



PUTTING THE FUN BACK  
INTO LEARNING!

Dear Parents and Guardians,

Welcome to the Science February Curriculum Guide.

## **Curriculum content**

### **Key Stage 3: 2014 English National Curriculum Science**

#### **Grade 6:**

This month, students in Grade 6 will study the Chemistry topic 'Acids and Alkalis'.

| <b>Topic</b>                    | <b>Key words</b>   |
|---------------------------------|--|
| Hazardous or safe?              | Acid, alkali, caution, corrosive, diluted, explosive, flammable, hazard, irritant, toxic |
| Indicators, acids and alkalis   | Indicator, neutral,  |
| The pH Scale                    | pH scale, dependent variable, independent variable                                       |
| Neutralisation                  | Chemical reaction, neutralization, products, reactants, salt, word equation              |
| Neutralization in everyday life | Antacid, base  |

#### **Grade 7:**

This month, students in Grade 7 will study the Physics topic 'Energy Changes'.

| <b>Topic</b>                 | <b>Key word</b>   |
|------------------------------|---|
| Temperature changes          | Degrees Celsius, evaporate, internal energy, joule, temperature, thermal energy   |
| Transferring energy          | Absorb, conduction, convection, convection current, density, emit, fluid, infrared radiation, medium, radiation, reflect, thermal conductor, thermal imager, thermal insulator. |
| Controlling energy transfers | Solar cell, solar panel   |
| Power and efficiency         | Appliance, efficiency, kilowatt, power, power rating, Sankey diagram, watt  |
| Keeping warm                 | Climate change, fossil fuel   |

## **Edexcel IGCSE**

In order to improve outcomes at IGCSE we have formalised the system of an extended three year KS4 in Science and IGCSE courses are now being followed by Grades 8, 9 and 10

For your information we have included hyperlinks to the relevant part of the specification in the details below.

For further details regarding the IGCSE syllabus and keywords for each course please follow the link below each section.

### **Grade 8**

Students in Grade 8 are following aspects of the IGCSE Edexcel Physics, Chemistry and Biology courses. In January they will be covering the first Physics unit.

#### **Physics:**

##### **Forces and motion**

- a) Units
- b) Movement and position
- c) Forces, movement, shape and momentum

<http://qualifications.pearson.com/content/dam/pdf/International%20GCSE/Physics/2017/specification-and-sample-assessments/IGCSE-Physics-2017-specification.pdf>

### **Grade 9**

#### **Grade 9 Physics (Only):**

##### **Forces and motion.**

- a) Momentum
- b) Safety and collisions
- c) Stopping distance
- d) Hooke's law
- e) Moments

#### **Grade 9 Physics & Chemistry (Separate science):**

##### **Physics Unit:**

##### **Waves**

- a) Units
- b) Properties of waves
- c) The electromagnetic spectrum
- d) Light and sound

<https://qualifications.pearson.com/en/qualifications/edexcel-international-gcse-chemistry-and-edexcel-certificates/international-gcse-chemistry-2017.html>

##### **Chemistry Unit:**

##### **Principles of chemistry**

- a) Elements, compounds and mixtures.

<https://qualifications.pearson.com/content/dam/pdf/International%20GCSE/Chemistry/2017/specification-and-sample-assessments/IGCSE-Chemistry-2017-specification.pdf>

#### **Grade 9 Biology (option):**

##### **Biology Unit:**

##### **Structure and functions in living organisms**

- a) *Gas exchange in humans*
- b) *transport in plants.*

<https://qualifications.pearson.com/content/dam/pdf/International%20GCSE/Biology/2017/specification-on-and-sample-assessments/IGCSE-Biology-2017-specification.pdf>

## **Grade 10**

### **Grade 10 Biology (Only):**

Students finished the Biology course in January and will be revising and preparing for the exam from now on.

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

### **Grade 10 Chemistry & Biology (Separate Science)**

#### **Chemistry:**

Students finished the Chemistry course in December and will be continuing with the biology course.

#### **Biology Unit:**

Students will be finishing the course with **Use of biological resources:**

- a) Food production
- b) Selective breeding
- c) Genetic modification (genetic engineering)
- d) Cloning

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

### **Grade 10 Physics (Option)**

Students will be working through 'Solids, liquids and gases' topic.

- a) Units
- b) Density and pressure
- c) Change of state
- d) Ideal gas molecules

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

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Thank you for your continued support,

**Science department**