2 examples of heat energy



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Heat and heat energy are terms we use to describe the level of activity for the molecules in an object. An object with molecules that are very "excited" and move around rapidly is known as being hot, while an object with molecules whose atoms move around less rapidly is known as cold. The heat energy, or thermal energy, can be transferred between objects. So, heat refers to this energy transfer between objects, while temperature refers to the energy contained within the objects.

There are three basic ways to transfer heat energy: convection, conduction, and radiation. Convection transfers heat energy through gases or liquids. Conduction transfers heat energy from one solid to another. Radiation transfers heat in the form of waves or particles through places where there are no molecules. It is a form of electromagnetic energy. Here are some common examples of heat energy.

So, heat energy comes from an object or substance whose molecules and atoms are moving faster due to a rise in temperature. Now you have seen lots of examples of heat energy, the next time your pet climbs into your lap, you can experience first-hand how heat energy works.

Most of us refer the word "heat" to anything that feels warm but scientifically, heat is defined as the flow of energy from a warm to a cooler object. The classification of heat is done on this basis as hot and cold.

The result of the movement of minute particles known as atoms, molecules, or ions in liquids, solids, and gases is nothing but heat energy. Heat energy can be transferred from one substance to another, and the flow because of the temperature difference between two objects is known as heat.

Convection transfers heat energy via air and liquids. The particles move apart and become less dense as the air heats up and hence causing the air to rise. While cooler air moves in from below and heats up.

Radiation warms the air using heat waves that radiate out of the hot object in all directions until absorbed by other objects. Heat transfer by radiation takes place at the speed of light and travels great distances.

Conduction transfers heat from one object to another when they are in direct contact with one another. The travelling molecules of a warm object can increase the energy of the molecules in a cooler object. Solids conduct heat better than gases and liquids since particles are close together.

Particles have higher energy at higher temperatures. Some amount of this energy can be transmitted to other particles that are at a lower temperature. For instance, when a fast travelling particle collides with a slower particle in the gas state, it transfers its energy to the other particle and thus increases the speed of slow-moving particles.



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An ice cube has some heat energy and also a glass of lemonade. If you put the ice in lemonade(warmer), the lemonade will transfer some of its heat energy to ice. Put differently, the ice melts, and the water and lemonade will be of the same temperature. This is nothing but reaching a state of equilibrium.

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