

Fantastic Physical Changes and Complicated Chemical Changes

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Homogeneous vs. Heterogeneous

- You already learned about mixtures, but did you know that mixtures can be mixed completely? That is called a homogeneous mixture! Some examples are water, mouthwash, and even coffee! Some everyday objects in your house could be homogenous! Now lets talk about heterogeneous mixtures. Heterogeneous mixtures are even more common than solutions! Heterogeneous mixtures unlike solutions settle into layers in a fluid. Think about when you get a bottle of salad dressing after sitting for a while, all the oil and little spices float to the top and create layers! Some example of heterogeneous mixtures are rocks, salad dressing, and even taco salads!



Messy Mixtures vs. Complete Compounds



Mixtures can be things like trail mix or other mixes that aren't completely blended. But the simply things like water or sodium chloride. Each thing plays a part in our world. A compound is a substance that has two or more chemical elements whose atoms are bonded together. A mixture is a combination of two or more different compounds that are not chemically combined. So they still keep their original properties.

Chemical vs. Physical Change

A physical change is any change NOT involving a change in the substance's chemical identity. A chemical change is any change that's results in the formation of a new substance.

The image shows a piece of white paper with handwritten notes in red and black ink, divided into two sections by a colorful zigzag line. The left section is titled "Physical Change" and defines it as a change that does not result in a new substance, with examples of melting an ice cube and heating water. The right section is titled "Chemical change" and defines it as a change that results in a new substance, with an example of toasting bread. Both sections include simple drawings: a melting ice cube and a toaster with toast.

Physical Change

A physical change is a change that does not result in a new substance. You know it is a physical change if it changes in size, shape, or state.

Ice cube ← Lamp

Water ← Lamp

This is a physical change because after the ice cube was under the lamp it melted and became a new substance.

Chemical change

A chemical change is a change that results in a new substance. Signs of a chemical change is if a color change occurs, or formation of gas or light.

Toast ← Toast

After the bread was put in the toaster it changed its color and became a new substance, toast.

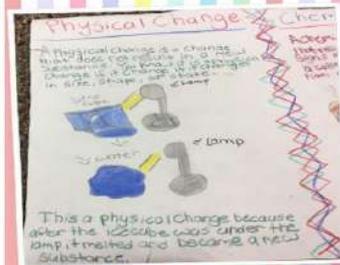
Chemical Change Pic-Collage



Physical Change Pic-Collage



PHYSICAL CHANGE



Why does this matter?

This all matters because the simple things like ice or even toothpaste are all one thing...Matter! Chemical Changes, physical changes, mixtures, compounds! They all around your from the chair you sit in to the salad you are eating for lunch. It is important to not take all of these for granted, because one day they might all just disappear.



References

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