

Introduction of Heat



Introduction

We wear woollen clothes to protect ourselves from the chilling cold. These woollen clothes are obtained from wool-yielding animals such as sheep, goats, yak, etc.

Wearing light-coloured clothes during summer will give us a feeling of coolness. To know if an object is hot or cold, and the degree of its hotness, we will study the chapter.

The measure of the intensity of heat present in a substance is called **temperature**. It is measured with the use of a device called a **Thermometer**. There are two types of thermometers viz. Laboratory Thermometer and Clinical Thermometer.



Heat

We know that many things around us can be hot or cold, like coffee or boiling water is hot, and ice or ice cream is cold. This is not just a sensation but a form of energy called heat energy.

Heat can be termed as an energy which makes you feel hot or warm or we can say scientifically that it is a form of energy where the transfer of energy from a hot to a cooler object takes place.

Heat energy that is transferred from one body to another as the result of a difference in temperature. When body is heated, its energy increases and when it is cooled, its energy decreases. Heat is measured by the change in the degree of hotness or coldness is produces in material bodies.

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Units of Heat: There are two types of units of heat:

Non- SI unit: calorie (cal), Kilocalorie (kcal)

These are older units of heat.

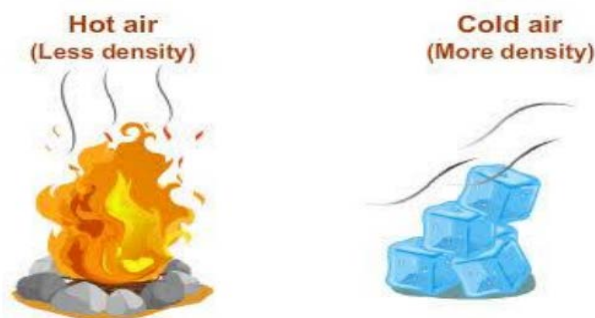
SI unit: joule (J)

This is the presently-used standard unit of heat.



Hot and cold

In our daily routine, we come across a number of objects, out of which some are hot while other objects are cold, e.g. when a frying pan kept on a burning gas stove becomes hot but the handle of the pan is cold. Even among the hot objects, some objects may be hotter than the other.



Temperature

Temperature of an object is the degree of hotness or coldness of an object. So, an object appears hot if its temperature is higher than of our body. On the other hand, an object appears cold if its temperature is lower than that of our body.

Temperature of an object is measured with an instrument called **thermometer**.