

# Intermediate Science 7

## Unit 1: Heat

### Study Guide For Test 1



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#### Know the following terms

Temperature	Thermometer	Scale
Room Temperature	Body Temperature	Bimetallic Strip
Celsius Scale	Fahrenheit Scale	Kelvin Scale
Thermocouple	liquid-in-glass thermometer	Bimetallic strip
Resistance thermometer	Infrared thermometer	Matter
Particle Theory of Matter		

#### Know the following

- Relate personal activities in formal and informal settings to temperature
- Define temperature
- Relate temperature to everyday experiences, including:
  - (i) daily temperature changes
  - (ii) cooking temperatures
  - (iii) refrigeration temperatures
  - (iv) average temperatures in different geographic areas
- Predict and identify the temperature of various familiar objects, including:
  - (i) human body temperature
  - (ii) temperatures of boiling and freezing water
  - (iii) comfortable room temperature
- Provide examples of temperature measuring technologies used in the past, including:
  - (i) Galileo's air thermometer
  - (ii) early liquid thermometers
- Identify scales used in temperature measurement, including:
  - (i) Celsius
  - (ii) Fahrenheit
  - (iii) Kelvin
- Describe various instruments used to measure temperature, including:
  - (i) -liquid-in-glass thermometer
  - (ii) -thermocouple
  - (iii) -resistance thermometer
  - (iv) -bimetallic strip (thermostat)
  - (v) -infrared thermometer

- Define matter
- Describe the particle theory of matter, including:
  - (i) all matter is made up of tiny particles
  - (ii) these particles are always moving - they have energy and the more energy the particles have, the faster they move
  - (iii) there is space between all particles
  - (iv) there are attractive forces between the particles
  - (v) the particles of one substance differ from the particles of other substance
- Describe and compare the three states of matter using the particle theory of matter in terms of:
  - (i) volume
  - (ii) shape
  - (iii) arrangement of particles
  - (iv) movement of particles

	<b>Solid</b>	<b>Liquid</b>	<b>Gas</b>
<b>Volume</b>	does not change	does not change	expands to fill the container
<b>Shape</b>	does not take shape of container	takes shape of container	takes shape of any closed container
<b>Arrangement of Particles</b>	particles are tightly packed together	particles are in contact with each other but they can slip and slide past one another	particles have large spaces between one another
<b>Movement of Particles</b>	particles vibrate in position, not moving away from each other	particles slide past on another, moving away from one neighboring particle and attracting another particles	particles can move freely in all directions

