







Subject: Science

Year: 8 Teaching block: 4

Topic: Health, Periodic Table, Separations, Electricity.

Assessment week: w/b 3rd Dec

During this topic you will develop and demonstrate the following PLTS:

Creative thinker		Team player	
Reflective learner		Effective participator	
Independent enquirer		Self-manager	

What I will learn?

The nutrients in our food and how they are digested.

How smoking, alcohol and drugs affect our body.

The sections of the Periodic Table, including how where an element is affects its reactions.

How different mixtures can be separated.

What charge is and how objects can become charged.

How current, voltage and resistance behave in different electrical circuits.

Y8 Block 1 Independent Learning Questions

- What is cholesterol and why is it important to monitor the level of cholesterol in a person's blood?
- What are the consequences of having high cholesterol levels?
- Find out what Cystic Fibrosis is
- People who suffer from CF have to take enzyme supplements to help them digest their food – why do they need to do this?

The periodic table is a list of elements. The table was added to as more elements were discovered.

- Find out which elements Humphry Davy discovered and which Marie Curie discovered.
- What new discovery helped Humphry Davy discover these elements?

<http://www.rsc.org/education/teachers/resources/periodictable/pre16/discover/davy.htm>

Recent discoveries of new elements involve making new elements rather than discovering them.

- How do they make these new elements?

<http://www.rsc.org/education/teachers/resources/periodictable/pre16/discover/seaborg.htm>

The making of alcoholic drinks like whisky involve using scientific separation techniques.

- Write a paragraph about how whisky is made and highlight the scientific separating techniques that are used.

What will the best students be able to do/understand by the end of the topic:

Describe the components of a healthy diet. Explain the role of each food group in the body. Describe how to test for starch, lipids, sugar and protein including the positive result for each test. Describe some health issues caused by an unhealthy diet. Calculate the energy requirements of different people. Describe the structure and function of the main parts of the digestive system. Describe the process of digestion. Describe the role of enzymes in digestion. Describe the role of bacteria in digestion. Describe the difference between recreational and medicinal drugs. Describe the effects of drugs on health and behaviour. Describe the effect of alcohol on health and behaviour. . Describe the effect of alcohol on conception and pregnancy. Describe the effect of smoking on health. Describe the effect of alcohol on pregnancy.

Explain how elements are classified as metals or non-metals. Use patterns to classify metals as metals/ non-metals. Use patterns to predict properties of elements. Compare patterns in properties in groups and periods. Interpret data to describe pattern in Group 1. Use patterns to predict the properties of Group 1 elements. Use patterns to predict the properties of Group 7 elements. Describe displacement reactions. Describe the chemical and physical properties of Group 0 elements. Use patterns to predict the properties of Group 0 elements. Describe the particle arrangement in mixtures. Explain how to identify pure substances. Describe solutions using key words. Use the particle model to explain dissolving. Explain what a saturated solution is. Explain the meaning of solubility. Explain how filtration works. Describe how to filter a mixture. Explain how to use evaporation to separate mixtures. Explain how distillation works. Explain how chromatography separates mixtures. Analyse chromatograms to identify substances in mixtures.

Explain how objects can become charged, describe how charged objects interact and describe what is meant by an electric field. Describe what is meant by and how to measure current and potential difference. Describe what is meant by rating of a battery and bulb. Describe the difference between series and parallel circuits and how current and potential difference vary in them. Describe what is meant by resistance and how to calculate resistance in a component and of a circuit. Describe the difference between conductors and insulators in terms of resistance.