# **Powering Up the Future competition as an assignment**

# **How to use this document:**

1. This document contains all assignment resources aligned to Years 5 and 6 of the Australian Curriculum.
2. It is editable so you can tailor it to suit your students and teaching schedule.
3. Make any changes needed to adapt the content for your class.
4. Use the document as a single reference point to make changes, then separate into the task sheet, assessment rubric, and student self-assessment checklist for your students as needed.

## **In this resource you will find:**

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| **The assignment instructions and  task description** | **The assignment marking rubric** | **The student self-assessment checklist** |
| The context and prompt are provided in the assignment instructions and task description.  Students can either:   * Enter the competition individually, or * Submit their entry to you, and you submit on their behalf.   Before submitting any student work, please use the document titled ‘1 Guardian and Parent Communication Template’ to ensure appropriate consent has been obtained for sharing student images. | One assignment rubric is provided, aligned to AC (v9) **Years 5 and 6.** The rubric includes:   * Key criteria for a successful competition entry * Links to general capabilities and cross-curriculum priorities * The far-right column shows the curriculum links. These can be cross-referenced in the ‘2 Curriculum Alignment’ document.   We recommend removing this column before sharing with students. Each criterion is graded on a 1–4 scale. The Scientific Understanding criterion is optional and highlighted in green. Other optional, non-assessed criteria that still link to the curriculum are shaded grey. | The student checklist includes a checklist statement for each row of the rubric.  Science Understanding content is:   * Shaded green * Aligned to the relevant year level (noted in the ‘Notes’ column)   If you do not wish to assess Science Understanding, simply remove these rows from both the rubric and the checklist. |

# **Assignment instructions and task description**

**How would you help to build a future powered by   
sustainable energy?**

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| **Imagine it’s the year 2050. You wake up in your home, head to school, or walk through your community. Everything runs smarter, cleaner, and more efficiently.**  *How did we get there?* |

**2025 Competition Task**

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| As a Snowy Hydro futurist, it is your mission to:  **invent a bold new idea, technology, or system that helps save or reuse energy to lower emissions.** |

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| **Your project will have two parts:** | **How to enter the competition:** |
| * **Part 1:** An idea or invention that creatively addresses energy conservation or emission reduction. * **Part 2:** An explanation (written or video) that clearly answers:   + What is the problem you are addressing?   + What is your idea?   + How does it work? | Once you have finished your assignment, you can submit your entry to win prizes on the [Powering Up the Future competition](https://www.snowyhydro.com.au/poweringup/) website for your chance to win you and your school prizes of up to $3000!  Each class can submit their entries all at once, so check with your teacher to see if they want you to submit your entry to them first.  Make sure you read the [2025 competition terms and conditions](https://www.snowyhydro.com.au/wp-content/uploads/2025/07/Snowy-Hydros-Powering-Up-The-Future-Competition-Terms-and-Conditions-2025.pdf) before you enter. |

# **Assessment rubric**

| **Criteria** | **1 – Beginning** | **2 – Developing** | **3 – At level** | **4 – Extending** | **Teacher notes: Curriculum & Capability Links** |
| --- | --- | --- | --- | --- | --- |
| **Creativity & Innovation** | Basic or copied idea. | Shows some original thinking. | Creative and relevant idea that solves a real problem. | Highly innovative, insightful and realistic with strong impact. | *Critical & Creative Thinking – Create Possibilities* |
| **Explanation of the problem** | Problem unclear or vague. | Describes a problem with some clarity. | Clearly explains a relevant, real-world issue. | Strong, thoughtful explanation with connections to community/environment. | *Identify problems and responses*, *Personal & Social – Community awareness* |
| **How the invention works** | Vague explanation. | Some explanation of function or process. | Logical and clear explanation of how the invention works. | Thorough and precise explanation using accurate terms and systems thinking. | *Science Inquiry – Evaluate & Reflect*, *Critical Thinking* |
| **Connection to reducing emissions** | Link to emissions or sustainability is unclear. | Some link but limited justification. | Clearly linked to reducing emissions or increasing sustainability. | Strong, well-reasoned explanation of how it reduces emissions and improves sustainability. | *AC9S5H02 – Science to make decisions*, *Sustainability* |
| **Year 6 Science Understanding content** *(optional)* | Shows little understanding of circuits or energy. | Identifies some components of a circuit or explains part of the process. | Describes how energy flows in a circuit using correct terminology (e.g., conductor, insulator, component). | Clearly explains transformation and transfer of energy, why materials are chosen, and how electricity is applied in real contexts (e.g. homes, inventions). | *AC9S6U03 – Investigate the transfer and transformation of energy in electrical circuits*  *Elaborations: components, flow, conductors/insulators, real-world uses* |
| **Presentation and communication** *(optional)* | Difficult to follow or understand. | Ideas are communicated but lack structure or clarity. | Clear and well-organised. Uses visuals or digital tools appropriately. | Highly engaging, creative, and effectively uses tools and layout to enhance communication. | *AC9S5I06/AC9S6I06 – Communicate using digital tools*, *Digital Literacy*, *Personal & Social – Communication* |
| **Scientific Vocabulary** *(optional)* | Rare or incorrect use of terms. | Some terms used but not consistently. | Correct use of relevant vocabulary. | Accurate and fluent use of scientific language throughout. | *Literacy – Understanding texts*, *Science Inquiry – Language Use* |
| **Use of Research about Resources**  *(optional)* | Little or no research shown. | Some relevant research or examples used. | Clearly informed by research or real-world examples. | Strong use of accurate, well-chosen sources or evidence to support design. | *Inquiring – Identify and Evaluate Information* |
| **Use of Digital Tools** *(optional)* | No or inappropriate tool use. | Some effective use of digital tools. | Purposeful, effective use of digital tools. | Sophisticated use of digital tools to enhance explanation or design. | *Digital Literacy – Create, Communicate & Collaborate* |

## **Student self-assessment checklist**

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|  | **📝 Checklist** | **✅  I did this well** | **🔄 I'm still working on this** | **✍️ Notes for myself** |
| 🧠 | My idea is creative and could really help people or the environment. | ☐ | ☐ |  |
| 🔍 | I clearly explained the problem I want to solve. | ☐ | ☐ |  |
| ⚙️ | I explained how my invention works step-by-step. | ☐ | ☐ |  |
| 🌏 | I explained how this invention helps reduce emissions or improve sustainability. | ☐ | ☐ |  |
| 📢 | My presentation is clear and easy to understand (writing, video or visual). | ☐ | ☐ |  |
| **🧠** | I explained how energy flows in an electrical circuit. | **☐** | **☐** | **\*\*Year 6 Science Understanding Content** |
| **🧠** | I included components like wires, power sources, conductors or insulators. | **☐** | **☐** | **\*\*Year 6 Science Understanding Content** |
| **🧠** | I talked about how electricity is used in homes or inventions. | **☐** | **☐** | **\*\*Year 6 Science Understanding Content** |
| 🧪 | I used correct science words and explained things using scientific thinking. | ☐ | ☐ |  |
| 📚 | I used information or examples from real life, books or research to support my idea. | ☐ | ☐ |  |
| 💻 | I used digital tools (e.g. slides, video, drawings) effectively to present my work. | ☐ | ☐ |  |