

Research Question: What happens with combustion of metals?

Introduction:

When heated, metal will go through combustion. Teacher will carry out controlled combustion reaction using a small amount of iron filling.

Procedures:

Place aluminum foil under a lamp and fill the oil lamp with ethanol and light it. Next shake the fillings from a container into the flame. Use your phone to take pictures. Place the metal top on the flame to kill it.

Results:



Before they are heated they are gray/normal.

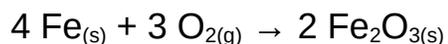


After they are heated they are burnt, discolored, darker.

Conclusion:

Combustion is a chemical reaction. After the experiment has taken place it has made iron oxide (rust). This is why the iron looks darker and discolored. Combustion of metals makes a new substance, metal oxide, which is what happened in this experiment.

This is the chemical reaction:



Combustion needs oxygen because fire needs it in order to burn. Oxygen is basically fuel for fire.

Vocab:

- Combustion reaction – a reaction that can only happen with burning a reactant with oxygen and the reactant being the fuel.
- Metal – any element to the right of the “stair case” on the P.T. and has certain properties like being shiny, smooth, and can conduct electricity and heat.
- Homonuclear diatomic – elements that exist in the molecular state. Two atoms bonded instead of a single atom. An example is oxygen exists as a pair of oxygen atoms bonded instead of one. It is written O_2 instead of just writing O as a molecule present in a chemical reaction.