

### 3.17 Heat

Name:.....

1. Heat is a form of \_\_\_\_\_ and is measured in \_\_\_\_\_.



2. Write down three safety rules that are important when working with the Bunsen burner.

(i) \_\_\_\_\_.

(ii) \_\_\_\_\_.

(iii) \_\_\_\_\_.

3. Draw a diagram of the equipment that you would use to show the effect of heat on a solid. Please label your diagram.

4. Which colour flame of a Bunsen burner is the hottest?

\_\_\_\_\_

How would you make the coldest flame on a Bunsen burner? \_\_\_\_\_

\_\_\_\_\_

5. Which do you think changes the most when heated: solids, liquids or gases?

\_\_\_\_\_

Why?

\_\_\_\_\_

\_\_\_\_\_

6. List five items of equipment that you would use to investigate the effect of heat on liquids.

(i) \_\_\_\_\_

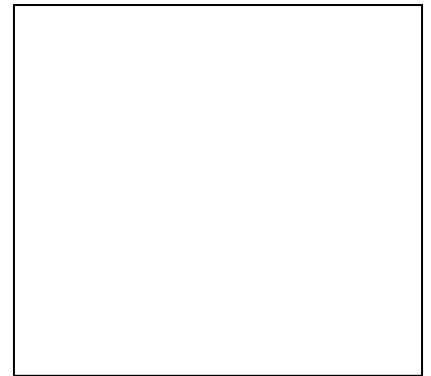
(ii) \_\_\_\_\_

(iii) \_\_\_\_\_

(iv) \_\_\_\_\_

(v) \_\_\_\_\_

7. Describe with the aid of a labelled diagram a method to show the effect of heat on gases.



Method: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

8. Outline two examples where engineers make allowances for expansion due to heat in everyday life.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

9. Solids \_\_\_\_\_ when heated and \_\_\_\_\_ when cooled.

10. What happens to the molecules inside a gas when it is heated?

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11. Using a diagram to show your idea, design an experiment to show the effect of heat on the volume of an inflated balloon.



(a) List what you need:

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(b) What measurements will you make?

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(c) Predict what will happen in your experiment.

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(d) How accurate do you think your method will be?

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