

Grade 4 Science  
Week of November 9 – November 13

Physical and Chemical Changes



Physical and Chemical Changes <https://youtu.be/yIJ2qnUO0wQ>

## Physical

Physical changes come in many forms. It can be a change in the shape or appearance of an object, like crumpling a piece of paper, or cutting, bending, or dissolving something.

In physical changes the change can be reversed. An example could be, dissolving sugar into water. The water and sugar can be easily separated if you just boil the water away the sugar would be left at the bottom.

Some examples of physical change are:



Cutting a Mango



Ice Melting



Cutting Wood

## Chemical

A chemical reaction occurs when a change is made and a new substance is formed.

Since chemical changes make new substances, most of them cannot easily be undone. For example, when you burn wood, you can't really turn the gases back into a log very easily.



Burning wood



Baking a cake



Fireworks

A chemical change creates a new substance.

There are indicators of chemical changes:

1. burning or fire
2. temperature change without heating or cooling
3. Explosion
4. Color Change
5. Odor

If two items are mixed and it fizzes, then it is a chemical change.

### *2.3 Chemical and Physical Changes*

1. Physical changes are changes in \_\_\_\_\_ only.

2. What are 5 indicators of a chemical change:

3. Are these changes chemical or physical?

Boiling water \_\_\_\_\_

Burning wood \_\_\_\_\_

Water and sugar \_\_\_\_\_

Fireworks \_\_\_\_\_

Shredding paper \_\_\_\_\_

Making ice cubes \_\_\_\_\_

4. True or False: Physical changes cannot be reversed.