

11. High blood pressure can be caused by the following factors: being overweight
stress
a salty/fatty diet
too much alcohol
too little exercise

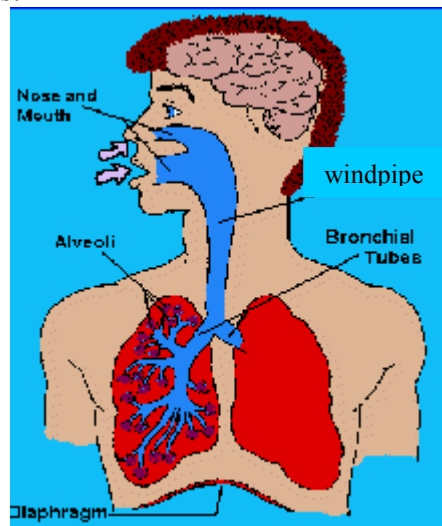
12. High blood pressure can lead to heart attacks, angina and strokes.

13. Know the following blood tests that can be done to test for infection:

<i>Illness</i>	<i>Test</i>
Anaemia	Too few red blood cells
Leukaemia	Too many white blood cells
Diabetes	Too much sugar in the blood

14. Know that we breathe in oxygen and breathe out carbon dioxide.

15. Structure of the lungs:



16. Know the following ways of measuring the health of our lungs:

VITAL CAPACITY	The maximum volume of air that your lungs can hold
TIDAL VOLUME	The volume of air breathed in/out in a normal breath
PEAK FLOW	The maximum rate at which air can be forced from your lungs

17. Know that smoking increases the risk of getting cancer, and can also cause asthma and bronchitis.

18. Carbon monoxide in cigarette smoke is dangerous as it decreases the amount of oxygen the blood can carry around the body.

19. Know why the different food groups are needed in a balanced diet:

<i>Food Group</i>	<i>Use</i>
Carbohydrates/Fats	Energy
Protein	Body building
Vitamins and Minerals	Protect from disease

20. Know that normal body temperature is 36/37 degrees Celsius. A body temperature of 40 indicates a fever. A body temperature of 34 and below indicates hypothermia.

21. By exercising the strength and mass of your muscles can be increased. Exercising also increases the flow of blood to the muscles.

22. Muscle strength is measured using a dynamometer.

23. Reaction time can be measured using a dropped ruler.

24. Long- term effects of excessive alcohol consumption are slower reaction time, liver damage and brain damage.

25. The level of alcohol in your blood can be tested using a breathalyser.

INTERMEDIATE 1 - ESSENTIAL REVISION NOTES
GROWING PLANTS

1. Be able to label the structure of a seed and state the function of each part.
2. State that germination is when a seed bursts into life and shoots appear.
3. Conditions required for germination are oxygen, moisture and a suitable temperature.
4. Know that photosynthesis is the process by which plants make food, and can be summarised as:

$$\text{water} + \text{carbon dioxide} \longrightarrow \text{sugar} + \text{oxygen}$$
5. Know that small seeds need to be mixed with silver sand before they can be sown, and that large seeds can be planted by hand.
6. Pelleted seeds are enclosed in a ball of clay to make them a regular shape.
7. Chitting is when the seed coat of a seed is cut or removed. This makes the seeds germinate faster and is also sometimes called pre-germination.
8. Know about the following food tests:

<i>Test</i>	<i>Test for...</i>
Iodine	Starch
Clinistix	Sugar
Albustix	Protein

9. Know that the following are methods of natural vegetative propagation:
 - bulbs
 - tubers
 - plantlets
 - runners
 - offset
10. Know that the following are methods of artificial vegetative propagation:
 - cuttings
 - grafting
 - layering

11. Know that the following are components in compost

<i>Material</i>	<i>Uses</i>
Loam (Soil)	Provides some nutrients
Peat/Peat Substitutes	Retain water
Grit and Sand	Increase air spaces and drainage
Perlite	Increase air spaces and drainage
Fertiliser	Provides nutrients

12. Know that a loam-based compost is one that contains loam, and that a loam-less compost is one that does not contain loam.

13. Know that the three main nutrients needed by plants are Nitrogen (N), Phosphorus (P) and Potassium (K).
14. Know that the following are methods of watering plants:
 - watering can
 - trough of water
 - gel
 - irrigation
 - capillary matting
15. You can improve ventilation in a greenhouse by adding a fan or opening windows.
16. The temperature in a greenhouse can be increased by adding a thermostatically controlled heater.
17. Humidity is the amount of moisture in the air.
18. Pricking out is the process of taking small seedlings and moving them into a larger pot.
19. Potting on is the process of moving an adult plant to a larger pot. We know we need to do this when the roots of the plant start growing out of the bottom of the pot.
20. Pests, such as greenfly, can be killed by using a pesticide.
21. To prevent the growth of mould on plants ventilation should be high and the humidity low.
22. Plants can be protected from the cold and frost by putting them in a polytunnel, a greenhouse or a propagator.

INTERMEDIATE 1 - ESSENTIAL REVISION NOTES
BIOTECHNOLOGY

1. Milk is a food containing sugar, fats, proteins, vitamins and minerals.
2. Evaporated milk is heated to remove some liquid making it more concentrated. Skimmed milk has nearly all its fat removed and semi-skimmed milk has had some of its fat removed.
3. Milk heat-treated to destroy harmful microbes. Pasteurisation destroys disease-causing microbes (72°C).
4. UHT treatment preserves milk and prolongs shelf life by destroying the microbes which cause milk to sour. (140°C).
5. The resazurin test is used to demonstrate the presence of bacteria.
6. Bacterial cultures can be added to pasteurized milk to make yoghurt. Milk sugar is converted into an acid which thickens the milk and gives yoghurt its flavour.
7. Rennet is added to milk to make cheese. The rennet clots the protein in milk to make curds. Rennet can be obtained from a variety of sources: from calves or from genetically engineered fungi grown in fermenters.
8. Whey is the liquid left when the curds are formed. Whey is a waste product which can be upgraded. Whey can be used as a food source for growing yeasts in fermenters to produce a creamy alcoholic drink. Whey can also be used as animal feed.
9. Yeast is a simple fungus. In bread dough, yeast produces carbon dioxide gas which causes the bread to rise. In beer making yeast converts sugar into alcohol and carbon dioxide. This process is called fermentation.
10. Cask conditioned beer (real ale) differs from other beer because the yeast is not removed and as a result fermentation and carbon dioxide production continue in the cask.
11. Yeast is removed from brewery conditioned beer and additional carbon dioxide is added.
12. Fermented milk drinks are produced using an enzyme and yeast.
13. Yeast and enzymes can be immobilised so that they can be separated from the end-product and can be used again.
14. Crisps can be flavoured and salmon flesh coloured using yeast products.
15. Enzymes are produced in large quantities by bacteria in industrial fermenters.

16. Enzymes are enclosed in a harmless coating to prevent allergic reactions which can cause skin rashes and eczema.
17. Enzymes in biological washing powders digest stains at moderate temperatures. It is claimed that this saves energy and results in less damage to delicate fabrics.
18. Washing at lower temperatures reduces fuel consumption and can contribute to reducing the pollution caused by the burning of fossil fuels in power stations.
19. Detergents contain other chemicals which can increase the growth of algae in lakes and rivers.
20. Antibiotics are produced naturally by fungi. Antibiotics destroy and prevent the further growth of bacteria. Different antibiotics are effective against different bacteria.
21. Antifungals are chemicals which limit fungal growth. They are used to treat fungal infections such as athlete's foot and thrush.
22. Over-use of antibiotics can lead to bacteria developing resistance to the antibiotics.