

Heat Revision Questions

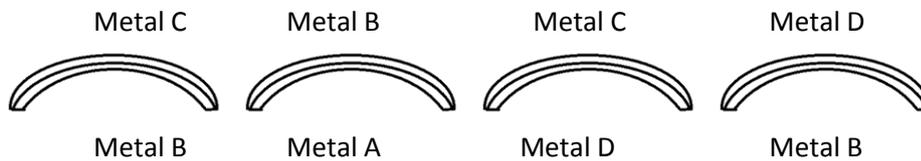
1. What is the unit for measuring heat energy?
2. What type of energy is due to motion of an object?
3. Describe whether energy is transferred or transformed in the scenarios below
 - a) A battery is connected to a light globe
 - b) a bowling ball collides into the pins
4. What is the difference between a source and receiver?
5. Draw 3 diagrams, based on the kinetic theory of matter, to represent a solid, a liquid and a gas.
6. If the cost of 1 kilowatt hour is 14c, how much would it cost to have a 300 watt TV running for 5 hours? (1 kilowatt = 1000 watts)
7. How much would it cost to run the same TV for 7 days straight?
8. Name the three methods of heat transfer.
9. Which method of heat transfer is dominant in
 - a. Solids -
 - b) Liquids-
 - c) Gases -
10. Explain two design considerations of a solar hot water system which help make it an effective means of heating up water.
11. How does the warmth of the Sun reach Earth when there is so much empty space between us and the Sun?
12. A car radiator (device which helps to cool a hot engine) is coloured black and has a wavy surface instead of a flat one. Why has it been designed this way?
13. Name one method of help keeping your house warm in the winter months that does not require electricity. How does this method work?
14. How do solid objects change when heated? Draw a diagram to help explain.

15. Why do we use alcohol in thermometers instead of mercury?

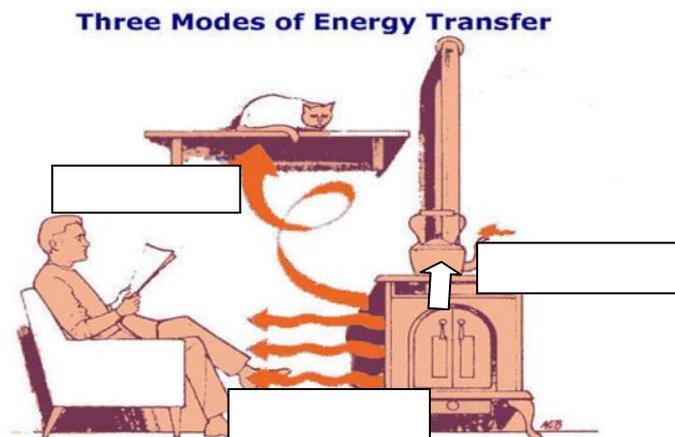
16. Why do we use alcohol in thermometers instead of water?

17. Briefly describe how a thermometer works.

18. Two bimetallic strips are shown below. Which metal expands the most when heated?



19. Write down what type of heat transfer each of the arrows represents below.



20. How does conduction transfer heat energy?

21. How does convection transfer heat energy?

22. How does radiation transfer heat energy?

23. Jack and Jill went up the hill. Then they held hands. How sweet. Jack said to Jill, "Your hands are warmer than mine. You must be giving me heat". Jill replied, "No, you goose. I am giving you temperature. That's why it feels warm". Who is right? Why?