



Dear Parents and Guardians,

I would like to welcome you to the Science Department's monthly curriculum guide. This month, the science teachers (and students!) had a very 'glowing' month with explosive alkali metals and sparkling magnesium ribbon experiments! This coming month, KS3 students will be studying Physics and learning about the universe! Please see our curriculum content below for more specific information about what the students will be learning about this month.

Curriculum Content

Grade 6:

Topics	Keywords
Exploring energy Transfers, Understanding potential energy and kinetic energy	Joule, energy transfers diagram, sanky diagram, gravity, gravitational energy, and kinetic energy.
Doing Work, Thinking about Fuels - please link with Renewable and non renewable energy	Work done, fuel, oxygen, combustion, hydrocarbon, and fossil fuel, renewable and non-renewable.
Exploring Sound, Describing sound, Hearing Sounds and understanding factors affecting hearing.	Vibrate. Frequency, wavelength, amplitude. Pinnar, Ear canal, ear drum, ossicles, cochlea, auditory nerve
Exploring the human skeleton, Understanding the role of skeletal joints, Investigating muscles	Bone, skeleton, calcium, marrow, ligament, muscle. Tendon. Contract, relax, force, newton, antagonistic muscles, biceps, triceps, quadriceps.

Grade 7:

Topics	Keywords
Describing electric circuits. Understanding energy in circuits. Explaining resistance. Describing series and parallel circuits.	Component, conductor, insulator, ammeter, ampere. Voltage, volt, voltmeter, potential difference, resistance. Series circuit, parallel circuit, branch.
Looking more closely at variation, explaining the caused of variation. Selective Breeding	Continuous variation, discontinuous variation, correlation, inherited, genetic. Selective Breeding.
Understanding why siblings are different. Looking inside a cell's nucleus. Understanding cloning	Inherit, trait, chromosome, identical twins, DNA, genes, Base, double helix, cloning, asexual reproduction, nuclear transfer.
Explaining Extinction	Extinction, endangered species, gene bank.

Grade 8:

Topic	Keywords
Law of conservation of mass, word and symbol equations, balancing equations,	Reactant, product, mass, conservation, product, reversible, balanced.
Moles and Relative Formula Mass calculations.	Mass, relative mass, atomic number, mass number, formula, compound.
Reactivity of metals, Oxidation, Reduction, Reactivity series	Oxidation, reduction, reactivity, potassium, sodium, calcium, magnesium, gain, lose, oxygen
Displacement Reactions, Reactions of acids	Displacement, reactant, hydrochloric acid, sulphuric acid, neutralisation, PH, base, hydrogen, oxygen.

Grade 9:

All keywords in the grade 9 curriculums can be found in the specification documents, which is also referenced at the end the newsletter. The topics the separate sciences class will be covering this month are:

- Bonding:
- Electrolysis
- Reactivity Series
- Displacement reaction
- Combustion

The topics the Biology class will be covering this month are:

- Gaseous exchange in humans and plants
- Photosynthesis
- Excretory system
- Nervous system
- Homeostasis
- Immunity,

How Can You Help?

You can help your children by assisting them in learning the meanings and spellings of the keywords they learn in class, getting them to create posters and spider diagrams, and helping them to answer exam style questions, which can be found in the resources listed below. Please remind your child to revise keywords they have learnt in lesson every day at home to remain confident.

Here are some useful websites:

Grades 6 – 8 (KS3)

BBC KS3 Bitesize <http://www.bbc.co.uk/bitesize/ks3/science/>

Skool.co.uk <http://inteleducationresources.intel.co.uk/parents.aspx?id=321>

Grade 9 (KS4)

BBC KS4 Biteize <http://www.bbc.co.uk/education/levels/z98jmp3>

Specification and Past Paper Material:

Biology

<http://qualifications.pearson.com/en/qualifications/edexcel-international-gcses-and-edexcel-certificates/international-gcse-biology-2011.html>

Chemistry

<http://qualifications.pearson.com/en/qualifications/edexcel-international-gcses-and-edexcel-certificates/international-gcse-chemistry-2011.html>

Physics

<http://qualifications.pearson.com/en/qualifications/edexcel-international-gcses-and-edexcel-certificates/international-gcse-physics-2011.html>

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Thank you in advance for your support in the education of your child. Please do not hesitate to contact me for any further information.

Yours Faithfully,

Miss Deega