



### Dear Parents and Guardians,

I would like to welcome you to the Science Department's monthly curriculum guide for December. This month, we will be assessing students on their ability to plan and use their investigation skills to conduct a successful practical. This comes under 'How Science Works' which is a crucial assessment objective that comes up in every science exam. We will be doing more of this in the coming months to ensure our students are confident in How Science Works, which will undoubtedly aid them in their Science skills set.

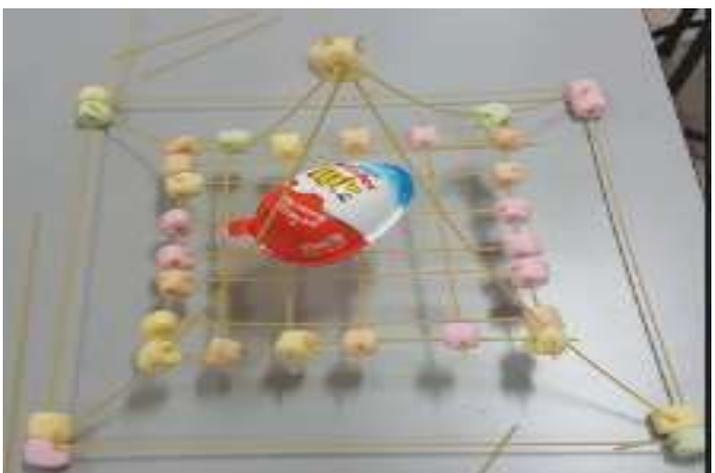
### What have we been up to in Science?

This month, we are lucky to hear from Miss Rabeya who will tell us a little bit more about what has been going on behind the scenes of the Science department this month:

'Well, it has been a very creative and active month in Science, to say the least. As part of innovation week, Grades 6-8 have been getting creative with marshmallows and spaghetti in Science. The challenge was to use a maximum number of marshmallows and a packet of spaghetti to construct a strong, sturdy and tall tower, which was able to support a kinder egg. Students were assessed on their skills in planning, sketching, constructing and evaluating their models. Students in all the Science classes did a fantastic job. They delved into their creative minds, brought out their inner architects, their inner engineers, and constructed some mind boggling towers. The test came when kinder eggs were placed on the top layers of the towers. Question was – would it hold, or would it collapse?'



The projects were then shared in a Science exhibition for students and teachers around the school to come and have a look at the great work produced by the secondary school students. Needless to say, students that visited from the lower grades were fascinated by the work produced. On entering the room one pupil stated "oh wow, it is a museum in here".



It is lovely to see our wonderful students so keen and enthusiastic to get stuck in and involved, whatever challenges they face. They stick with the motto – "Anything is possible, when you try and try again". WE LOVE SCIENCE AT AL BASMA!  
Miss Rabeya

## Curriculum Content

### Grade 6

Topics	Keywords
Exploring chromatography, using chromatograph to identify unknown evidence.	Mixture, Separate, Paper Chromatography, Dye, Forensic, Reliable.
How Science Works, Investigations, Practical Write ups.	Hypothesis, Equipment, Method, Apparatus, Results, Conclusion, reliability, accuracy, precision, independent variable, dependent variable, control variable.

### Grade 7

Topics	Keywords
Fuels - please link with Renewable and non-renewable energy.	Work Done, Fuel, Oxygen, Combustion, Hydrocarbon, Fossil Fuel, Renewable And Non-Renewable.
Exploring Sound, Describing sound, Hearing Sounds and understanding factors affecting hearing.	Vibrate, Frequency, Wavelength, and Amplitude. Pinnar, Ear Canal, Ear Drum, Ossicles, Cochlea, Auditory Nerve.
How Science Works, Investigations, Practical Write ups.	Hypothesis, Equipment, Method, Apparatus, Results, Conclusion, reliability, accuracy, precision, independent variable, dependent variable, control variable.

### Grade 8

Topic	Keywords
Aseptic Techniques and Antibiotic bacteria growth practical Developing New medicines.	Inhibition Zone, Bacterial Growth, Placebo, Control Group, Double Blind Trial.
Photosynthesis Respiration	Carbon Dioxide, Oxygen, Chloroplast, Chlorophyll, Glucose, Starch, Stomata.
How Science Works, Investigations, Practical Write ups.	Hypothesis, Equipment, Method, Apparatus, Results, Conclusion, reliability, accuracy, precision, independent variable, dependent variable, control variable

### 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. The topics they will be covering this month are:

- Chemical formula masses and molar volumes of gases
- Chemical Formulae and Chemical Equations
- Covalent Substances
- Ionic Bonding
- Ionic Compounds.
- Covalent Bonding
- Dot and cross diagram
- Electrical conductivity

## **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