Australian Government
Department of Industry, Science and Resources

The Prime Minister's Prizes for Science 2027–2029 – Science Teaching Prizes

Advice for responding to assessment criteria

Strong nominations will include specific examples that demonstrate, using the full breadth of the assessment criteria, how the nominee profoundly impacted students and STEM education.

Using strong evidence and examples, explain why you, as the nominator, believe the nominee should be considered for this prize.

Prime Minister's Prize for Excellence in Science Teaching in Primary Schools

Assessment criterion 1

Professional knowledge: Knowledge of STEM education, how students learn, and the application of strategies to maximise student engagement and learning (10 points)

Demonstrate how the nominee:

a. shows broad and current knowledge of STEM education, curriculum, teaching, learning and assessment, and understands the interconnected nature of STEM disciplines in developing students' deep understanding and supporting innovation

b. designs and delivers inclusive STEM education that responds to how students learn and to their diverse cultural, developmental and contextual needs, including through authentic engagement with peers, communities, parents and carers

c. applies evidence-based STEM teaching practices and continually builds professional capability to foster student curiosity, engagement, participation and learning in STEM.

Strong responses to this criterion will:

- Using a range of strong evidence and examples, outline the context, challenges and beneficial outcomes of the nominee's achievements through the application of their professional knowledge.
- Clearly outline how the nominee's professional knowledge and curriculum-based STEM education programs contribute to effective, inclusive teaching and improved learning outcomes for students with diverse cultural, developmental and learning needs. Describe the diversity of the student population and how the learning programs have engaged students.
- Demonstrate authentic and inclusive STEM education by showing how students applied knowledge from multiple STEM disciplines to real-world problems or projects.
- Clearly demonstrate how the nominee's professional knowledge contributes to effective STEM education. Provide evidence of how their inclusive practices have improved student understanding, engagement, participation and achievement. Describe professional growth and leadership, including how the nominee has refined their practice, built their professional capacity, shared expertise or influenced STEM education beyond their own classroom.

Assessment criterion 2

Professional practice: Working with students to achieve high-quality outcomes in STEM education in a safe, supportive environment, using equitable assessment and feedback (10 points)

Demonstrate how the nominee:

a. designs and delivers engaging intellectually challenging, emotionally supportive and physically safe, high-quality STEM education programs that are coherent and tailored to students' needs and interests, using equitable assessment and feedback to inform and improve learning

b. creates supportive and inclusive STEM learning environments that build students' confidence to theorise, investigate and communicate like scientists for decision making and problem-solving, advancing their STEM knowledge and skills

c. fosters engagement, achievement and ongoing interest and participation in STEM by integrating STEM disciplines, promoting interdisciplinary and real-world learning.

Strong responses to this criterion will:

- Clearly outline how the nominee's practices have been transformational to student engagement and confidence. For each example, include detail on the elements of the program that support a safe, welcoming and supportive learning environment for students.
- Describe the learning approach and the strategies used to support and encourage students to engage in the learning program. For example, trans-curricular and cross-curricular approaches and collaboration. Provide evidence of engagement and impact for example by results from school-based evaluation surveys or proportion of student and teacher engagement.
- Provide examples where the nominee has developed innovative and creative initiatives or practices that have positively impacted student experience or student engagement in STEM education. Use a range of evidence to support the response, such as school-based student competency data, formal evaluation data (e.g. school-based improvement data, initiative evaluation), student retention and attendance and rates of success.

Assessment criterion 3

Professional attributes: Collaborates within their school and broader community to improve the quality of STEM education and enhance student outcomes (10 points)

Demonstrate how the nominee:

a. commits to continuous improvement in STEM education through reflective practice, professional learning and the application of current research and evidence-based approaches to strengthen teaching, learning and student outcomes

b. improves the teaching of STEM education, through the adoption of classroom practices by others, contributions to curriculum or influence on policy

c. supports others by mentoring, coaching and collaborating with colleagues, pre-service teachers and professional networks

d. leads and advocates for STEM education through engagement with families, communities, industry and professional organisations, contributing to a culture in which STEM education is visible and valued.

Strong responses to this criterion will:

- Clearly describe the nominee's engagement with the school community, professional teaching networks and broader communities to improve the quality and effectiveness of teaching in STEM education.
- Clearly outline how the nominee's professional attributes have had significant impact on the broader STEM education community. Evidence to demonstrate this may include:
  - Initiatives to share knowledge with other teachers and students e.g. design and facilitation of professional learning programs.
  - Participation in public forums, advisory boards, science teacher focused conferences and workshop facilitation.
  - Building and supporting teacher capability by sharing knowledge through leadership, mentorship and advisory roles.
- Demonstrate how the nominee is widely recognised as having made a significant contribution to STEM education in their school, local school area, state/territory, nationally or internationally through their activities.

Prime Minister's Prize for Excellence in Science Teaching in Secondary Schools

Assessment criterion 1

Professional knowledge: Knowledge of one or more areas of science, technology, engineering or mathematics (STEM) and how students learn to maximise student engagement and learning (10 points)

Demonstrate how the nominee:

a. shows deep and current expertise in one or more STEM subjects, content, curriculum and pedagogy, and uses evidence-based teaching strategies to develop students' understanding

b. designs and delivers inclusive STEM education that responds to how students learn and to their diverse cultural, developmental and contextual needs, fostering curiosity, engagement and active participation in learning

c. applies evidence-based STEM teaching practices and commits to professional growth through ongoing learning to drive student engagement, participation and learning in STEM.

Strong responses to this criterion will:

- Using a range of strong evidence and examples, outline the context, challenges and beneficial outcomes of the nominee's achievements through the application of their professional knowledge.
- Describe the nominee's deep STEM expertise and demonstrate how they use their significant knowledge in one or more subjects and application of various evidence-based teaching strategies to improve student learning.
- Outline how the nominee's curriculum-based learning programs have enhanced learning outcomes for students. Describe the diversity of the student population and how the learning programs have engaged students.
- Demonstrate how the nominee's professional knowledge contributes to effective STEM learning, including how they adapt teaching to meet diverse cultural, developmental and learning needs. Provide evidence of how their inclusive practices have improved student understanding, engagement, participation and achievement.
- Illustrate the nominee's professional growth and leadership, by describing how they have refined their practice, built their professional capacity, shared expertise or influenced STEM education beyond their own classroom.

Assessment criterion 2

Professional practice: Implements practices to achieve high-quality outcomes in STEM subject area/s, in a safe, supportive environment, using equitable assessment and feedback (10 points)

Demonstrate how the nominee:

a. designs and delivers engaging, intellectually challenging, emotionally supportive and physically safe, high-quality STEM subject area programs that are tailored to students' needs and interests, using equitable assessment and feedback to inform and improve learning

b. creates inclusive STEM learning environments that build students' confidence to generate, construct, test and communicate knowledge, using scientific or technical language, and use reason, evidence and inquiry to investigate problems and develop solutions

c. connects learning to real-world contexts, promoting critical and creative problem-solving, and inspiring continued participation, further study and future opportunities in STEM.

Strong responses to this criterion will:

- Demonstrate how the nominee designs and delivers STEM learning that is tailor to the students and explain how assessment and feedback are used to improve learning outcomes. Provide examples where the nominee has developed innovative and creative initiatives or practices that have positively impacted student experience or student engagement in science, technology, engineering or mathematics.
- Clearly outline how the nominee creates inclusive learning environments and how they connect STEM learning to authentic real-world contexts, helping students apply their knowledge to meaningful challenges and develop critical and creative problem-solving skills.
- Describe the learning approach and the strategies used to support and encourage students to engage in STEM learning programs. Provide evidence of engagement and impact for example by results from school-based evaluation surveys or proportion of student and teacher engagement.
- It is encouraged that you draw on a diverse range of evidence to demonstrate impact in the nomination, such as school-based student competency data, formal evaluation data (e.g. school-based improvement data, initiative evaluation), student retention and attendance, rates of success and evidence of students pursuing further education and careers in science, technology, engineering or mathematics.

Assessment criterion 3

Professional attributes: Collaborates within their school and broader community to improve the quality of one or more areas of STEM and enhance student outcomes (10 points)

Demonstrate how the nominee:

a. engages in continuous improvement in STEM education through reflective practice, professional learning and the application of current research and evidence-based approaches to strengthen teaching, learning and student outcomes

b. improves the teaching of STEM education, through the adoption of classroom practices by others, contributions to curriculum or influence on policy

c. supports others by mentoring, coaching and collaborating with colleagues, pre-service teachers and professional networks

d. leads and advocates for STEM education through engagement with families, communities, industry and professional organisations, contributing to a culture in which STEM education is visible and valued.

Strong responses to this criterion will:

- Clearly describe the nominee's engagement with the school community, professional teaching networks and broader communities to improve the quality and effectiveness of science, technology, engineering or mathematics teaching.
- Clearly outline the nominee's professional attributes that have had significant impact on the broader science, technology, engineering or mathematics education community. Evidence to demonstrate this may include:
  - Initiatives to share knowledge with other teachers and students e.g. design and facilitation of professional learning programs.
  - Participation in public forums, advisory boards, science teacher focused conferences and workshop facilitation.
  - Building and supporting teacher capability by sharing knowledge through leadership, mentorship and advisory roles.

Demonstrate how the nominee is widely recognised as having made a significant contribution to science, technology, engineering or mathematics education in their school, local school area, state/territory, nationally or internationally through their activities.

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