

PROGRESS SCIENCE GRADE CRITERIA

Grade	Y11	Y10	Y9	Y8	Y7	AO1:	AO2:	AO3:
9						Top 20% of candidates who achieve grades 7-8		
8						<ul style="list-style-type: none"> Make exceptional evaluations and judgements on a very wide variety of scientific issues. Make exceptional evaluations and judgements on a wider range of scientific evidence including its nature/origin/purpose. Produce work with exceptional structure and precision, making fluent use of key scientific terms. <p>Manipulate data with ease presenting it clearly and purposefully.</p>		
7						<ul style="list-style-type: none"> Show detailed and precise knowledge of science Show comprehensive understanding of science, its laws and the influence on society Show detailed and precise understanding of scale in terms of times, size and space 	<ul style="list-style-type: none"> Apply and justify a detailed and precise use of mathematical, technological and scientific skills. Show a comprehensive understanding of the relationships between hypotheses, evidence, theories and explanations. Make detailed and precise use of models, mathematical equations, sources of information and processes, justifying where appropriate. 	<ul style="list-style-type: none"> Justify and evaluate the arguments linked with scientific developments and explanations taking into account the limitations of the available qualitative and quantitative evidence. Make detailed, evidence-based conclusions (<i>e.g. discuss the scientific issues associated with fossil fuels v nuclear power</i>).
6						<ul style="list-style-type: none"> Critically evaluate and make substantiated judgements about scientific concepts and models Ensure work has an analytical structure and with well-selected information. 	<ul style="list-style-type: none"> Evaluate what influences technological and scientific developments (<i>e.g. satellites to navigation</i>) 	<ul style="list-style-type: none"> Evaluate the ethical and moral issues linked with scientific developments (<i>e.g. discuss the scientific issues associated with fossil fuels v nuclear power</i>) Evaluate the relevance of sources of information.
5						<ul style="list-style-type: none"> Analyse different scientific concepts and models and make links between them (<i>e.g. linking energy and forces</i>) Ensure work is well structured and uses information and terms selectively to help back up answers. Put qualitative (words) and quantitative (numbers) data into appropriate graphs. 	<ul style="list-style-type: none"> Analyse how technological and scientific developments impact society (<i>e.g. debating whether we should bother exploring space</i>). Choose appropriate equations manipulating them where necessary. 	<ul style="list-style-type: none"> Analyse, interpret and evaluate a range of qualitative and quantitative data and information. Analyse the limitations of evidence and develop arguments with supporting evidence.
4						<ul style="list-style-type: none"> Explain scientific ideas using abstract ideas or models. Communicate secure subject knowledge. Show understanding of the nature of science and explain its applications and influences on society. Explain how scientific advances have ethical implications, benefits and risks. 	<ul style="list-style-type: none"> Apply appropriate skills including communication, technological and mathematical skills (<i>e.g. calculating a mean</i>). Link these skills to a range of practical and other contexts. Recognise the links between hypotheses, evidence, theories and explanations. Apply skills to answer questions, solve problems and test hypotheses. Manipulate simple maths equations (<i>e.g. rearranging</i>) 	<ul style="list-style-type: none"> Explain the limitations of evidence and develop arguments. Draw conclusions, linking them with available evidence.
3						<ul style="list-style-type: none"> Describe simple scientific ideas using scientific knowledge, models (<i>e.g. animations, diagrams</i>) and evidence (<i>e.g. data, results, textbooks, and internet</i>). 	<ul style="list-style-type: none"> Describe the positive and negative effects of scientific and technological developments (<i>e.g. x-rays leading to medical improvements</i>). 	<ul style="list-style-type: none"> Describe why there are some of the good and bad things about different scientific developments using keywords (<i>e.g. describing how fossil fuels are bad for the environment</i>)
2						<ul style="list-style-type: none"> Recall and select scientific ideas and communicate basic knowledge. 	<ul style="list-style-type: none"> Recall straightforward processes explaining very simple scientific phenomena, events and processes. Recall maths equations, units and basic practical skills. 	<ul style="list-style-type: none"> Test ideas and draw elementary conclusions with basic numerical and descriptive detail.
1						<ul style="list-style-type: none"> List differences, similarities and changes. Make simple models (<i>e.g. a ball representing a planet</i>). 	<ul style="list-style-type: none"> List some of the purposes of scientific and technological developments. 	<ul style="list-style-type: none"> List some of the good and bad things about different scientific developments (<i>e.g. listing good and bad things about fossil fuels</i>)