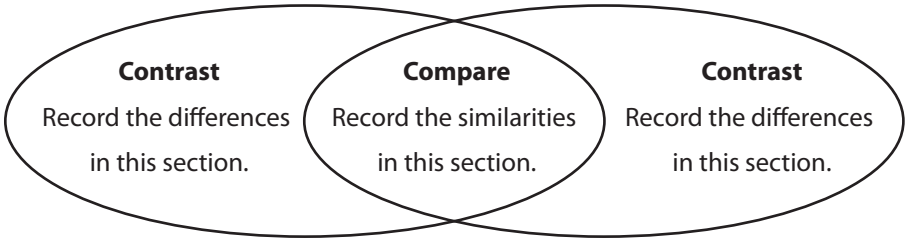
Name: _____ Date: _____

Compare and Contrast: Chemical and Physical Changes

*When we **compare** and **contrast**, we look for the similarities and differences.



Directions: Using two informational texts on the same topic, complete the graphic organizer.

In science, it is important to know the difference between **chemical** and **physical** changes. Sometimes it can be hard to know the difference, but other times the changes are obvious.

Chemical Changes

A chemical change is a change to matter. There is a change in energy. It is when matter changes into a new substance and cannot change back into its original form. When a tree burns and releases energy as heat, a chemical change has occurred.

We usually can not see chemical changes. Sometimes the changes can be seen. That is not the only thing we should look for, though. When things rust, cook, mold, or become ripe, they are going through a chemical change. These are changes that can not be reversed.

Some examples of chemical changes include:

- cake mix bakes in the oven
- a dog's body turns food into energy
- apple pieces turn brown

Physical Changes

A physical change is a change to matter. There is a change in energy. It is when matter temporarily changes states and can change back to its original state. For example, when water is frozen to ice, that is a physical change.

We can usually see physical changes. When ice melts, we can see the matter changing from a solid into the liquid water. When we color with a crayon, we can see the difference in the size of the crayon. We can also see that the crayon is a different shape after it has been used. It is still a crayon, though.

Some examples of physical changes include:

- aluminum foil is crumpled into a ball
- a glass bottle breaks
- a piece of lumber is sawed in half