

**By the end of Autumn 1 you will know:**

**Gas Exchange**

1. What are the main organs of gas exchange?
2. What are the main parts of the respiratory system?
3. What are the functions of the different parts of the respiratory system?
4. How can we measure lung volume?
5. What is the standard unit for volume?
6. What are the two gases involved in gas exchange?
7. What is inhalation?
8. What is exhalation?
9. What parts of the respiratory system does air pass through during inhalation?
10. What happens to the ribcage and diaphragm during inhalation?
11. What happens to the ribcage and diaphragm during exhalation?
12. What are the functions of the muscles between the ribs during breathing?
13. What is diffusion?
14. What are the two gases involved in gas exchange in the lungs?
15. What parts of the respiratory system does air pass through during inhalation?
16. Which gases are exchanged?
17. What happens to the oxygen from the inhaled air?
18. What happens to the carbon dioxide from the blood?
19. What are the main adaptations of the alveoli?
20. What diseases are associated with smoking?
21. What is found in tobacco smoke?
22. What is a stimulant?
23. What is passive smoking?
24. What does smoking do to the respiratory system?
25. What is asthma?

**Heart and Respiration**

1. What are the 4 components of blood?
2. What is the function of each blood component?
3. What different body vessels are in the body?
4. What are the main features of arteries?
5. What are the main features of veins?
6. What are the main features of capillaries?

7. What is the function of each blood vessel?
8. What is the function of the heart?
9. What is heart made of?
10. What is the structure of the heart?
11. What is the difference between the right and left ventricle?
12. What is the double circulatory system?
13. What is aerobic respiration?
14. What is the difference between breathing and respiration?
15. What is the equation for aerobic respiration?
16. Is respiration endothermic or exothermic?
17. Where does aerobic respiration happen?
18. What is the equation for anaerobic respiration in animals?
19. Where does anaerobic respiration happen?
20. What are the reactants and products for anaerobic respiration?
21. What are the similarities of aerobic and anaerobic respiration?
22. What are the differences between anaerobic and aerobic respiration?
23. What happens to the body during exercise?
24. What is a hypothesis?
25. What effect does lactic acid have on the body?
26. What is oxygen debt?
27. What is anaerobic respiration in yeast called?
28. What is the word equation for anaerobic respiration in yeast?
29. What are the uses of fermentation?

**By the end of Autumn 2 you will know:**

**Photosynthesis**

1. What is the process of photosynthesis?
2. What organelle takes in light?
3. What is essential for photosynthesis?
4. What is the word equation for photosynthesis?
5. What are the reactants and products of photosynthesis?
6. Where do the reactants for photosynthesis come from?
7. What is meant by the rate of photosynthesis?

8. Describe two ways of measuring oxygen released from a plant.
9. What piece of equipment is used for measuring volume?
10. What factors affect the rate of photosynthesis?
11. What is a prediction?
12. What type of graph is used to show the rate of photosynthesis?
13. What is on the x axis?
14. What is on the y axis?
15. What does optimum mean?
16. What do plants store glucose as?
17. How do we know if starch is present?
18. What are the main structures in the leaf?
19. What are the adaptations of a leaf for photosynthesis?
20. What is the role of the stomata?
21. How are water and glucose transported through the plant?
22. What is the function of the phloem?
23. What is the function of the xylem?
24. What is diffusion?
25. What is the function of guard cells?
26. What part of the leaf allows gases to enter/exit?
27. What is active transport?
28. What is active transport used for in plants?
29. What is a root hair cell?
30. What are the adaptations of a root hair cell?
31. What minerals do plants need?
32. What is the function of each mineral?