



# Newton Moore Senior High School

## Science

### Year 9 Science

### 2016



## Course Description

### Science Inquiry Skills

Science inquiry involves identifying and posing questions; planning, conducting and reflecting on investigations; processing, analysing and interpreting evidence; and communicating findings. This strand is concerned with evaluating claims, investigating ideas, solving problems, drawing valid conclusions and developing evidence-based arguments and is carried out over the entire year within the Science Understanding sub-strands.

### Science as a Human Endeavour

Through science, humans seek to improve their understanding and explanations of the natural world. Science influences society by posing and responding to social and ethical questions, and scientific research is itself influenced by the needs and priorities of society. This strand highlights the development of science as a unique way of knowing and doing, and the role of science in contemporary decision making and problem solving. It acknowledges that in making decisions about science practices and applications, ethical and social implications must be taken into account. It is carried out over the entire year within the Science Understanding sub-strands.

### Science Understanding

The core content of science includes Earth and Space Sciences, Physical Sciences, Biological Sciences and Chemical Sciences.

#### *Earth and space sciences*

Students will focus on the theory of plate tectonics and how this can be used to explain global patterns of geological activity and continental movement.

#### *Physical sciences*

This term, students will look at how energy transfer through different mediums can be explained using wave and particle models.

#### *Biological sciences*

Students will learn that multi-cellular organisms rely on coordinated and interdependent internal systems to respond to changes in the environment. Students will also learn that ecosystems consist of communities of interdependent organisms and abiotic components of the environment. Students will examine how matter and energy flow energy flow through these systems.

#### *Chemical sciences*

Students will examine how matter is made of atoms which are composed of protons, neutrons and electrons, and that natural radioactivity arises from the natural decay of atoms. Students will discover that chemical reactions involve rearranging atoms to form new substances, and that during a chemical reaction mass is not created or destroyed. Students will identify and discuss different types of chemical reactions (such as combustion and reaction of acids), and how chemical reactions are important in both living and non-living systems and involve energy transfer.

## Assessment Outline

Assessment Task	Outcome	Date Due	Student score	Max Score	% Weight
<b>SEMESTER 1</b>					
 Biology					
Task 1 Biology Test – Body Control	Biological Sciences, Science Inquiry Skills, Science as a Human Endeavour	Term1 Week 5		100	10
Task 2 Biology Inquiry	Biological Sciences, Science Inquiry Skills	Term 1 Week 7		100	5
Task 3 Biology Test Ecosystems	Biological Sciences, Science Inquiry Skills, Science as a Human Endeavour	Term 1 Week 10		100	10
 Science Inquiry					
Task 4 Chemistry Inquiry	Science Inquiry Skills, Chemical Sciences	Term 2 Week 4		100	5
<b>SEMESTER 2</b>					
 Chemistry					
Task 5 Chemistry Test	Chemical Sciences ,Science Inquiry Skills, Science as a Human Endeavour	Term 2 Week 8		100	20
 Science Inquiry					
Task 6 Student Investigation	Science Inquiry Skills	Term 3 Week 3		100	10
 Earth and Space					
Task 7 Earth and Space Inquiry	Earth and Space, Science Inquiry Skills	Term 3 Week 5		100	5
Task 8 Earth and Space Test	Earth and Space, Science as a Human Endeavour	Term 3 Week 8		100	15
 Physics					
Task 9 Physics Inquiry	Physical Sciences ,Science Inquiry Skills	Term 3 Week 10		100	5
Task 10 Physics Test	Physical Sciences ,Science Inquiry Skills, Science as a Human Endeavour	Term 4 Week 6		100	10
 Exam					
Task 11 Exam Semester 2	Physical Sciences , Earth and Space Science Inquiry Skills, Science as a Human Endeavour	Term 4 Week 6		100	5
Semester 1 % Total Weight 14 weeks					30.0
Semester 2 % Total Weight 26 weeks					70.0
Total					100.0

The above weighting are intended to show the importance of each task. The allocation of a grade at the end of a semester is determined based on grade related descriptors issued by School Curriculum and Standards Authority.