# Young Scientist Awards

## JUDGING RUBRIC: iTE Innovations and Engineering Design Awards - Years 7-8

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| 5     | The student has provided clear and convincing evidence that they:  
  - **actively** designed and built a prototype 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 device  
  - included **relevant** background research and **evaluated** the **originality** of their design by exploring similar related devices  
  - had been **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** innovative device that is **easy to use** and **performs as intended**  
  - included a **comprehensive** log book or portfolio, detailing the design process from brainstorming through construction, to final product and evaluation  
  - used **critical thinking** in the evaluation and testing of the innovative device, 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 innovative device to the intended audience |
| 4     | The student has provided substantial evidence that they:  
  - designed and built a prototype of an innovative device with **considerable planning**  
  - developed an innovative device which is a **solution** to a need or problem, different from existing devices  
  - **identified** and **understood** technological concepts used in the innovative device  
  - performed background research and **searched** for similar products on the market  
  - demonstrated **some creative** aspects  
  - had shown **skill** in the design and construction of the innovative device and **safe procedures** were adopted in the device’s production  
  - made **considered** choices in the selection of materials  
  - had constructed a prototype of an innovative device that **works well**  
  - included a log book or portfolio **detailing** the different stages of the design process  
  - exhibited **rational thinking** in the testing of the innovative device and **alternative procedures** for improvements have been suggested  
  - **acknowledged** and provided details of any assistance given  
  - **effectively** communicated the innovative device’s operational details and the language and visuals **take account** of the audience |
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### Years 7–8

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| 3     | The student has provided evidence that they:  
  - designed and built a prototype of an innovative device over a **period of time**  
  - developed an innovative device which is a **solution** to a need or problem  
  - demonstrated an **understanding** of technological concepts used in the device  
  - performed **relevant** background research  
  - had an innovative device which has some **creative** features  
  - displayed **reasonable** workmanship in the design and construction of the innovative device  
  - used **suitable** materials in the prototype’s construction  
  - had a prototype of an innovative device that **works** most of the time  
  - provided **supporting** documentation in the accompanying log book or portfolio  
  - **tested** the device 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     | The student has provided evidence that they:  
  - built a prototype of an innovative device with **little** planning or design  
  - built a device which **lacks** originality  
  - had placed the innovative device in a **technological context**  
  - performed **little** background research  
  - had shown **glimpses** of creativity  
  - displayed **satisfactory** workmanship in the design and construction of the innovative device  
  - used some materials in the working model’s construction that were **not suitable**  
  - had a prototype that works **irregularly**  
  - provided **limited** documentation in the accompanying log book or portfolio  
  - **briefly** tested the prototype 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     | The student has provided evidence that they:  
  - entered an innovative device that **does not fully work**  
  - had an **inadequate** understanding of the related technological concepts  
  - provided designs and sketches that were **haphazard**  
  - made a prototype with **poor** workmanship  
  - **failed** to test the prototype 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 innovative device |