*Mandatory for prize winners

Level	Description
5	The student has provided **clear and convincing evidence** that they: ● completed a **valid** scientific investigation***** ● had **well-defined** aims and **clearly expressed** the subject of the investigation* ● formulated a **testable hypothesis** based on prior research and/or previous observations* ● identified **independent** and **dependent variables** (or **two variables** for correlation) and took deliberate steps to regulate and keep **controlled variables** constant* ● made relevant observations using appropriately **replicated trials** or **gathered relevant secondary data*** ● demonstrated **deep knowledge** and **understanding** of related science concepts* ● used **critical thinking** to synthesise information and construct **evidence-based arguments*** ● based their explanations on **plausible** scientific processes or causes* ● addressed an issue of **social** or **scientific significance*** ● have been **innovative** or **creative** in their approach, content, methodology or communication to the audience* ● included a **concise** and **comprehensive** summary of relevant research in the field and its **reliability** assessed ● accurately **identified** and took steps to **minimise** potential investigative risks and ethical problems. ● **identified** and **assessed** a range of procedures and provided **convincing arguments** for the procedure selected ● **justified** the selection of equipment, technologies and/or secondary data to optimise the **accuracy** of the collected data ● recorded data in an **organised, sequential** and **logical** manner using correct units ● used **analytical tools** to **evaluate** trends, patterns and relationships in collected data ● suggested **creative** and **worthwhile** directions for future research in a succinct way ● **developed, proposed** and **evaluated** inquiry questions to identify an issue or phenomenon that could be investigated scientifically ● included a **comprehensive** logbook detailing the investigative process, from brainstorming, through data collection and analysis to the final conclusion ● comprehensively **acknowledged** the **nature** of all assistance ● used **clear, concise and consistent** scientific language and terminology that is **meaningful** for the intended audience or purpose ● selected and used **suitable** forms of **visual, written and/or digital** forms of communication
4	The student has provided **substantial evidence** that they: ● completed a **well-planned** scientific investigation ● **proposed** and **developed** inquiry questions that could be investigated scientifically ● had **realistic** aims and **well-described** the subject of the scientific investigation ● included a **summary** of relevant information and checked its **reliability** ● proposed a **hypothesis** based on prior research or previous observations ● had a **detailed knowledge** and **understanding** of the science concepts used in the investigation ● conducted a carefully **considered** risk assessment prior to investigation. ● selected equipment and technologies to improve the **accuracy** of the collected data ● had been **innovative** or **creative** in content or methodology ● gathered experimental data over a **number of trials** using appropriate technologies or gathered relevant secondary data ● recorded data in a **systematic** manner using **correct units** ● identified **independent** and **dependent variables** and worked to control them ● **analysed** and **explained** trends, patterns and relationships in the data collected ● synthesised collected data and constructed **evidence-based arguments** ● used **critical thinking** to derive conclusions, suggesting ideas for future research ● included a log book **detailing** the different stages of the investigative process ● **acknowledged** and provided details of any assistance given ● communicated the report with **effective** use of language, visuals and sequencing

Level	Description
3	The student has provided **evidence** that they: ● completed a scientific investigation that shows evidence of **careful** planning ● **proposed** relevant inquiry questions that could be investigated scientifically ● had **measurable** aims and the subject of the investigation was **clearly** described ● collected background research with **some relevance** to the subject of investigation ● proposed a **relevant hypothesis** ● demonstrated **good knowledge** and **understanding** of the science concepts used in the investigation ● had some **innovative** or **creative** ideas but did not develop them ● conducted a **risk assessment** prior to any first-hand experimentation ● used appropriate equipment and technologies for better **accuracy** ● gathered first-hand data **with replication** ● used thorough scientific methodology including the **control** of **variables** ● identified **obvious** trends, patterns and relationships in the data ● used critical thinking to formulate conclusions that were **supported** by data ● provided **supporting** documentation in the accompanying logbook ● put forward some **good** and **practical** ideas for future improvements ● **acknowledged** any assistance given ● communicated the report with **good** use of language, visuals and sequencing appropriate to the intended audience
2	The student has provided **evidence** that they: ● completed a scientific investigation with **moderate** planning ● launched into the investigation without a **clear inquiry question** to drive the project ● had some **tentative** aims and the subject of the investigation was **adequately** described ● performed **limited** or **general** background research ● had **minimal** understanding of the science concepts used in the investigation ● lacked **innovative** or **creative** ideas ● considered **experimental risks** but did not conduct a formal **risk assessment** ● used equipment and technologies without considering **accuracy** ● gathered **some** first-hand data **without replication** ● **controlled** some **variables** ● identified **limited** trends, patterns and relationships in the data ● formulated conclusions that were **not fully supported** by gathered data ● provided **limited** or **disorganised** documentation in the accompanying logbook ● put forward **some** ideas for future improvements ● received some assistance but **did not provide details** of the assistance recieved ● communicated the report with **adequate** use of language, visuals and sequencing
1	The student has provided **evidence** that they: ● submitted a project with **limited** planning ● had no **clear** aim and the subject of the investigation was **vaguely** described ● performed **nominal** or **irrelevant** background research ● had an **inadequate** understanding of the science concepts used in the investigation ● selected equipment and technologies that were **inaccurate** ● **failed** to recognise or control **variables** ● **failed** to identify trends, patterns and relationships in the data ● manufactured conclusions **lacking** supporting information and scientific accuracy ● **neglected** to include a logbook ● **neglected** to acknowledge the assistance given ● communicated the report with **poor expression** and **inadequate** use of visuals