

## Science Department

### Staff

Dr Matthew Binding - Subject Leader & Physics

Mr Michael Airey – Biology

Ms Katie Shaw - Chemistry

Mrs Mhairi Jauncey - Laboratory Technician

### KS3 Information

#### (i) Induction

All students in year 7 have a two week induction period at the start of the September term. This involves preparing students to become effective and safe learners in Science by studying Safety in Practical Sessions, Learning Skills and a Brain Awareness program.

#### (ii) Course content

Students in KS3 Science follow the National Curriculum Scheme of work for Science. This involves the study of the following topics.

Year	Biology	Chemistry	Physics
7	Animal & Plant Cells, Tissues & Organs, Reproduction in Plants & Animals, Classification & Food webs.	Acids & Alkalis, Simple Chemical Reactions, Particle model of Solids, Liquids & gases, Solutions, Weathering & Fossils.	Energy Resources, Electrical Circuits, Forces & their Effects, The Solar System & Beyond.
8	Food & Digestion, Respiration, Microbes & Disease, Ecological Relationships	Atoms & Elements, Compounds & Mixtures, Rocks & Weathering, The Rock Cycle	Heating & Cooling, Light, Magnets & Electromagnets. Sound & Hearing.
9	Inheritance & Selection, Fit & Healthy, Plants & Photosynthesis, Plants for Food.	Reactions of Metals & Metal Compounds, Patterns of Reactivity, Environmental Chemistry, Using Chemistry.	Energy & Electricity, Gravity & Space, Speeding Up. Pressure & Moments.

#### (iii) Methods of assessment.

##### a) End of topic tests.

Ongoing student attainment is assessed using levelled and differentiated end of topic tests. Student attainment is monitored against their yearly and Key stage attainment targets. Students whose performance is significantly lower than their targets are expected to re-sit assessments. Students who outperform their targets consistently have their targets elevated.

##### b) Assessing Pupil Performance (APP) Homework Tasks.

Students in years 7 and 8 have two levelled Science APP task homework assignments. These tasks are used to confirm attainment levels emerging from end of topic tests.

#### v) Homework

Homework for years 7 & 8 follow the school timetable can be a combination of tasks that summarise and consolidate learning from the lesson of the day, APP tasks ( these are the tasks that are the primary focus for detailed marking and feedback – there are two of them per Science subject per year) and revision exercises which may be paper or web-based.

Year 9 homeworks are similar to years 7 and 8 but change to those from the GCSE programme at February half-term, when the GCSE programmes begin.

#### **vi) Additional Activities**

Additional activities which also contribute towards Science and Art Specialist Status:

##### **Year 7**

The River Study. A one day fieldwork study on the River Nidd near Lofthouse. An opportunity to practise field study techniques and use data-logging equipment.

##### **Year 8**

**Brimham Rocks and The Coldstones Cut Art/Science visit.** An opportunity to combine a scientific understanding of the formation of rocks at Brimham and Coldstones Quarry with an Artistic appreciation of their form.

**The Deep Art/Science visit.** A one day visit to “The Deep” aquatic visitor attraction in Hull. A scientific understanding of food chains and webs and the evolution and adaptations of marine animals and plants is combined with an Artistic appreciation of the creatures on display.

##### **Year 9**

G&T activities. A variety of activities, for our most able students, involving for instance, forensic science, DNA profiling and other science-based activities usually presented by the University of Sheffield.