



Young Scientist Awards



JUDGING RUBRIC: Years 7–9

STANSW Scientific Investigation – Survey

Level	Description
5	<p>The student has provided clear and convincing evidence that he/she:</p> <ul style="list-style-type: none"> • completed a thoroughly-planned and methodical survey of a specific area of interest • had quantifiable aims and well-described the subject of the survey • included relevant background research and checked its reliability • had a detailed understanding of the science concepts used in the survey • conducted a carefully considered risk assessment prior to experimentation • addressed an issue of scientific significance • had shown originality in selection of site or method of data collection • systematically gathered data in a variety of sample areas that are representative of the wider study area • recorded data in an organised way, using appropriate mapping techniques • categorised features of interest in sample areas, identifying variants • analysed and explained trends, patterns and relationships in the data collected, performing some form of statistical distribution analysis • used critical thinking to explain anomalies or errors • suggested purposeful modifications to procedures or creative ideas put forward for further survey work • included a comprehensive log book, detailing the surveying 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	<p>The student has provided substantial evidence that he/she:</p> <ul style="list-style-type: none"> • completed a well-planned and structured survey of a specific area of interest • had realistic aims and well-described the subject of the survey • performed relevant background research • identified and understood science concepts used in the survey • conducted a risk assessment prior to experimentation • has shown originality in the subject of the survey • gathered data in a number of sample areas, representative of the wider study area • recorded data in a logical manner, using suitable mapping techniques • identified similarities and differences between features in sample areas • explained most trends, patterns and relationships in the data collected, including some basic statistical analysis • used rational thinking to suggest modifications to procedures for further surveys • included a log book detailing the different stages of the surveying process • acknowledged all assistance given • communicated the report with effective use of language, visuals and sequencing

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3	<p>The student has provided evidence that he/she:</p> <ul style="list-style-type: none"> • completed a planned survey over a period of time • had some measurable aims and the subject of the survey was clearly described • collected background research with some relevance to the subject of the survey • demonstrated an understanding of the science concepts used in the survey • conducted some form of risk assessment • had shown glimpses of innovation or creativity • gathered data in a few sample areas, representative of the wider study area • recorded data in a logical manner, using a suitable mapping technique • 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	<p>The student has provided evidence that he/she:</p> <ul style="list-style-type: none"> • completed a broad survey without much attention to detail • had some tentative aims and the subject of the survey was adequately described • collected fragments of background research • had minimal understanding of the science concepts used in the survey • 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	<p>The student has provided evidence that he/she:</p> <ul style="list-style-type: none"> • submitted a survey with limited first-hand data collection • had no clear aim and the subject of the survey was vaguely described • included background research that was irrelevant to the survey • 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