



3055 BA SANGAM COLLEGE

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WORKSHEET 10

School: Ba Sangam College

Name: _____

Subject: Basic Science

Year/Level: 9

Strand 2	Matter
Sub Strand 2.1	Investigating Matter
Content Learning Outcome	Describe the structure and properties of matter using particle model of atoms and molecules and account for the behavior of matter when heat is added or removed.

Lesson Notes - Expansion and Contraction of Matter

- material get bigger or shrink in response to changes in temperature
- substances expand when:
 - particles gain energy
 - move faster
 - occupy more space
- substances contract when:
 - particles lose energy
 - slow down
 - move less
 - become more attract to each other

Note: Gases expand much more than liquids and solids.

Expansion and contraction in everyday life:

1. Bridges have gaps at each end to allow for expansion of metal and concrete in hot water
2. Roller and sliding joints allow for movement
3. Railway lines have gaps to allow for expansion in hot weather
4. Electrical lines are huge loosely from poles so that when weather cools ,they do not become too tight and break
5. Mercury in a thermometer
6. Roofing iron cooling at night



Exercise

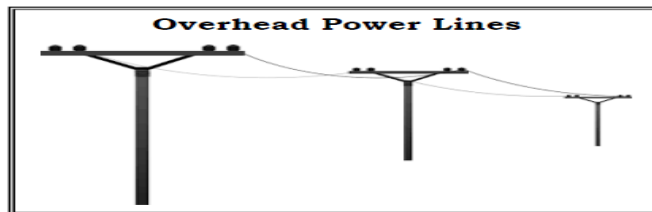
1. Why do substances expand?

(2 marks)

2. Why do substances contract?

(2 marks)

3. Explain why overhead power lines are installed to hang loosely instead of pulled tightly.



(2 marks)

4. Why do bridges have gaps at each end?

(2 marks)

5. Why do railway lines have gaps?

(2 marks)

