

- Number 1 through 10 on a blank piece of paper.
- Write the correct answer that completes the sentences.

