Year 8 AP 1 – Science

Ormiston Horizon Academy

How to revise Science:

Memorise the facts

- Make flash cards
- Produce mind maps
- Write the information in a book

Practice answering questions

- Use online tests
- Use Tassomai
- Use BBC bitesize multichoice tests at the end of units

Additional Information:

You will be assessed on the science knowledge and the science skills

Revision list:

1. The trachea is the organ that runs down the neck and carries air from the mouth and nose to the lungs.
2. Identify the trachea, bronchi, bronchioles, alveoli, diaphragm, ribs and intercostal muscles on a diagram of the breathing system.
3. The airways are adapted with ciliated epithelial cells and goblet cells to maintain the health of the breathing system.
4. At the end of all the air tubes are microscopic air sacs called alveoli (singular alveolus) which have thin walls and a high blood supply for diffusion of gases.
5. Diffusion is the movement of molecules from an area of high concentration to an area of low concentration down a concentration gradient – often across a membrane.
6. In the alveoli, Carbon Dioxide diffuses from the blood to the air in the alveoli and oxygen diffuses from the air in the alveoli to the blood.
7. To breathe in (inhale), we make the chest cavity bigger by contracting the diaphragm to move it down, and contracting the muscles between the ribs, moving the rib cage out.
8. When we make the chest cavity bigger, the air pressure in the lungs decreases and air flows into the lungs.
9. To breathe out (exhale), we make the chest cavity smaller by relaxing the diaphragm to move it up, and relaxing the muscles between the ribs, moving the rib cage in.
10. When we make the chest cavity smaller, the air pressure in the lungs increases and air flows out of the lungs.
11. The maximum amount of air you can breathe in and out is your vital lung capacity.
12. Reactants are the starting substance(s) in a chemical reaction. Products are the

substance(s) that is made in a chemical reaction.

13. A chemical reaction is represented by an arrow between the reactants and the products, and they are often not reversible.
14. Observations during chemical reactions can include but are not limited to change of state (leading to a measurable change of mass), change in colour.
15. Combustion is the burning of a substance in oxygen.
16. Combustion is an example of an irreversible change.
17. Fuel + Oxygen --> Carbon dioxide + Water (insert wood, petrol, diesel and carbon for fuel)
18. Lime water can be used to test for carbon dioxide.
19. Thermal decomposition is the chemical breakdown of a substance when it is heated.
20. Copper carbonate --> copper oxide + carbon dioxide.
21. Oxidation is the addition of oxygen in a chemical reaction.
22. Iron + oxygen --> iron oxide and copper + oxygen --> copper oxide.
23. Displacement reactions are where a more reactive reactant takes the place of a less reactive reactant in a chemical compound.
24. Magnesium + copper chloride --> magnesium chloride + copper.
25. Define acids and alkalis in terms of neutralisation reactions
26. The pH Scale for measuring acidity/alkalinity; and indicators
27. Reactions of acids with metals to produce a salt plus hydrogen
28. Reactions of acids with alkali to produce a salt plus water.
29. Energy changes on changes of state (qualitative)
30. Exothermic and endothermic chemical reactions (qualitative)