



EDUCATORS FAQ

Understanding the New Rubric

How is this competition different from traditional science fairs or research competitions?

This competition uses an Indigenous-centered rubric that values students as whole people, not just their research results. Instead of focusing solely on technical skills, judges evaluate four pillars: Interest in STEM, Engagement & Sense of Belonging, STEM Competencies & Confidence, and Future Intentions. This means your student's cultural identity, community connections, and traditional knowledge are celebrated as strengths that enhance their scientific work.

How do I evaluate traditional knowledge integration fairly?

Pillar 1 - Interest in STEM

Help your student articulate their curiosity, passion, and motivation for their research topic

Pillar 2 - Engagement & Belonging

Encourage them to share how their Indigenous identity strengthens their scientific work

Pillar 3 - STEM Competencies

Support them in confidently explaining their methods and integrating different ways of knowing

Pillar 4 - Future Intentions

Help them think about their STEM goals and how they want to help their community

Why does this evaluation approach benefit all students?

Traditional academic evaluations often overlook the unique strengths students bring to STEM. This framework recognizes cultural knowledge as scientific expertise, values community connections, and celebrates their identity as an asset rather than something to overcome. It creates space for students to be authentically themselves while pursuing scientific excellence.

Supporting Cultural Integration

How can I help my student connect their cultural background to their research?

Start conversations about family knowledge, traditional practices, community connections, and cultural values that relate to their research. Help them see that Indigenous peoples have always been scientists - from traditional ecological knowledge to astronomy to medicine. Encourage them to share stories about learning from elders, family traditions, or community practices that sparked their scientific interest.

What if my student doesn't feel confident about their cultural knowledge?

Reassure them that every Indigenous student's journey is different. They don't need extensive traditional knowledge to be valued - their perspective as an Indigenous person in STEM is valuable regardless. Help them identify any cultural connections they do have, encourage them to express interest in learning more, and remind them that being Indigenous in STEM spaces is itself meaningful representation.

Should my student mention specific tribal or cultural practices?

Only if they're comfortable and it's authentic to their experience. Encourage them to share what feels natural and appropriate. This might be learning from grandparents, participating in cultural activities, understanding traditional foods or medicines, or simply having a cultural perspective that influences how they see science. Authenticity matters more than specific cultural details.

How do I help my student see their Indigenous identity as a strength in STEM?

Share examples of Indigenous innovations and contributions to science, help them understand that Indigenous ways of knowing complement Western science, remind them that diversity of thought strengthens problem-solving, and celebrate their unique perspective as valuable to the scientific community. Emphasize that they don't have to choose between being Indigenous and being a scientist - they can be both proudly.

Presentation Preparation

How can I help my student practice presenting with confidence?

- Practice their presentation multiple times in a supportive environment
- Help them prepare answers to likely questions about their motivation and future goals
- Encourage them to tell their research story, not just recite facts
- Time their practice sessions to ensure they stay within limits
- Focus on their passion and excitement rather than perfection

What should my student focus on during their presentation?

Help them balance four areas: showing genuine excitement about their research, demonstrating confidence in their scientific abilities, sharing authentic cultural connections when appropriate, and articulating their vision for future STEM work and community impact. The goal is telling their complete story as an Indigenous scientist.

How do I help my student prepare for the Q&A portion?

- "Why did you choose this research topic?"
- "How does your background influence your approach to science?"
- "What are your future plans in STEM?"
- "How could your research help Indigenous communities?"

Help them prepare honest, thoughtful answers that reflect their authentic experiences and aspirations.

What if my student is nervous about presenting?

Normalize their feelings - nerves are completely normal! Help them prepare thoroughly, remind them that judges want them to succeed, practice positive self-talk and visualization, focus on sharing their story rather than performing perfectly, and remind them they're among supportive Indigenous STEM community members.

What feedback should I provide to students?

Use the "What went well" / "Even better if" feedback model. Start with specific strengths tied to the rubric pillars, then offer constructive growth suggestions. For example: "What went well: Your passion for water quality research really came through, and I loved hearing about your grandmother's teachings. Even better if: you could share more about your specific plans for using this research to help your community." For younger students, emphasize encouragement and future potential. For advanced students, provide substantive suggestions for continued development.

Age-Appropriate Expectations

My student is in middle school - what should we focus on?

Emphasize their natural curiosity and excitement about learning. Help them explain why they find their topic interesting, share any family or community connections that influenced their interest, and express simple goals like wanting to keep studying science. At this level, enthusiasm and potential matter more than sophisticated research.

My high school student wants to compete - how is this different from other competitions?

Help them show sustained interest in STEM beyond just completing an assignment. Encourage them to discuss their cultural pride, share concrete post-graduation plans, and explain how they see themselves contributing to their community through STEM. The evaluation looks for growing independence and authentic cultural integration.

How do expectations differ for undergraduate vs. graduate students?

Undergraduates

Should demonstrate solid academic competencies while integrating cultural perspectives, show clear career direction, and articulate community impact goals

Graduate/Professional

Expected to show advanced expertise, leadership potential, sophisticated community impact planning, and ability to mentor others

Community Connections

How can I help my student think about community impact?

Discuss how STEM can address issues important to Indigenous communities like health disparities, environmental protection, education, economic development, or cultural preservation. Help them think broadly - even basic research can eventually benefit communities through new knowledge, technologies, or by inspiring other Indigenous students.

What if our family doesn't live on a reservation or in a tribal community?

Community connections aren't limited to specific locations. Help your student think about urban Indigenous communities, cultural organizations, Indigenous professional networks, or the broader Indigenous community. Their perspective as an Indigenous person in STEM is valuable regardless of where they live.

Should my student commit to specific ways they'll help their community?

They should be authentic about their current thinking rather than making commitments they're unsure about. Help them express genuine interest in serving Indigenous communities, even if their specific path isn't clear yet. Authenticity and growth potential matter more than detailed plans.

Practical Support

How can I help without doing the work for them?

- Ask guiding questions rather than providing answers
 - Help them practice and give feedback on their presentation
 - Support their research process but let them lead
 - Encourage their authentic voice and perspective
 - Provide emotional support and confidence building
-

What resources are available to help us prepare?

AISES provides presentation workshops, preparation guidelines, and rubric explanations at conference.aises.org

Contact research@aises.org for additional support resources or specific questions about preparation.

How can I support my student if they don't win or receive the feedback they hoped for?

Focus on their growth, courage, and the value of their participation. Remind them that the experience itself is valuable, their voice matters in STEM spaces, feedback is meant to help them grow, and they're part of building Indigenous representation in STEM. Celebrate their willingness to share their work and perspective.

Cultural Considerations

How do I navigate cultural protocols around sharing traditional knowledge?

Consult with elders, cultural leaders, or tribal education departments about appropriate sharing of traditional knowledge. Help your student understand what knowledge is appropriate to share publicly and what should remain private. When in doubt, focus on personal perspectives and learning experiences rather than specific traditional practices.

What if I'm not Indigenous but I'm supporting an Indigenous student?

Your support is valuable!

Focus on encouraging the student's authentic voice, learning about Indigenous perspectives respectfully, connecting them with Indigenous mentors when possible, and supporting their cultural identity as a strength. Don't try to provide cultural guidance you're not qualified to give - instead, help them connect with appropriate cultural resources.

How do we balance honoring traditional knowledge with meeting academic standards?

This evaluation framework specifically recognizes that traditional knowledge and academic standards can work together. Help your student see how Indigenous ways of knowing complement Western science rather than competing with it. The rubric values this integration as sophisticated scientific thinking.

Long-term Impact

How does this competition support my student's STEM journey?

Beyond the immediate experience, this competition helps students build confidence in STEM spaces, develop presentation skills, connect with Indigenous STEM professionals and peers, see pathways for using STEM to serve their communities, and understand that their cultural identity enhances their scientific work.

What opportunities might arise from participation?

Students may connect with mentors, discover scholarship opportunities, network with Indigenous STEM professionals, gain confidence for future presentations, and develop clearer vision for their STEM career path. The relationships and confidence built often have lasting impact beyond the competition itself.

How can I continue supporting my student's STEM development after the competition?

Encourage continued STEM education, help them maintain connections made at the conference, support their applications for STEM programs and scholarships, celebrate their identity as an Indigenous scientist, and continue emphasizing how their perspective strengthens STEM fields.

Questions & Support

What if my student has accessibility needs?

Contact research@aises.org as early as possible to arrange appropriate accommodations. AISES is committed to ensuring all students can participate effectively.

Who can we contact with questions about preparation?

General questions: research@aises.org

Cultural guidance: Consult with tribal education departments or cultural leaders

Presentation skills: Many schools offer presentation coaching resources

What should we expect on the day of presentations?

A supportive environment with Indigenous STEM professionals and community members who want to see students succeed. Judges are trained in culturally responsive evaluation and will provide encouraging feedback focused on student growth and potential.