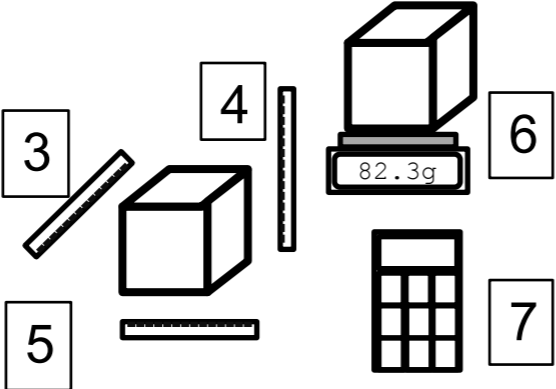
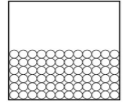
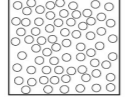
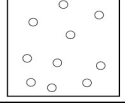
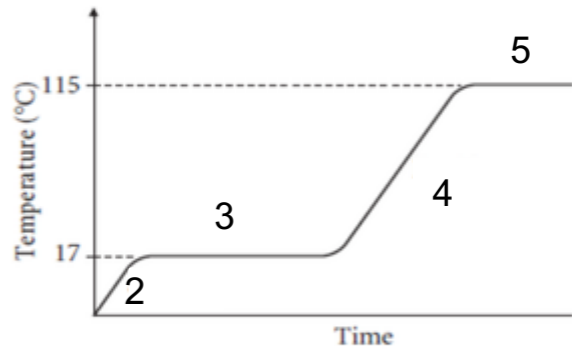


PHYSICS TRILOGY – YEAR 9 – PARTICLE MODEL

A		DENSITY	
1	Density (kg/m ³) =	$\frac{\text{Mass (kg)}}{\text{Volume (m}^3\text{)}}$	
2	Floating	Object with lower density	
3	Measure depth		
4	Measure height		
5	Measure width		
6	Measure mass with balance		
7	Calculate density		
8	Measure mass with balance		
9	Submerge object in water		
10	Measure volume of displaced water		
11	Calculate density		

B		STATES OF MATTER	
1	Solid		Particles vibrate in fixed positions Least energetic state
2	Liquid		Particles in contact but move randomly More energetic than solid
3	Gas		Particles move randomly, are far apart Most energetic state

C		PARTICLE MODEL	
1	Change of State	Mass and temperature is constant	
2	Solid warms		
3	Solid melts		
4	Liquid warms		
5	Liquid boils		
6	Boiling Point		
7	Melting Point	Temperature at which melting occurs	
8	Evaporation	From the surface of a liquid Can be below its boiling point	
9	Internal Energy	Energy stored in the particles Can be kinetic or potential	
10	Higher Temperature	Increases internal kinetic energy	
11	Changing State	Increases internal potential energy	
12	Gas Pressure	Collision of gas particles and surfaces	
13	Effect of temperature on pressure	Increased temperature, molecules move faster Faster molecules have more collisions More collisions means more pressure	