



Physical properties and physical change

Physical properties

Properties that you can measure or see through direct observation are called **physical properties**. For example, water is a colorless liquid at room temperature. The quality of “color” is a physical property. Temperature is another physical property.



Brittleness and malleability are physical properties



Gold is a shiny, *malleable* solid at room temperature. Malleable means gold can be hammered into thin sheets without cracking. The opposite is *brittle*. Glass is brittle. Brittle materials break if you hammer or bend them. Malleability and brittleness are examples of physical properties of solid materials.

Density and phase are physical properties

The density of a material is a physical property. Wood is less dense than water, which is less dense than rock or steel. Wood floats on water because its density is lower than the density of water. The phase (solid, liquid, gas) of a material is also a physical property.



Physical changes are reversible

Physical changes include
heating
cooling
melting
freezing
boiling
dissolving
bending
evaporating



Physical changes are changes in the physical properties of matter. Physical changes can be reversed without changing one substance into another. Heating, cooling, dissolving, melting, freezing, boiling or bending are all physical changes. When water freezes, it undergoes a physical change from a liquid to a solid. This does not change the water into a new substance. The change can easily be reversed by melting the water. Bending a steel bar is another physical change. Bending changes the shape of the bar, but it is still steel.

Chemistry terms

physical property - property such as mass, density or color that you can measure or see through direct observation.

physical change - a change in physical properties, such as shape, phase or temperature; for example, grinding, melting, boiling, dissolving, heating or cooling.