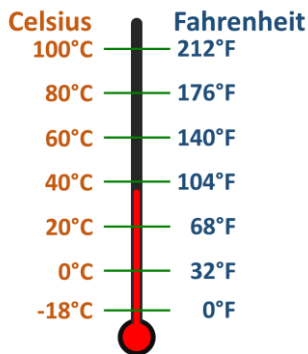


- Part A
- Heat is a form of \_\_\_\_\_.
  - List three things (or processes) that produce heat. \_\_\_\_\_

- Part B
- On the Celsius scale, ice melts at \_\_\_\_\_ and water boils at \_\_\_\_\_. The difference in temperature between these two points is \_\_\_\_\_°C.
  - On the Fahrenheit scale, ice melts at \_\_\_\_\_ and water boils at \_\_\_\_\_. The difference in temperature between these two points is \_\_\_\_\_°F.



5. Using the diagram on the left, convert the following temperatures from one scale to the other.

- (i) 20°C = \_\_\_\_\_°F (ii) 80°C = \_\_\_\_\_°F (iii) \_\_\_\_\_°C = 140°F (iv) \_\_\_\_\_°C = 0°F

Skill-Builder Questions:

6. A *change* in temperature of 20°C is the same as a *change* in temperature of \_\_\_\_\_°F.

7. Using the scale on the left, and some mathematics, convert the following from one scale to another.

- (i) -9°C = \_\_\_\_\_°F (ii) 10°C = \_\_\_\_\_°F (iii) 120°C = \_\_\_\_\_°F  
 (iv) 200°C = \_\_\_\_\_°F (it's not double 212)

- Part C
- Pure iron is made entirely of \_\_\_\_\_ atoms.
  - Water is made of water molecules. Briefly describe a water molecule and state its chemical formula. \_\_\_\_\_

10. What is temperature a measure of? \_\_\_\_\_

11. Describe the difference between the movement of the atoms in a cold iron bar and in a hot iron bar. \_\_\_\_\_

12. Briefly describe what the Kinetic Theory of Matter says. \_\_\_\_\_

13. Why does food dye diffuse more quickly into hot water than it does in cold water? \_\_\_\_\_

14. Why does it take time for you to smell a deodorant when someone sprays it a few metres away? \_\_\_\_\_

- Part D
- All energy (including heat energy) is measured in \_\_\_\_\_.
  - Heat energy will always transfer from a hotter/colder object to a hotter/colder object. (Circle the correct words.)
  - If 1 kg of water absorbs 4,200 Joules of energy, the temperature of the water will increase by \_\_\_\_\_°C.
  - Fill in the table below.

Initial Temperature (°C)	Final Temperature (°C)	Temperature Change (°C)	Mass of Water (kg)	Energy Absorbed (J)
20	21	1	1	4200
20	22		1	
20		10	1	
20	21		2	