## 8Fa – Fireworks/Dalton's atomic model

| Word | Pronunciation | Meaning |
|---|---|---|
| atom | | Atoms are small particles from which all substances are made. |
| chemical reaction | ***kem***-*ik-al re-****ack***-*shun* | A change in which one or more new substances are formed. |
| compound | | A substance that can be split up into simpler substances, since it contains the atoms of two or more elements joined together. |
| element | | A simple substance, made up of only one type of atom. |
| matter | | All things are made of matter. There are three states of matter: solid, liquid, gas. |
| oxidiser | | A substance that supplies oxygen for a reaction. |
| physical change | ***fi***-*zi-kal* | A change in which no new substances are formed (e.g. changes of state). |
| physical property | ***fi***-*zi-kal* | A description of how a material behaves and responds to forces and energy. Hardness is a physical property. |
| property | | A description of how a material behaves and what it is like.<br>Hardness is a property of some solids. |
| symbol (chemistry) | | The letter or letters that represent an element. |

## 8Fb – Elements and their symbols

| Word | Pronunciation | Meaning |
|---|---|---|
| chemical change | ***kem***-*ik-al* | A change that forms one or more new substances. |
| chemical formula | | A combination of symbols and numbers that shows how many atoms of different elements are in a particular molecule.<br>In compounds that do not form molecules, it shows the ratio of the different elements in the compound. |
| chemical property | ***kem***-*ik-al* | How a substance reacts with other substances. |
| chemical reaction | ***kem***-*ik-al re-****ack***-*shun* | A change in which one or more new substances are formed. |
| hypothesis | *hy-****poth***-*uh-sis* | An idea about how something works that can be tested using experiments. Plural is hypotheses. |
| prediction | *pred-****ik***-*shun* | What you think will happen in an experiment and why you think this. |
| ratio | | A way of comparing two different quantities. The two numbers are separated by a colon (:). |
| scientific method | | Any way of testing that involves collecting information in order to show whether an idea is right or wrong. This is often done by developing a hypothesis that is tested by using it to make a prediction. The prediction is then tested using experiments. |

## 8Fc – Mendeleev's table

| Word | Pronunciation | Meaning |
|---|---|---|
| alkali metal | | A group of very reactive metals. Found in group 1 of the periodic table. |
| group (chemistry) | | A vertical column of elements in the periodic table. Elements in the same group generally have similar properties. |
| halogen | | An element in group 7 of the periodic table, such as fluorine and chlorine. |
| noble gas | | Group of very unreactive non-metal gases. Found in group 0 of the periodic table. |
| periodic table | | An ordered list of all known elements. |

## 8Fc WS – Anomalous results

| Word | Pronunciation | Meaning |
|---|---|---|
| anomalous result (outlier) | *uh-**nom**-uh-luh s* | A measurement that doesn't fit the same pattern as other measurements from the same experiment. |
| outlier | | Another term for anomalous result. |
| range | | The difference between the highest and lowest values in a set of data (usually ignoring any anomalous results). |

## 8Fd – Trends in physical properties

| Word | Pronunciation | Meaning |
|---|---|---|
| boiling | | When there is liquid turning into a gas in all parts of a liquid, creating bubbles of gas in the liquid. |
| boiling point | | The temperature at which a liquid boils. |
| brittle | | Not easily bent, not flexible, breaks under force. |
| melt | | When a solid turns into a liquid. |
| melting point | | The temperature at which a solid turns into a liquid. |
| freeze | | When a liquid turns into a solid. |
| freezing point | | The temperature at which a liquid turns into a solid. It is the same temperature as the melting point of the substance. |
| flexible | | Can bend without breaking. |
| group (chemistry) | | A vertical column of elements in the periodic table. Elements in the same group generally have similar properties. |
| malleable | ***mal**-ee-uh-buh l* | Able to be beaten and bent into shape. |
| metal | | Any element that is shiny when polished, conducts heat and electricity well, is malleable and flexible and often has a high melting point. |
| non-metal | | Any element that is not shiny, and does not conduct heat and electricity well. |
| period (chemistry) | | A horizontal row in the periodic table. |
| transition metal | | One of a central group of elements in the periodic table. |

## 8Fe – Trends in chemical properties

| Word | Pronunciation | Meaning |
|---|---|---|
| acid | | A substance that reacts with alkalis, turns litmus red and has a pH of less than 7 is acidic. |
| alkali | | A substance that reacts with acids, turns litmus blue and has a pH of more than 7 is alkaline. |
| oxide | | A compound of a metal or non-metal with oxygen, such as magnesium oxide or carbon dioxide. |
| pH | | A numerical scale from 1 to 14 showing how acidic or alkaline a substance is. Acids have a pH below 7, neutral substances have a pH of 7 and alkalis have a pH greater than 7. |
| indicator | | A substance that changes colour in solutions of different acidity and alkalinity. |
| reactivity | | A description of how quickly or vigorously something reacts. |