Young Scientist Awards

JUDGING RUBRIC: STANSW Scientific Investigation, Years 7–9

Level	Description
5	The student has provided clear and convincing evidence that he/she: • completed a **thoroughly-planned** scientific investigation over a **period of time** • 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 • conducted a carefully **considered** risk assessment prior to experimentation • addressed an issue of **scientific significance** • had been **innovative** or **creative** in content or methodology • **accurately** gathered experimental data in an **appropriate number of trials** using appropriate technologies • recorded data in an **organised** and **logical** manner using **correct units** • identified **independent** and **dependent variables** and regulated the **control** of the appropriate variables • **analysed** and **explained** trends, patterns and relationships in the data collected • used **critical thinking** to explain anomalies or errors • suggested purposeful **modifications** to procedures or creative ideas put forward for further investigation • included a **comprehensive** log book, 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
4	The student has provided substantial evidence that he/she: • completed a **well-planned** scientific investigation over a **period of time** • 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 log book **detailing** the different stages of the investigative process • **acknowledged** all assistance given • communicated the report with **effective** use of language, visuals and sequencing

JUDGING RUBRIC: STANSW Scientific Investigation, Years 7–9

3	The student has provided evidence that he/she: • completed a **planned** scientific investigation over a **period of time** • had some **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 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 log book • 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
2	The student has provided evidence that he/she: • 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 log book • 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
1	The student has provided evidence that he/she: • submitted a project with **limited** first-hand 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