



UAKN  
Urban Aboriginal  
Knowledge Network

RCU  
Réseau de connaissances des  
Autochtones en milieu urbain

## RESEARCH PROJECT SUMMARY

### Prairie Research Centre

#### **Name of Project:**

The impact of Indigenous Knowledge in science education on urban Aboriginal students' engagement and attitudes toward science: A pilot study

#### **Research Start-up Summary and Abstract:**

This research will engage science teachers and community Elders and/or knowledge keepers in developing and delivering a science unit respectfully including Indigenous content and pedagogies and will examine the impact of the delivery of this unit on urban Aboriginal students' engagement and attitudes toward science.

Formal science education has failed to meet the needs of most Indigenous learners. Hence, few Indigenous peoples pursue post-secondary programs or careers in science, grossly diminishing our capacity for economic development and our ability to make informed decisions related to health, resource management, and education—thus limiting opportunities to contribute to the broader socio-economic health of Saskatchewan and Canada. The research will also foster cross-cultural understandings and acknowledge the value of Indigenous knowledge (IK) for scientific endeavors in natural resource management, ecology, and further science-related areas. While IK has recently been introduced in curricula across all subjects and grade levels in Saskatchewan; many teachers have little knowledge of how to meet these expectations. In response, Saskatoon Public Schools (SPS) has introduced professional development programming for science teachers engaging them in experiential learning with First Nations and Métis Elders and knowledge keepers. This proposed pilot research project is a logical and necessary next step in supporting these teachers to apply what they have learned with their students.

This research responds to a need for improved science teaching for Aboriginal learners shared across Indigenous communities, as evidenced in the support of the Central Urban Métis Federation Inc., Whitecap Dakota First Nation, and Saskatoon Public Schools. The principal investigator of the research, Jeff Baker, is a Métis member of the urban Indigenous community in Saskatoon, a graduate of SUNTEP, and holds the position of Chair in Aboriginal Education at the University of Saskatchewan.

#### **Engagement objectives:**

- Generate knowledge regarding processes (among teachers and Elders and/or knowledge keepers) designed to respectfully include Indigenous knowledge in science education.
- Collect evidence on how respectfully including Indigenous knowledge in science education impacts urban Aboriginal students' engagement and attitudes toward science.

**Name of Principal Investigator:**

- Professor Jeff Baker, University of Saskatchewan

**Collaborating Friendship Centre and/or other urban Aboriginal organization:**

- Central Urban Métis Federation Inc., Whitecap Dakota First Nation, and Saskatoon Public Schools

**Main contact:**

Professor Jeff Baker  
Department of Educational Administration  
University of Saskatchewan  
28 Campus Drive Saskatoon, SK S7N 0X1  
306-966-5664  
[jeff.baker@usask.ca](mailto:jeff.baker@usask.ca)