



Dear Parents and Guardians,

On behalf of the Science team, we would like you wish you all a Happy New Year. This term is an opportunity for students to continue to explore and develop their science skills and understanding. Please see below for more information on what students will be covering this month.

**Curriculum Content**

**Grade 6:**

| Topics  | Keywords  |
|---|---|
| Combining Elements<br>Understanding What Happens When An Element Burns. Observing How Elements React In Different Ways. Understanding Oxidation.  | Model, Ratio, Compound, Reactant, Product, Reaction, Oxidation, Thermal Decomposition.  |
| Discovering Forces.<br>Measuring Forces, Understanding Weight On Other Planets, Exploring The Effects Of Forces, Understanding Friction.  | Pushing Force, Pulling Force, Turning Force, Gravity, Weight, Mass, Weightless, Prediction, Action Force, Reaction Force, Friction, Contact Force, Lubricant. Independent Variable, Dependent Variable, Control Variable, Reliable, Safety. |
| Link Frictional Forces Between Surfaces To 'Drag' Between Objects In A Fluid. Explain Examples Of Streamlining. Link Streamlining To Fuel Efficiency In Vehicles. Describe The Effects Of Balances And Unbalanced Forces. | Air Resistance, Water Resistance, Draft, Terminal Velocity, Particle, Streamlined, Balanced, Unbalanced, Reaction Force.  |
| Understanding Speed Calculations, Understanding Turning Forces, Discovering Moments.  | Distance, Speed, Unit, Formula, Average, Turning Force, Pivot, Moment, Lever, Load, Effort, Force Multiplier.   |

**Grade 7:**

| Topics  | Keywords   |
|---|--|
| Exploring How Plants Make Food. Looking At Leaves, Exploring The Role Of Stomata. Investigating Photosynthesis.     | Glucose, Photosynthesis, Starch, Iodine, Chlorophyll. Cuticle, Epidermis, Palisade Cell, Spongy Cell. Pore, Stomata, Guard Cell.                                       |
| Understanding Food Webs. Learning About Ecological Balance. Understanding The Effects Of Toxins In The Environment. | Food Chains, Food Webs, Primary Consumer, Secondary Consumer, Tertiary Consumer, Trophic Levels. Ecology, Predator, Prey, Equilibrium. Fertiliser, Insecticide, Toxin. |

|   |   |
|---|---|
| Exploring Acids And Alkalis.<br>Using Indicators. Using Universal Indicator,<br>Exploring Neutralisation. | Acid, Corrosive, Irritant, Hydrogen, Alkali, Soapy,<br>Hydroxide. Indicator, Litmus, Neutral, PH Scale,<br>Neutralisation, Titration. |
| Exploring Magnets.<br>Understanding Magnetic Fields, Using<br>Electromagnets.                             | Non-Contact Force, Attract, Pole, Repel, Magnetic<br>Field, Strength, Field Lines, Core, Field, Attract,<br>Repel.                    |

### Grade 8:

| Topic   | Keywords   |
|---|--|
| Elements & Atoms.<br>Electronic Configuration + Periodic Table.   | Atom, Atomic Number, Mass Number, Electron,<br>Neutron, Proton, Nucleus, Configuration, Shells,<br>Charge, Isotopes, Element, Compound, Mixture,<br>Shells, Period, Group. |
| Metals & Non-Metals.<br>Charges, Reactions Between Them.  | Metals, Non-Metals, Positive Ions, Negative Ions,<br>Charge, Group 1, Group 7.   |
| Ionic Structures And Properties.<br>Covalent Structure And Properties. Ionic<br>Bonding And Covalent Bonding. | Ionic, Covalent, Metallic, Electrostatic, Giant<br>Covalent Substances, Sharing, Electron Transfer,<br>Loss, Gain, Charge, Dot Cross Diagram.                              |
| How Bonding And Structure Are Related<br>To The Properties Of Substances.<br>Structure And Bonding Of Carbon. | Intermolecular Forces, Conductivity, Diamond,<br>Silicon Dioxide, Graphite, Properties.  |

### Grade 9:

All keywords in the grade 9 curriculum can be found in the specification document, which is also referenced at the end the newsletter. This month, we will be going back to Chemistry and Biology, and reinforcing knowledge on the following topics:

- Enzyme and PH
- Balanced Diet
- Plant Transport Systems
- Vaccinations
- Circulation Systems
- Function of the Eye
- Homeostasis
- Avogadro Number of Particles
- Giant Covalent and Ionic Structures

### 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:

<http://qualifications.pearson.com/en/qualifications/edexcel-international-gcses-and-edexcel-certificates/international-gcse-science-2011.coursematerials.html#filterQuery=Pearson-UK:Category%2FExam-materials>

### **Science Department Contact Details:**

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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