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.

LIVEWORKSHEETS

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.

LIVEWORKSHEETS

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.

LIVEWORKSHEETS

PHENOMENON 1

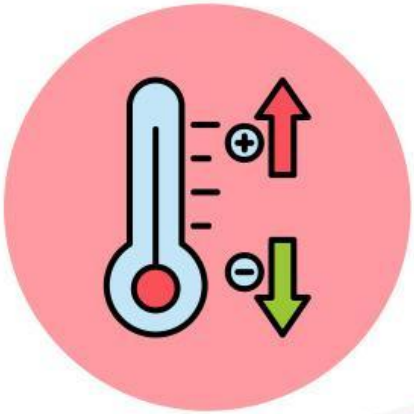
Why gaps are left in railway tracks?

ANSWER

LIVEWORKSHEETS

PHENOMENON 2

Why mercury level rise up in the thermometer?



ANSWER

LIVEWORKSHEETS

PHENOMENON 3

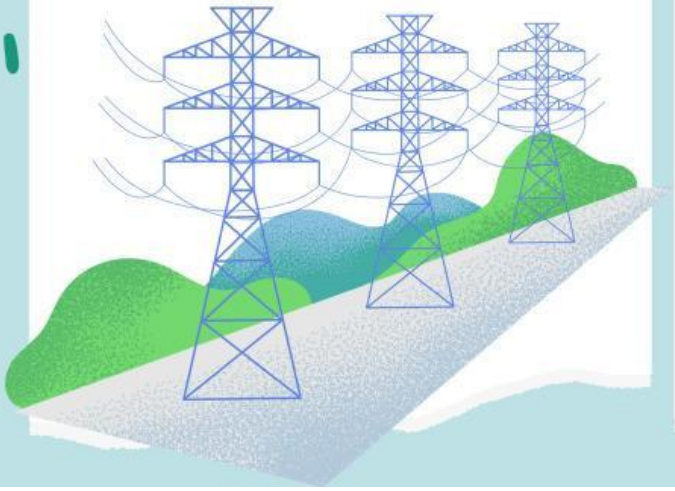
Why do the glass crack or break when we give hot water?

ANSWER

LIVEWORKSHEETS

PHENOMENON 4

Why do they hang power line cable with slack?



ANSWER

LIVEWORKSHEETS

PHENOMENON 5

Why are the windows between glass and wood loose?

ANSWER

LIVEWORKSHEETS

PHENOMENON 6

why the balloon expands when placed in hot water

ANSWER

LIVEWORKSHEETS

PHENOMENON 7

Why can a tight bottle lid be opened when heated?

ANSWER

LIVEWORKSHEETS

PHENOMENON 8

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

ANSWER

LIVEWORKSHEETS