Combined Science: Trilogy. Biology. Chemistry. Physics.	AO1 Demonstrate knowledge and understanding of: scientific ideas; scientific techniques and procedures.	AO2 Apply knowledge and understanding of: scientific ideas; scientific enquiry, techniques and procedures.	AO3 Analyse information and ideas to: interpret and evaluate; make judgments and draw conclusions; develop and improve experimental procedures.
% of Total Grade	40	40	20
Grade 9	**Can independently…** …Demonstrate knowledge and understanding of scientific ideas, scientific techniques and procedures. **…**Demonstrate a comprehensive understanding of the nature of Science, its laws, its applications, and the influences of society on Science and Science on society. …Understand the relationships between scientific advances, their ethical implications and the benefits and risks associated with them. …Use scientific and technical knowledge, terminology and conventions appropriately, and consistently showing a detailed understanding of scale in terms of time, size and space.	**Can independently…** …Apply knowledge and understanding of scientific ideas, scientific enquiry, techniques and procedures. ….Show a comprehensive understanding of the relationships between hypotheses, evidence, theories and explanations and make effective use of models to explain phenomena, events and processes. …Use a wide range of appropriate methods, sources of information and data consistently, applying relevant skills to address scientific questions, solve problems and test hypotheses.	**Can independently…** …Analyse information and ideas to interpret and evaluate, make judgements and draw conclusions, and develop and improve experimental procedures. ….Show a comprehensive understanding of the relationships between hypotheses, evidence, theories and explanations and make effective use of models to explain phenomena, events and processes. …Use a wide range of appropriate methods, sources of information and data consistently, applying relevant skills to address scientific questions, solve problems and test hypotheses.
Grade 8	**Can independently…** **…**Demonstrate a comprehensive understanding of the nature of Science, its laws, its applications, and the influences of society on Science and Science on society. …Understand the relationships between scientific advances, their ethical implications and the benefits and risks associated with them. …Use scientific and technical knowledge, terminology and conventions appropriately, and consistently showing a detailed understanding of scale in terms of time, size and space.	**Can independently…** …Show a comprehensive understanding of the relationships between hypotheses, evidence, theories and explanations and make effective use of models to explain phenomena, events and processes. …Use a wide range of appropriate methods, sources of information and data consistently, applying relevant skills to address scientific questions, solve problems and test hypotheses.	**Can independently…** …Show a comprehensive understanding of the relationships between hypotheses, evidence, theories and explanations and make effective use of models to explain phenomena, events and processes. …Use a wide range of appropriate methods, sources of information and data consistently, applying relevant skills to address scientific questions, solve problems and test hypotheses.

Grade 7	**Can independently…** …Critical evaluate information and evidence. …Make strong and well-structured explanations in a variety of ways. …Suggest skills that would be necessary to solve scientific problems. …Describe ways that a society influences Science. …Evaluate the effects science has on society. …Explain the unintended consequences of scientific development. …Make balanced judgments about the impact of Science on society.	**Can independently…** …Describe processes in detail using abstract ideas and models. …Use an appropriate approach to evaluate different explanations or arguments. …Analyse new scientific developments.	**Can independently…** …Give explanations for unexpected observations and results. …Process and use data and link the importance of variables. …Critically interpret/evaluate conflicting evidence. …Suggest ways to improve results and ways to take an investigation further. …Justify strategies to investigate different scientific questions. …Select appropriate data collection methods. …Adapt work to control risks by taking expert advice.
Grade 6	**Can independently…** …Explain how information may be manipulated in order to influence ideas. …Represent abstract ideas using symbols, flow diagrams and graphs. …Explain how scientists have contributed to Science. …Suggest ways that Science/technology can be influenced, and can influence, world views …Recognise economic, ethical and social arguments for and against Science. …Understand how creative thinking helps with the development of new ideas.	**Can independently…** …Use scientific ideas to describe simple processes. …Use simple models to describe scientific ideas. …Give scientific evidence to debate for and against arguments.	**Can independently…** …Recognise patterns in results, including graphs. …Draw conclusions from data presented in different ways. …Give scientific evidence in conclusions. …Suggest ways to improve practical work. …Decide when it is necessary to carry out a fair test. …Select the right equipment for a practical. …Take measurements or observations during a practical and identify ranges. …Know the risks involved in a practical.
Grade 5	**Can independently…** …Identify lack of balance in the presentation of info and evidence. …Communicate qualitative or quantitative data appropriately. …Use scientific and mathematical symbols when communicating ideas. …Tell the difference between primary, secondary sources and simulations.	**Can independently…** …Use more than one abstract idea or model to Explain processes. …Identify strengths and weaknesses of different models. …Describe scientific evidence that supports or refutes different arguments. …Understand how new scientific evidence is discussed and interpreted.	**Can independently…** …Suggest why there might be inconsistencies or limitations in evidence collected. …Select and manipulate data and use it In my conclusions. …Give conclusions that link to the evidence collected. …Make valid comments on quality of data. …Plan practical work and Identify variables which are dependent and independent. …Justify choice of results collection.

	…Describe how decisions on the use of Science differ in economies and cultures. …Explain how societies are affected by different science ideas. …Describe how scientific developments help scientists pose new questions. …Describe how Science links to different jobs.		…Choose appropriate ranges, numbers and values. …Recognise familiar risks and take action to control them.
Grade 4	**Can independently…** …Tell the difference between opinion and evidence relating to Science. …Decide on the best way to represent data. …Use scientific and mathematical symbols when communicating ideas. …Suggest how teamwork in practical work may improve results. …Describe viewpoints a range of people may have on Science. …Indicate how scientific or technological developments may affect groups of people. …Link uses of science to scientific ideas.	**Can independently…** …Use more than one abstract idea or model to Describe processes. …Explain processes and suggest solutions to problems by using models. …Recognise scientific questions that might not have answers. …Understand how scientists use ideas and evidence for scientific ideas.	**Can independently…** …Recognise patterns in results, including graphs. …Give reasons for differences in repeated investigations. …Draw conclusions using more than one piece of evidence. …Evaluate results and method and suggest ways to improve them. …Recognise important variables in practical work. …Explain why certain equipment or Information for a practical is used. …Repeat investigations where appropriate. …Understand risks involved and take necessary action.
Grade 3	**Can independently…** …Present data appropriately. …Use appropriate scientific language to communicate ideas. …Use scientific and mathematical symbols when communicating ideas. …Describe pros and cons of different scientific and technological developments. …Recognise uses of different scientific ideas. …Point out areas of our lives and jobs that involve Science.	**Can independently…** …Use scientific ideas to describe simple processes. …Use simple models to describe scientific ideas. …Give scientific evidence to debate for and against arguments.	**Can independently…** …Recognise patterns in results, including graphs. …Draw conclusions from data presented in different ways. …Give scientific evidence in conclusions. …Suggest ways to improve practical work. …Decide when it is necessary to carry out a fair test. …Select the right equipment for a practical. …Take measurements or observations during a practical and identify ranges. …Know the risks involved in a practical.
Grade 2	**Can independently…** …Present some data appropriately.	**Can independently…** …Use some scientific ideas to describe simple processes.	**Can independently…** …Recognise some patterns in results, including graphs.

	…Use some appropriate scientific language to communicate ideas. …Use some scientific and mathematical symbols when communicating ideas. …Recognise the pros and cons of different scientific and technological developments. …Recognise uses of different scientific ideas. …Point out areas of our lives and jobs that involve Science.	…Use some simple models to describe scientific ideas. …Give some scientific evidence to debate for and against arguments.	…Draw limited conclusions from data presented in different ways. …Give limited scientific evidence in conclusions. …Suggest ways to improve practical work. …Identify when it is necessary to carry out a fair test. …Select some of the right equipment for a practical. …Take some measurements or observations during a practical and identify ranges. …Know the risks involved in a practical.
Grade 1	**Can independently…** …Collect and present data in a simple format. …Use some scientific language to communicate simple ideas. …Use some scientific and mathematical symbols when communicating ideas. …Recognise uses of some different scientific ideas.	**Can independently…** …Use some scientific ideas to describe very simple processes. …Use some simple models with help to describe scientific ideas. …Give some scientific evidence to debate for and against arguments.	**Can independently…** …Recognise some patterns in results. …Draw limited conclusions from data presented in a simple table …Give limited scientific evidence in conclusions. …Identify why it is necessary to carry out a fair test. …Select some of the right equipment for a practical. …Take some measurements or observations during a practical. …Know some of the risks involved in a practical.
Grade H **(Entry 3)**	**Can independently…** …Collect and present data in a simple format. …Use some scientific language to communicate simple ideas. …Recognise uses of some very basic scientific ideas.	**Can independently…** …Use some scientific ideas to describe very simple processes. …Use some simple models with help to describe scientific ideas.	**Can independently…** …Recognise some patterns in results. …Draw a conclusion from data presented in a simple table. …Identify why it is necessary to carry out a fair test. …Select some of the right equipment for a practical. …Take some measurements or observations during a practical. …Know some of the risks involved in a practical.
Grade I **(Entry 2)**	**Can independently…** …Collect and present data in a simple format. …Use some scientific language to communicate simple ideas.	**Can independently…** …Use some ideas to describe simple processes.	**Can independently…** …Recognise some patterns in results with. …Select some of the right equipment for a practical. …Take some measurements or observations during a practical. …Know some of the risks involved in a practical.

Grade J (Entry 1)	**Can independently…** … Collect and present data in a simple format. … Use some scientific language to communicate simple ideas.	**Can independently…** …Use some ideas to describe very simple processes.	**Can independently…** …Select some of the right equipment for a practical. …Take some observations during a practical. …Know some of the risks involved in a practical.
Grade K	**With help can…** … Collect and present data in a simple format. …Use simple scientific terms to communicate very simple ideas.	**Can independently…** …Use some ideas to describe very simple processes.	**Can independently…** …Select some of the right equipment for a practical. …Take some observations during a practical. …Know some of the risks involved in a practical.
Grade L	**With help can…** …Use every day language to communicate very simple ideas.	**With help can…** …Use some ideas to describe very simple processes.	**Can independently…** …Select some of the right equipment for a practical. …Take some observations during a practical. …Know some of the risks involved in a practical.
Grade M	**With help can…** …Use some everyday language to communicate very simple ideas.	**With help can…** …Use some ideas to describe very simple processes.	**With help can…** …Select some of the right equipment for a practical. …Take some observations during a practical. …Know some of the risks involved in a practical.