

## University of Alaska – GK-12 Evaluation Process and Draft Plan

The evaluation process will be guided by core values identified in the American Indian Higher Education Consortium’s (AIHEC) Indigenous Framework for evaluation. With support from NSF, AIHEC has developed a framework based on indigenous knowledge creation and core beliefs and values common in Native communities. The framework is designed to assist indigenous programs embed evaluation within indigenous ways of knowing and values. It does not reject western evaluation tradition, but assists programs focus first on indigenous framing and using this process to choose which western evaluation methodologies are appropriate and which should be adapted.

Core Elements of the framework and the ways in which they will be respected in our approach to the evaluation are illustrated in the following table.

<b>Beliefs and Values (AIHEC Framework)</b>	<b>GK-12 Project Evaluation Process and Practice</b>
<p><b>Indigenous Knowledge Creation – Context is Critical</b></p> <ul style="list-style-type: none"> <li>• Evaluation itself becomes part of the context, it is not an “external” function</li> <li>• Evaluation must situate the program by describing its relationship to the community, including its history, current situation, and the individuals affected</li> <li>• Evaluators need to attend to the relationships between the program and community</li> <li>• Care must be taken if specific variables are to be analyzed to do so without ignoring the contextual situation</li> </ul>	<p>Evaluation will be embedded in the program from the beginning. The External Evaluator will meet with major stakeholders to discuss evaluation planning and ways to ensure that western evaluation research methodologies are chosen and adapted to fit the core values of the program and the communities it serves</p>
<p><b>People of a Place - Respect Place-based Programs</b></p> <ul style="list-style-type: none"> <li>• Honor the place-based nature of many of our programs</li> <li>• Respect that what occurs in one place may not be easily transferred to other situations or places</li> </ul>	<p>The evaluation will capture contextual information regarding each community and consider how this information mediates program activities and findings</p>
<p><b>Recognizing our Gifts–Personal Sovereignty - Consider the Whole Person when Assessing Merit</b></p> <ul style="list-style-type: none"> <li>• Allow for creativity and self-expression</li> <li>• Use multiple ways to measure accomplishment</li> <li>• Make connections to accomplishment and responsibility</li> </ul>	<p>Student performance will be assessed through multiple measures including teacher assessments as well as those of Elders. Students will be asked to make connections between their research and their responsibility to use knowledge in ways that contribute to community</p>
<p><b>Centrality of Community and Family - Connect Evaluation to Community</b></p> <ul style="list-style-type: none"> <li>• Engage community when planning and implementing an evaluation</li> <li>• Use participatory practices that engage stakeholders</li> <li>• Make evaluation processes transparent</li> <li>• Understand that programs may not focus only on individual achievement, but also on restoring community health and wellbeing</li> </ul>	<p>The evaluation will use participatory practices. The draft evaluation prepared for this proposal will be reviewed and modified based on an inclusive process engaging major stakeholders. Efforts will be made to ensure that assessment of community based research includes community members and local educators.</p>
<p><b>Sovereignty- Create Ownership and Build Capacity</b></p> <ul style="list-style-type: none"> <li>• Follow Native Institutional Review Board processes</li> <li>• Build capacity in the community</li> <li>• Secure proper permission if future publishing is expected</li> <li>• Report in ways meaningful to Native audiences as well as to funders</li> </ul>	<p>The evaluation will seek all appropriate approval processes, including formal IRBs and informal processes within communities.</p>

In addition to following the guidance of the indigenous framework, the evaluation will be based on a “theory of change” model. At the beginning of the program, an inclusive process with major stakeholders will be used to identify the conceptual model or theory of change for the program. The relationship of activities to outcomes will be mapped in a way useful to project participants. The assumptions underlying the connections between program activities and outcomes will be made explicit so these can be assessed through the evaluation process. In the AIHEC framing, this process is linked to indigenous thinking because it is a process that involves “creating the story” the program hopes to tell and then identifying how the evaluation (establishment of key questions, evaluation design, data collection and analysis) will capture the final “story of the program.” And in all indigenous communities, the lessons are learned through the telling of the stories. The table below is a draft evaluation plan that will be subject to review by stakeholder in the process described above. It outlines initial evaluation processes, indicators and timeframes based on the key evaluation questions.

### Draft Evaluation Plan for Indigenous Knowledge Systems, Science and K-12 Education

Evaluation Questions	Data Collection/Methodology	Performance Indicator	Timeline
How do GK-12 fellows experience the following program components?			
<ul style="list-style-type: none"> <li>○ Integrating a common course of study related to broad themes of indigenous knowledge systems and western science with their disciplinary studies</li> </ul>	<ol style="list-style-type: none"> <li>1) Pre- and post-survey of fellows perceptions of knowledge systems and their relevance to their research and disciplinary study</li> <li>2) Interviews to gather qualitative richness regarding fellows experience</li> <li>3) Documentation of publications and presentations</li> </ol>	<ol style="list-style-type: none"> <li>1) fellows responses on pre-/post-survey will show a significant change in perceptions</li> <li>2) Examples of experience that will suggest strengths to be supported and weakness to be corrected</li> <li>3) At least one major publication/presentation each year</li> </ol>	<ul style="list-style-type: none"> <li>Fall/Spring</li> <li>Spring</li> <li>Summer</li> </ul>
<ul style="list-style-type: none"> <li>○ Designing place-based research projects in collaboration with indigenous community experts, university scholars and middle and high school teachers that explore hypotheses related to the intersection of western and indigenous systems of knowing</li> </ul>	<ol style="list-style-type: none"> <li>1) Interviews to gather qualitative richness regarding fellows experience</li> <li>2) Inventory of field/observational place-based research for middle and high school students</li> <li>3) Fellows journals of their experiences working with community members and educators</li> </ol>	<ol style="list-style-type: none"> <li>1) Examples of experience that will suggest strengths to be supported and weakness to be corrected</li> <li>2) 60% to 80% of the school projects are useful and disseminated for schools in state</li> <li>3) Examples of experience that will suggest strengths to be supported and weakness to be corrected</li> </ol>	<ul style="list-style-type: none"> <li>Spring</li> <li>Ongoing</li> <li>Ongoing</li> </ul>
<ul style="list-style-type: none"> <li>○ Working with community members, students and teachers in organizing and presenting research at Native Science Fairs?</li> </ul>	<ol style="list-style-type: none"> <li>1) Observation of Science Fairs</li> <li>2) Elder Assessments of fellows engagement with community</li> <li>3) Interviews to gather qualitative richness regarding fellows experience</li> <li>4) Fellows journals of their experiences working with community members and educators</li> </ol>	<ol style="list-style-type: none"> <li>1) all projected Science Fairs occur</li> <li>2) 90% of Elder assessments of fellows engagement is positive</li> <li>3) Examples of experience that will suggest strengths to be supported and weakness to be corrected</li> <li>4) Examples of experience that will suggest strengths to be supported and weakness to be corrected</li> </ol>	<ul style="list-style-type: none"> <li>Summer</li> <li>When most appropriate</li> <li>Spring</li> <li>ongoing</li> </ul>

<b>Evaluation Questions</b>	<b>Data Collection/Methodology</b>	<b>Performance Indicator</b>	<b>Timeline</b>
How to middle and high school teachers and indigenous community experts describe their collaboration with fellows, university faculty?			
<ul style="list-style-type: none"> <li>Middle and high school teachers</li> </ul>	1) Interviews/focus group (via distance technology)	1) Examples of experience that will suggest strengths to be supported and weakness to be corrected	Spring
<ul style="list-style-type: none"> <li>Indigenous community members</li> </ul>	1) Interviews/focus group (via distance technology)	1) Examples of experience that will suggest strengths to be supported and weakness to be corrected	Spring
<ul style="list-style-type: none"> <li>What evidence is there of benefits to middle and high school students?</li> </ul>			
<ul style="list-style-type: none"> <li>How do students demonstrate understanding of place based science that integrates different ways of knowing and doing research?</li> </ul>	1) Student demonstrations at Science Fair	90% of schools working with GK-12 will have local science fairs, 60% will participate in statewide fair	Spring
<ul style="list-style-type: none"> <li>What evidence is there that students developed an appreciation for science?</li> </ul>	2) Pre- and post- survey of science interest	60% of students will show gains on science interest survey	Early fall and Spring
<ul style="list-style-type: none"> <li>What evidence is there of research and instructional collaboration within the University of the Arctic and Native organizations that can sustain the development of STEM scholars who are able to work within co-existing systems of thought and contribute to critically important place based research?</li> </ul>			
<ul style="list-style-type: none"> <li>Did the project meet its goal to provide courses and seminars through the U. Arctic network?</li> </ul>	1) Inventory of courses offered, course evaluations	1) project will meet goals established for courses and seminars, 80% of fellows will favorably rate courses as very good to excellent	Spring
<ul style="list-style-type: none"> <li>How did Native organizations contribute to GK-12 place-based research projects</li> </ul>	1) Survey of individuals from organizations who engaged in the GK-12 program	1) 80% of those surveyed will favorably rate their experience in the project and they will provide examples of experience that will suggest strengths to be supported and weakness to be corrected	Summer
<ul style="list-style-type: none"> <li>What are the major lessons learned through the GK-12 program to inform continuing development of PhDs who</li> </ul>	1) Interviews with major stakeholders (staff and advisory committee. 2) Summative assessment of all evaluation data	1) Examples of experience that will suggest strengths to be supported and weakness to be corrected	Spring  Summer