



Young Scientist Awards



JUDGING RUBRIC: IIATE Models and Innovations, Years 7–9

Level	Description
5	<p>The student has provided clear and convincing evidence that he/she:</p> <ul style="list-style-type: none">• actively designed and built a working model of an innovative device or application over an appropriate period of time• identified a need or problem and developed a solution that is an improvement over current alternatives• addressed an issue of technological significance• had a good understanding of the technological concepts used in the working model• included relevant background research and evaluated the originality of their design by exploring similar related devices• had been innovative or creative in the design of the device and its production• employed safe and competent construction and design skills• exhibited resourcefulness in the use of materials• produced a reliable working model that is easy to use and performs as intended• included a comprehensive log book, detailing the design process from brainstorming through construction, to final product and evaluation• used critical thinking in the evaluation and testing of the model, discussing modifications or improvements• suggested directions for future development in a succinct manner• formally acknowledged those who contributed to the project• used clear, concise and meaningful language to communicate the operational details of the working model to the intended audience
4	<p>The student has provided substantial evidence that he/she:</p> <ul style="list-style-type: none">• designed and built a model of an innovative device showing considerable planning• developed an innovative device or application which is a solution to a need or problem, different from existing devices• identified and understood technological concepts used in the working model• performed relevant background research and looked for similar products already on the market• demonstrated some innovative or creative aspects• had shown skill in the design and construction of the working model and safe procedures were adopted in the model's production• made considered choices in the selection of materials• had constructed a model that works well• included a log book detailing the different stages of the design process• exhibited rational thinking in the testing of the working model and alternative procedures for improvements have been suggested• acknowledged and provided details of any assistance given• effectively communicated the working model's operational details and the language and visuals take account of the audience

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3	<p>The student has provided evidence that he/she:</p> <ul style="list-style-type: none"> • designed and built a model of an innovative device over a period of time • developed a device or application which is a solution to a need or problem • demonstrated an understanding of technological concepts used in the model • performed relevant background research • had a device or application which has some innovative or creative features • displayed reasonable workmanship in the design and construction of the working model • used suitable materials in the working model’s construction • had a model that works most of the time • provided supporting documentation in the accompanying log book • tested the model and put forward some good ideas for future improvements • acknowledged any assistance given • included an adequate set of operational instructions to assist the audience
2	<p>The student has provided evidence that he/she:</p> <ul style="list-style-type: none"> • built a working model of an innovative device with little planning or design • had an innovative device or application which lacks originality • had placed the device or application in a technological context • performed little background research • had shown glimpses of innovation or creativity • displayed satisfactory workmanship in the design and construction of the working model • used some materials in the working model’s construction that were not suitable • had a model that works irregularly • provided limited documentation in the accompanying log book • briefly tested the model and insufficient ideas have been put forward for future improvements • casually mentioned people who have helped without formally acknowledging assistance given • included an inadequate set of operational instructions for the audience
1	<p>The student has provided evidence that he/she:</p> <ul style="list-style-type: none"> • entered a model of an innovative device or application that does not fully work • had an inadequate understanding of the related technological concepts • provided designs and sketches that were haphazard • made a model with poor workmanship • failed to test the model and ideas for future improvements are vague and impractical • provided limited or disorganised documentation • neglected to acknowledge assistance given • did not include instructions on how to operate the working model