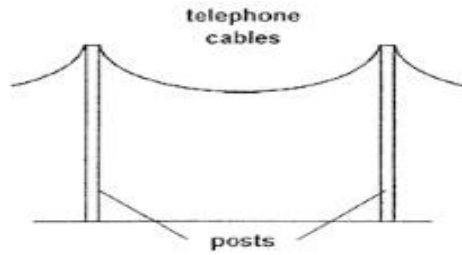


During the day



Electrical wires are hang loosely so that when the wires lose heat and contract due to the drop in the temperature of the surrounding, they will not snap and affect the electricity supply.

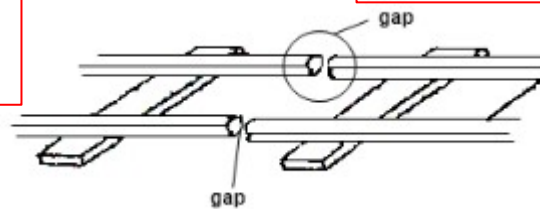
Contracts

Heat loss

Change of state

Freezing: liquid to solid
Condensation: gas to liquid

On a hot day when the rails are heated, the rails would expand. If there are no gaps on the tracks, the railway would turn crooked and the train would not be able to travel on it.



travels from a hotter region to a colder region

is a form of energy

Temperature measures how hot or cold an object is. Measure using thermometer. Unit is $^{\circ}\text{C}$.

Metals are good conductors of heat

Good conductors of heat gain and lose heat fast

Temperature

Air is a poorer conductor of heat than water.

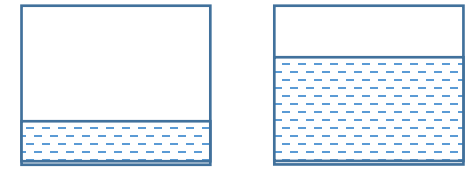


Change of state

Boiling or Evaporation: liquid to gas
Melting: solid to liquid

Expands

Heat

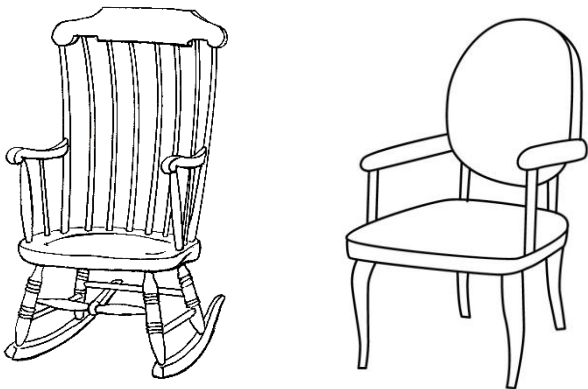


Bigger amount of water has more heat than smaller amount of water at the same temperature.

Mary feels cooler when she sits on a metal chair than a wooden chair. Why is that so?

Metal chair is a better conductor of heat than wooden chair so Mary loses heat faster to the metal chair so she feels cooler when she sits on the metal chair.

Boiling water was poured into four containers, A, B, C and D, made of different materials. The time taken for the water in each container to reach room temperature was recorded as shown below.



Container	Time taken for the water to reach room temperature (min)
A	10
B	23
C	30
D	14

Which material is most suitable to make a container to keep the food warm for the longest time?

Material C, it took the longest time for the water to reach room temperature so it is the poorest conductor of heat. Material C loses heat to the surrounding the slowest so it can keep the food warm for the longest time.