\*Mandatory for prize winners

| Level | Description |
| --- | --- |
| 5 |  The student has provided **clear and convincing evidence** that they:* completed a **thoroughly planned** scientific investigation**\***
* had **quantifiable** aims and **well-described** the subject of the investigation\*
* included **relevant** background research and checked its **reliability**
* proposed a **testable hypothesis** based on prior research or previous observations\*
* had a **detailed understanding** of the science concepts used in the investigation\*
* used **critical thinking** to explain anomalies or errors\*
* addressed an issue of **scientific significance\***
* **accurately** gathered experimental or secondary data in an **appropriate number of trials** using appropriate technologies\*
* had been **innovative** or **creative** in content or methodology
* recorded data in an **organised** and **logical** manner using **correct units**
* identified **independent** and **dependent** **variables** (or two variables for correlation) and regulated the **control** of the appropriate variables\*
* **analysed** and **explained** trends, patterns and relationships in the data collected
* conducted a carefully **considered** risk assessment prior to experimentation
* suggested purposeful **modifications** to procedures or creative ideas put forward for further investigation
* included a **comprehensive** logbook, detailing the investigative process, from brainstorming, through data collection, to the final conclusion
* **acknowledged** and provided details of all assistance given
* used **clear, concise** and **meaningful** language, visuals and sequencing to **effectively** communicate to the intended audience
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|  4 | The student has provided **substantial evidence** that they:* completed a **well-planned** scientific investigation
* had **realistic** aims and **well-described** the subject of the scientific investigation
* performed **relevant** background research
* suggested a **hypothesis** based on prior research or previous observations
* **identified** and **understood** science concepts used in the investigation
* conducted a **risk assessment** prior to experimentation
* demonstrated **some** innovative or creative aspects
* gathered experimental data over a **number of trials** using suitable technology
* recorded data in a logical manner using **correct units**
* used appropriate scientific methodology including the **control** of **variables**
* explained **most** trends, patterns and relationships in the data collected
* used **rational thinking** to suggest modifications to procedures for further investigation
* included a logbook **detailing** the different stages of the investigative process
* **acknowledged** all assistance given
* communicated the report with **effective** use of language, visuals and sequencing
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| 3 | The student has provided **evidence** that they:* completed a **planned** scientific investigation
* had some **measurable** aims and the subject of the investigation was **clearly** described
* collectedbackground research with **some relevance** to the subject of investigation
* proposed a **relevant** **hypothesis**
* demonstrated an **understanding** of the science concepts used in the investigation
* conducted some form of **risk assessment**
* had shown **glimpses** of innovation or creativity
* gathered first-hand data with **some repetition**
* took steps to **control** **variables**
* identified **obvious** trends, patterns and relationships in the data
* formulated conclusions that were **supported** by the results
* provided **supporting** documentation in the accompanying logbook
* put forward ideas for **future improvements**
* **acknowledged** any assistance given
* displayed **good** use of language and formatting in the report to communicate with the intended audience
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| 2 | The student has provided **evidence** that they:* completed a scientific investigation with **limited** planning
* had some **tentative** aims and the subject of the investigation was **adequately** described
* collected **fragments** of background research
* had **minimal** understanding of the science concepts used in the investigation
* exhibited no **innovative** or **creative** ideas
* gathered **insufficient** amounts of data
* **controlled** some **variables**
* **poorly** explained trends, patterns and relationships in the data
* formulated conclusions that were **not supported** by the results
* provided **limited** documentation in the accompanying logbook
* put forward **insufficient** ideas for future improvements
* **casually** mentioned people who have helped without **formally** acknowledging assistance given
* used **simple** language and formatting in the report to communicate with the intended audience
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| 1 | The student has provided **evidence** that they:* submitted a project with **limited** data collection
* had no **clear** aim and the subject of the investigation was **vaguely** described
* included background research that was **irrelevant** to the investigation
* had an **inadequate** understanding of the related science concepts
* **failed** to recognise or control variables
* **neglected** to identify trends, patterns and relationships in the data
* formulated conclusions **lacking** supporting information and scientific accuracy
* provided **limited** or **disorganised** documentation
* **neglected** to acknowledge assistance given
* used language and formatting that **did not connect** with the intended audience
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