



**Subject:** Science

**Year/Course:** Year 7

### **Knowledge and Understanding**

By the end of this course, students will have acquired a broad knowledge base on the following scientific concepts; Food, digestion and respiration (Biology), Solutions, particles, elements, compounds and mixtures (Chemistry) and Light, sound, magnets and electromagnets (Physics).

### **Subject Specific Skills developed**

Students develop subject specific skills in the following areas;

- a) Theoretical understanding: Recall of scientific information, understanding, application of knowledge, analysis, synthesis and evaluative techniques.
- b) Practical skills; Designing experimental procedures, collecting, processing and presenting practical data, using scientific theory to offer relevant conclusions and evaluating the strengths and limitations of methods and techniques. In addition, students ability to manipulate apparatus accurately and safely is also assessed.

### **Transdisciplinary and Generic Skills developed**

Students also develop the following trans disciplinary skills in Science.

- a) Research skills.
- b) ICT presentation skills.
- c) Extended writing skills.
- d) Attitude to learning. (This includes a number of skills from the IB learner profile including, organization, self reflection, teamwork, motivation, being inquisitive.)  
In addition, students continue the Cognitive Acceleration in Science Education programme to develop their 'Thinking Skills'.

### **Assessment**

All assessments in Science are formative and involve student reflection, self evaluation and target setting.

- a) Theoretical understanding (written tests)
- b) Practical assessments.
- c) Research projects.
- d) ICT presentations.
- e) Extended writing assessments.
- f) Attitude to learning.

### **Challenge for All**

All activities are differentiated to support, challenge and extend students of all abilities throughout this Science course.

**Subject: Science**  
**Year/Course: Year 8**

### **Knowledge and Understanding**

By the end of this course, students will have acquired a broad knowledge base on the following scientific concepts; Food, digestion and respiration (Biology), Solutions, particles, elements, compounds and mixtures (Chemistry) and Light, sound, magnets and electromagnets (Physics).

### **Subject Specific Skills developed**

Students develop subject specific skills in the following areas;

- a) Theoretical understanding: Recall of scientific information, understanding, application of knowledge, analysis, synthesis and evaluative techniques.
- b) Practical skills; Designing experimental procedures, collecting, processing and presenting practical data, using scientific theory to offer relevant conclusions and evaluating the strengths and limitations of methods and techniques. In addition, students ability to manipulate apparatus accurately and safely is also assessed.

### **Transdisciplinary and Generic Skills developed**

Students also develop the following trans disciplinary skills in Science.

- a) Research skills.
- b) ICT presentation skills.
- c) Extended writing skills.
- d) Attitude to learning. (This includes a number of skills from the IB learner profile including, organization, self reflection, teamwork, motivation, being inquisitive.)  
In addition, students continue the Cognitive Acceleration in Science Education programme to develop their 'Thinking Skills'.

### **Assessment**

All assessments in Science are formative and involve student reflection, self evaluation and target setting.

- a) Theoretical understanding (written tests)
- b) Practical assessments.
- c) Research projects.
- d) ICT presentations.
- e) Extended writing assessments.
- f) Attitude to learning.

### **Challenge for All**

All activities are differentiated to support, challenge and extend students of all abilities throughout this Science course.

**Subject: Science**  
**Year/Course: Year 9**

### **Knowledge and Understanding**

By the end of this course, students will have acquired a broad knowledge base on the following scientific concepts; Plants, drugs and inheritance (Biology), Acids, bases, salts and the reactivity series (Chemistry) and Motion, energy, pressure and moments (Physics).

### **Subject Specific Skills developed**

Students develop subject specific skills in the following areas;

- a) Theoretical understanding: Recall of scientific information, understanding, application of knowledge, analysis, synthesis and evaluative techniques.
- b) Practical skills; Designing experimental procedures, collecting, processing and presenting practical data, using scientific theory to offer relevant conclusions and evaluating the strengths and limitations of methods and techniques. In addition, students ability to manipulate apparatus accurately and safely is also assessed.

### **Transdisciplinary and Generic Skills developed**

Students also develop the following transdisciplinary skills in Science.

- a) Research skills.
- b) ICT presentation skills.
- c) Extended writing skills.
- d) Attitude to learning. (This includes a number of skills from the IB learner profile including, organization, self reflection, teamwork, motivation, being inquisitive. In addition, students continue the Cognitive Acceleration in Science Education programme to develop their 'Thinking Skills'.

Students also participate in an end of year Science project that allows them to work in teams solving practical scientific problems and presenting their results. This project is assessed on generic skills in self motivation, teamwork and their ability to self reflect.

### **Assessment**

All assessments in Science are formative and involve student reflection, self evaluation and target setting.

- a) Theoretical understanding (written tests)
- b) Practical assessments.
- c) Research projects.
- d) ICT presentations.
- e) Extended writing assessments.
- f) Attitude to learning.
- g) Motivation, teamwork and self reflection (as a part of the Yr 9 Science project).

### **Challenge for All**

All activities are differentiated to support, challenge and extend students of all abilities throughout this Science course.

**Subject: Science**  
**Year/Course: Year 10**

### **Knowledge and Understanding**

By the end of this course, students will have acquired a broad knowledge base on the following concepts as described in the IGCSE EdExcel Biology, Chemistry and Physics courses;

Biology: Cells and microbes, Human nutrition, Respiration and gas exchange, Human Transport, Homeostasis and nerves, Plants.

Chemistry: Bonding, formula and equations, Periodic Table, Acids and Energetics, Rates, Preparation and Analysis, Organic (1).

Physics: Forces, Matter, Energy and Circuits.

### **Subject Specific Skills developed**

Students develop subject specific skills in the following areas;

- a) Theoretical understanding: Recall of scientific information, understanding, application of knowledge, analysis, synthesis and evaluative techniques.
- b) Practical skills; Designing experimental procedures, collecting, processing and presenting practical data, using scientific theory to offer relevant conclusions and evaluating the strengths and limitations of methods and techniques. In addition, students ability to manipulate apparatus accurately and safely is also assessed.

### **Transdisciplinary and Generic Skills developed**

Students also develop the following trans disciplinary skills in Science.

- a) Research skills.
- b) ICT presentation skills.
- c) Extended writing skills.
- d) Attitude to learning. (This includes a number of skills from the IB learner profile including, organization, self reflection, teamwork, motivation, being inquisitive.)

### **Assessment**

All assessments in Science are formative and involve student reflection, self evaluation and target setting.

- a) Theoretical understanding (written tests)
- b) Practical assessments.
- c) Research projects.
- d) ICT presentations.
- e) Extended writing assessments.
- f) Attitude to learning.

### **Challenge for All**

All activities are differentiated to support, challenge and extend students of all abilities throughout this Science course.

**Subject: Science**  
**Year/Course: Year 11**

### **Knowledge and Understanding**

By the end of this course, students will have acquired a broad knowledge base on the following concepts as described in the IGCSE EdExcel Biology, Chemistry and Physics courses;

Biology: Ecology, Human influences and food, Reproduction and inheritance, Cloning and GM.

Chemistry: Organic, Quantitative Chem, Structure, properties, metals and electrolysis, Ammonia and equilibrium.

Physics: Momentum and Astronomy, Waves, Mains and magnetism, Atomic Physics. Students can opt for either the Double award or Triple award qualification at the end of the course.

### **Subject Specific Skills developed**

Students develop subject specific skills in the following areas;

- a) Theoretical understanding: Recall of scientific information, understanding, application of knowledge, analysis, synthesis and evaluative techniques.
- b) Practical skills; Designing experimental procedures, collecting, processing and presenting practical data, using scientific theory to offer relevant conclusions and evaluating the strengths and limitations of methods and techniques. In addition, students ability to manipulate apparatus accurately and safely is also assessed.

### **Transdisciplinary and Generic Skills developed**

Students also develop the following trans disciplinary skills in Science.

- a) Research skills.
- b) ICT presentation skills.
- c) Extended writing skills.
- d) Attitude to learning. (This includes a number of skills from the IB learner profile including, organization, self reflection, teamwork, motivation, being inquisitive.)

### **Assessment**

All assessments in Science are formative and involve student reflection, self evaluation and target setting.

- a) Theoretical understanding (written tests)
- b) Practical assessments.
- c) Research projects.
- d) ICT presentations.
- e) Extended writing assessments.
- f) Attitude to learning.

### **Challenge for All**

All activities are differentiated to support, challenge and extend students of all abilities throughout this Science course.