Science Level Descriptors

Grade	Required knowledge / skills
A	Learners recall, select and communicate precise knowledge and detailed understanding of science. They demonstrate a comprehensive understanding of the nature of science, its laws, its applications and the influences of society on science and science on society. They understand the relationships between scientific advances, their ethical implications and the benefits and risks associated with them. They use scientific and technical knowledge, terminology and conventions appropriately and consistently, showing a detailed understanding of scale in terms of time, size and space. They apply appropriate skills, including communication, mathematical and technological skills, knowledge and understanding effectively in a wide range of practical and other contexts. They show a comprehensive understanding of relationships between hypotheses, evidence, theories and explanations and make effective use of models to explain phenomena, events and processes. They 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. Learners analyse, interpret and critically evaluate a broad range of quantitative data and information systematically to develop arguments and explanations taking account f the limitations of the available evidence. They make reasoned judgments consistently and draw detailed, evidence based conclusions.
B	Learners recall, select and communicate precise knowledge and detailed understanding of science. They demonstrate a solid understanding of the nature of science, its laws, its applications and the influences of society on science and science on society. They understand the relationships between scientific advances, their ethical implications and the benefits and risks. They use scientific and technical knowledge, terminology and conventions effectively, showing a detailed understanding of scale in terms of time, size and space. They apply appropriate skills, including communication, mathematical and technological skills, knowledge and understanding effectively in a wide range of practical and other contexts. They are starting to show a comprehensive understanding of relationships between hypotheses, evidence, theories and explanations and make effective use of models to explain phenomena, events and processes. They use a range of appropriate methods, sources of information and data, applying relevant skills to address scientific questions, solve problems and test hypotheses. Learners analyse, interpret and critically evaluate quantitative data and information systematically to develop arguments and explanations taking account of the limitations of the available evidence. They can make reasoned judgments and draw evidence based conclusions.
C	Learners recall, select and communicate secure knowledge and understanding of

	science. They demonstrate understanding of the nature of science, its laws, its applications and the influences of society on science and science on society. They understand how scientific advances may have ethical implications, benefits and risks. They use scientific and technical knowledge, terminology and conventions appropriately and, showing a detailed understanding of scale in terms of time, size and space. They apply appropriate skills, including communication, mathematical and technological skills, knowledge and understanding effectively in a range of practical and other contexts. They recognise, understand and use straightforward links between hypotheses, evidence, theories and explanations. They use models to explain phenomena, events and processes. Using appropriate methods, sources of information and data, they apply their skills to answer scientific questions, solve problems and test hypotheses. Learners analyse, interpret and evaluate a range of quantitative and qualitative data and information. They understand the limitations of evidence and develop arguments with sporting explanations. They draw conclusions consistent with the available evidence.
D	Learners recall, select and communicate knowledge and understanding of science. They demonstrate understanding of the nature of science, its laws, its applications and the influences of society on science and science on society. They understand how scientific advances may have ethical implications, benefits and risks. They use scientific and technical knowledge, terminology and conventions, showing an understanding of scale in terms of time, size and space. They apply appropriate skills, including communication, mathematical and technological skills, knowledge and understanding in a range of practical and other contexts. They recognise, understand and use some links between hypotheses, evidence, theories and explanations. They use models to explain phenomena, events and processes. Using a range of methods, sources of information and data, they apply their skills to answer scientific questions, solve problems and test hypotheses. Learners analyse, interpret and evaluate some quantitative and qualitative data and information. They understand the limitations of evidence and draw conclusions consistent with the available evidence.
E	Learners recall, select and communicate knowledge and understanding of science. They are starting to demonstrate understanding of the nature of science, its laws, its applications and the influences of society on science and science on society. They understand how scientific advances may have ethical implications, benefits and risks. They use scientific and technical knowledge, terminology and conventions, showing some understanding of scale in terms of time, size and space. They can apply skills, including communication, mathematical and technological skills, knowledge and understanding in some practical and other contexts. They recognise, understand and use some links between hypotheses, evidence,

	theories and explanations. They are starting to use models to explain phenomena, events and processes. Using some methods, sources of information and data, they are starting to apply their skills to answer scientific questions, solve problems and test hypotheses. Learners analyse, interpret and evaluate some quantitative and qualitative data and information. They can draw elementary conclusions having collected limited evidence.
F	Learners recall, select and communicate their limited knowledge and understanding of science. They have a limited understanding that scientific advances may have ethical implications, benefits and risks. They recognise simple interrelationships between science and society. They use limited scientific and technical knowledge, terminology and conventions, showing some understanding of scale in terms of time, size and space. They apply skills, including limited communication, mathematical and technological skills, knowledge and understanding in practical and some other contexts. They show limited understanding of the nature of science and its applications. They can explain straightforward models of phenomena, events and processes. Using a limited range of skills and techniques, they answer scientific questions, solve straightforward problems and test ideas. Learners interpret and evaluate some quantitative and qualitative data and information from a limited range of sources. They can draw elementary conclusions having collected limited evidence.