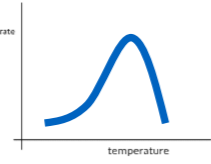
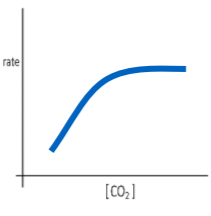
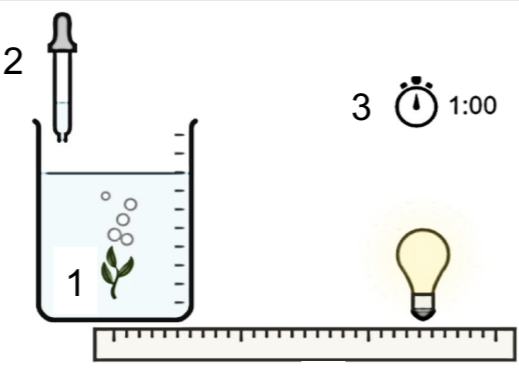


FOUNDATION BIOLOGY – YEAR 10 – BIOENERGETICS

A PHOTOSYNTHESIS	
1	Photosynthesis word equation Carbon Dioxide + Water → Glucose + Oxygen
2	Photosynthesis symbols Carbon Dioxide Water Glucose Oxygen CO ₂ H ₂ O C ₆ H ₁₂ O ₆ O ₂
3	Photosynthesis description Endothermic reaction with energy transferred from environment to chloroplast by light
4	Effect of temperature on rate of respiration  Rate increases until optimum temperature reached. Rate decreases after passing this temperature
5	Effect of light intensity, CO ₂ concentration and chloroplast number on respiration  Rate increases until plateau reached
6	Glucose uses Respiration Storage as starch, fat or oil Cellulose for cell wall or amino acids for proteins

B PHOTOSYNTHESIS PRACTICAL	
1	Place pondweed in water
2	Add small amount of sodium hydrogen carbonate
3	Count bubbles for 1 minute
4	Change distance and repeat



C RESPIRATION	
1	Respiration description Exothermic reaction in living cells releasing energy for chemical reactions, movement and warmth
2	Aerobic respiration Requires oxygen and releases energy Produces carbon dioxide and water
3	Anaerobic respiration Doesn't require oxygen only produces little energy Produces lactic acid n muscle Produces alcohol plus carbon dioxide in yeast
4	Aerobic respiration equation Glucose + Oxygen → Carbon Dioxide + Water
5	Anaerobic respiration equations In muscles: Glucose → Lactic Acid In yeast: Glucose → Carbon Dioxide + Alcohol
6	Reaction to Exercise Increased heart rate, breathing rate and breathing volume. Anaerobic respiration occurs if insufficient oxygen
7	Oxygen debt Caused by build up of lactic acid due to anaerobic respiration