



Class:

Group Member Name:

THERMAL EXPANSION



LIVEWORKSHEETS

A. DEFINITION OF THERMAL EXPANSION

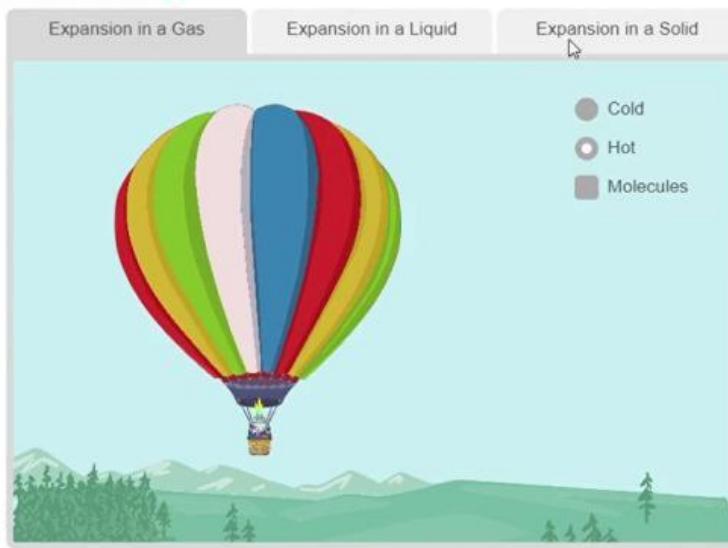
Thermal expansion simply means that a substance will expand or get bigger when the temperature is increased.



On the other hand, a substance will contract or shrink when it is cooled.



PAY ATTENTION TO THE VIDEO



Long steel bridges often have expansion joint, also called movement joint as illustrated in the video. This expansion joint will allow the bridge to move freely back and forth with the rise and fall of the temperature.

LIVEWORKSHEETS

DISCUSSION



Please gather in a group.
Then, discuss about the
examples of thermal
expansion in daily life.



DISCUSSION

1. Gather in a group.
2. Each member get 1 phenomenon
3. Then, gather with the other group member who get the same phenomenon in 20 minutes.
4. Explain the process of phenomenon, how it is happen?
5. Back to your group, explain to all member.
6. Answer the liveworksheet and present in front of class.

PHENOMENON 1

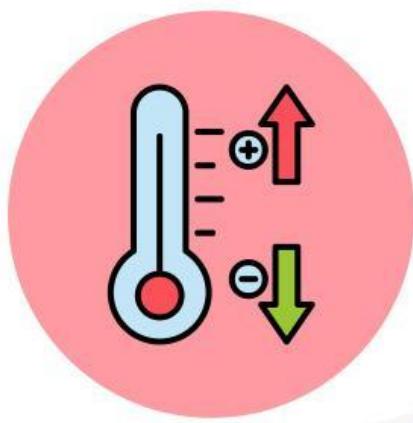
Why gaps are left in railway tracks?



ANSWER

PHENOMENON 2

Why mercury level rise up in the thermometer?



ANSWER

PHENOMENON 3

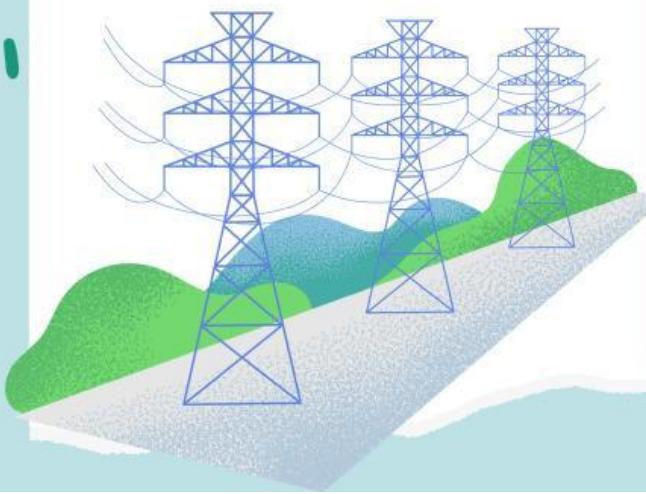
Why do the glass crack or break when we give hot water?



ANSWER

PHENOMENON 4

Why do they hang power line cable with slack?



ANSWER

PHENOMENON 5

Why are the windows between glass and wood loose?



ANSWER

PHENOMENON 6

why the balloon expands when placed in hot water



ANSWER

PHENOMENON 7

Why can a tight bottle lid be opened when heated?



ANSWER

PHENOMENON 8

Why does a bicycle tire explode when it's in a hot place?



ANSWER