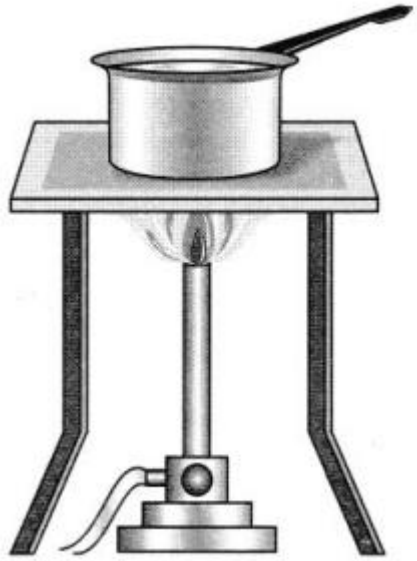
Grade 7 Heat Worksheets

A. Answer the following questions in short:

1. State similarities and differences between the laboratory thermometer and the clinical thermometer.
2. Give two examples each of conductors and insulators of heat.
3. Discuss why wearing more layers of clothing during winter keeps us warmer than wearing just one thick piece of clothing.
4. Look at the figure given below and mark where the heat is being transferred by conduction, by convection and by radiation?



5. In places of hot climate it is advised that the outer walls of houses be painted white. Explain.
6. What is temperature?
7. What is radiation?
8. What is land breeze?
9. How does the heat travel in air? In which direction does the smoke go?
10. You may have noticed that a few jerks are given to a clinical thermometer before using it. Why is it done so?
11. While constructing a house in a coastal area, in which direction should the windows preferably face and why?

B. Fill in the blanks:

1. The hotness of an object is determined by its …… .
2. Temperature of boiling water cannot be measured by a ……. thermometer.
3. Temperature is measured in degree …….. .
4. No medium is required for transfer of heat by the process of …… .

5. A cold steel spoon is dipped in a cup of hot milk. It transfers heat to its other end by the process of …… .
6. Clothes of …… colours absorb heat better than clothes of light colours.

C. Match the following:

'A'	'B'
1. Land breeze blows during	a. summer
2. Sea breeze blows during	b. winter
3. Dark coloured clothes are preferred during	c. day
4. Light coloured clothes are preferred during	d. night

D. Tick (✓) the correct option:

1. One litre of water at 30°C is mixed with one litre of water at 50°C. The temperature of the mixture will be:
(a) 80°C
(b) more than 50°C but less than 80°C
(c) 20°C
(d) between 30°C and 50°C

2. An iron ball at 40°C is dropped in a mug containing water at 40°C. The heat will:
(a) flow from iron ball to water.
(b) not flow from iron ball to water or from water to iron ball.
(c) flow from water to iron ball.
(d) increase the temperature of both.

3. A wooden spoon is dipped in a cup of ice cream. Its other end:
(a) becomes cold by the process of conduction.
(b) becomes cold by the process of convection.
(c) becomes cold by the process of radiation.
(d) does not become cold.

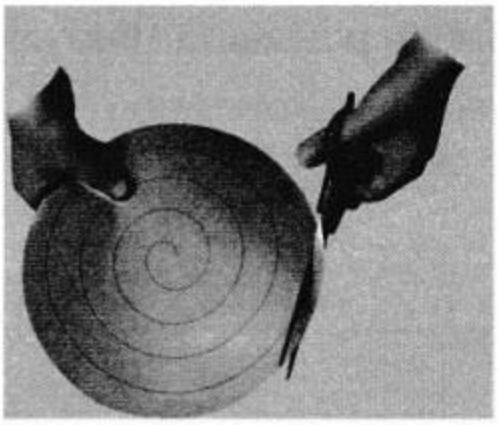
4. Stainless steel pans are usually provided with copper bottoms. The reason for this could be that:
(a) copper bottom makes the pan more durable.
(b) such pans appear colourful.
(c) copper is a better conductor of heat than the stainless steel.
(d) copper is easier to clean than the stainless steel.

E. State 'True' or 'False':

1. Wool is a good conductor of heat. ……..
2. Molecular movement takes place during convection. ……..
3. Heat is measured in degree Celsius. ……..
4. For radiation, no medium is required. ……..

F. Go to a doctor or your nearest health centre. Observe the doctor taking temperature of patients. Enquire:
(a) why she dips the thermometer in a liquid before use.
(b) why the thermometer is kept under the tongue.
(c) whether the body temperature can be measured by keeping the thermometer at some place other than the mouth.
(d) whether the temperature of different parts of the body is the same or different.
You can add more questions which come to your mind.

G. Go to a veterinary doctor (a doctor who treats animals). Discuss and find out the normal temperature of domestic animals and birds.
H. Wrap a thin paper strip tightly around an iron rod. Try to burn the paper with candle while rotating the iron rod continuously. Does it burn? Explain your observation.
I. Take a sheet of paper. Draw a spiral on it as shown in the Fig. given below. Cut out the paper along the line. Suspend the paper as shown in Fig. above a lighted candle. Observe what happens. Think of an explanation:



J. Mark the objects given in the table as hot or cold:

S. No.	Object	Cold/Cool	Warm/Hot
1.	Ice cream		
2.	Spoon in a tea cup		
3.	Fruit juice		
4.	Handle of a frying pan		
5.	Snow		
6.	Candle flame		