The renewed 2008 Saskatchewan science curriculum combines Indigenous knowledge\(^1\),\(^2\) with scientific knowledge. As a result, many teachers are wondering what is involved when implementing such a curriculum. This handbook provides a frank and honest summary of what we know from research into the experiences of teachers and students when such an enhanced science curriculum has been implemented.

Personal stories and other contributions also came from Saskatoon Public School teachers; the First Nations, Inuit and Métis Education unit; and other personnel involved in a 2011-2012 professional development project.

Each of the eight teachers who composed a story conveyed from the heart their challenges and successes when embarking upon a career-long journey into enhancing their science teaching with Indigenous knowledge; many for the first time, while a few had some initial experience. These eight stories arise from very different classrooms taught by diverse teachers, each with their own initial degree of cross-cultural competence. Their stories, one per chapter, form the backbone of the handbook with their compelling accounts of key moments and explanations; all very different, all very revealing, and all providing support for those who have not yet begun this type of professional journey.

The titles associated with these personal stories effectively highlight key ideas found throughout the book:

- Benefits from Interacting with Elders and Knowledge Keepers
- Connect to the Land and Nurture Self-Identities
- Teaching as Storytelling: Worldview, Spirituality, Metaphors
- Anti-Racist Education across the Curriculum
- Suburban Students, Indigenous Awareness: A Matter of Commitment
- The Power of Relationship Building in Learning
- Autonomous Learning Environments for All Students
- The Brain Needs the Heart

\(^1\) In this handbook, the term “Indigenous” encompasses worldwide the original inhabitants of a place and their descendants who have suffered colonization. This follows the UN convention. The term includes Canada’s Aboriginal peoples who are the First Nations, Inuit, and Métis peoples of Canada. It is spelled with a capital “I” to follow and respect how Indigenous scholars spell it (see Chapter 3 for more details on respectful spelling of terms). Indigenous and Aboriginal are interchangeable terms in this handbook.

\(^2\) The phrase “Indigenous knowledge” is also called Indigenous knowledges, Indigenous science, Aboriginal science, Native science, traditional ecological knowledge, Indigenous ways of living in nature, etc. in some publications.
These shared stories make excellent resources for initiating discussions among science teachers during formal or informal professional development; not only to learn from the authors, but to learn as well from colleagues when exchanging personal reflections and offering mutual support.

The stories demonstrate what it means to become a culturally responsive science teacher. Initially defined in Chapter 1, culturally responsive science teaching is a major theme throughout the book. It is centred on the cultural self-identity of students, particularly the cultural resources they bring into the classroom from their home and community.

The handbook mentions some very specific further reading for teachers if they wish to pursue some ideas of interest to them. One example is a book written for teachers that describes important general ideas about Indigenous and scientific perspectives that science teachers likely need to know for implementing the curriculum. The book also offers advice on what to do in order to prepare for teaching the curriculum’s Indigenous content.

In short, *Enhancing School Science with Indigenous Knowledge* realistically paints the big picture of what lies ahead. At the same time, it connects teachers to specific resources and strategies that will help them get started, and that will nurture them during the years to come.

*The real voyage of discovery consists not in seeking new landscapes but in having new eyes.*

French novelist Marcel Proust (1871-1922)
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This book for teachers and teacher candidates is about:
• The in’s and out’s of culturally responsive science teaching
• Building on individual strengths and pedagogical gifts
• Providing realistic, informative, encouraging, and thoughtful ideas
• Highlighting the voices of teachers and students
• Commonsense generalizations balanced with real teaching events
• Benefiting both Indigenous and non-Indigenous students

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