BOOKS TO BUILD ON

Teaching and earning Ideas

Thank you for downloading this Books to Build On Teaching and Learning "Seed" for you to plant in the garden of your professional practice! We are excited for you to use it in a good way to further Indigenous Education and reconciliation for you and your students. Please take them as inspiration and adapt them to your needs. See below for some important information.



These teaching and learning ideas originate from the Books to Build On: Indigenous Literatures for Learning website. Please check out the website, as well as the Indigenous Education resources at the Werklund School of Education, for more information on working with Indigenous literatures! We would love to hear your feedback on our educational materials! Please find our contact information on the website.

https://werklund.ucalgary.ca/teaching-learning/indigenous-literatures-learning

Open Education Resource



Teaching and learning ideas have been gifted to Books to Build On and are free to use. In this spirit of giving, all of the lesson plans are Open Education Resources. They all have a Attribution-NonCommercial-ShareAlike 3.0 Unported (CC BY-NC-SA 3.0) License. For more information on what exactly this means, visit this website: http://creativecommons.org/licenses/by-nc-sa/3.0/. Under this license we welcome you to share the lessons with anyone you wish and adapt the lessons to your own unique needs for your own specific students and teaching situation. You may not, however, use these lessons in a commercial setting to earn money, and you must always credit Books to Build On when you share the lessons. Finally, remix, transform, or build upon the lesson; you must use the same Creative Commons licence as we picked.

> How do we engage with Indigenous literatures in teaching and learning?

By Erin Spring & Aubrey Hanson

"Starting with Story" allows us to centre Indigenous voices, knowledges, people, and experiences in our teaching and learning

Why do we believe in teaching and learning with Indigenous literatures? During our years of engagement with Indigenous knowledge systems, communities, literatures, and scholarship, we have come to know that stories are at the heart of our work. Stories embody communities and their ways of knowing, being, and doing in an appealing form—reaching the heart, not only the head. Stories are inherently relational, in that a teller and listener are drawn into relationship with each other and with the story being told. And because relationships call for mutual responsibility, storytelling as a mode of sharing knowledge draws people into reciprocal webs of connection. Stories are not just for entertainment; they are there to guide how we live our lives. Thomas King's oft-repeated line at the end of each chapter in the Truth about Stories lecture series is an illustration of this principle. King (2003) tells the reader that the story is "yours. Do with it what you will . . . But don't say in the years to come that you would have lived your life differently if only you had heard this story. You've heard it now" (p. 29). When deciding how to engage others in the work of Indigenous education, then, we believe in starting with story. We appreciate storytelling for how it respects Indigenous knowledge systems, ensures that knowledge remains rooted in context, and emphasizes the value of personal voice and collective listening. Stories are a key way into relational work in education.

Social responsibility is at the heart of our work, we are working for better futures

Teaching and learning with Indigenous literatures is part of the broader work of Indigenous Education. We believe that work in education must be socially responsible and committed to communities. Significant social impact is being created by the process of reconciliation and with Indigenous-focused teaching and learning happening across the country. We see our task as working to nourish Indigenous communities and knowledge systems, while challenging racism and colonialism. This work is also about fostering open and reciprocal relationships between Indigenous and non-Indigenous peoples. This call for social responsibility informs our collaborations in the Books to Build On project.

Title of Lesson: Trudy's Rock Story and Probability

Name: Maya Anderson

Bio: I am a certified teacher living and working in Alberta. I currently teach grade 5 math, language arts, social studies and visual art in a dual language track school in Cochrane.

Cochrane.	
Resources used and any possible concerns with resource	- <i>Trudy's Rock Story</i> by Trudy Spiller & Jessika Von Innerebner
Author/creator and/or literature background (feel free to use the author's existing words and make sure you cite)	 Publisher's description: "Trudy is part of the Gitxsan Nation in British Columbia and belongs to the House of Gwininitxw of the Wolf Clan. Trudy's traditional name, Lugaganowals, means a frog that is always leaning or giving. Trudy and her siblings were brought up to believe that children are like flowers. Today, she helps families to grow and flourish by sharing her knowledge of First Nation medicine, food, dress, and practices. By sharing her stories, Trudy makes knowledge keepers of us all." (Medicine Wheel Education, 2017) Publisher's description: "When a young girl from the Gitxsan Nation argues with her brother, she remembers the teachings of her grandmother and goes in search of a stone to share her feelings with. This engaging First Nation's story teaches children that it is okay to have feelings and shows them how to process and release negative thoughts." (Medicine Wheel Education, 2017)
K-12 curricular connection	 Math Grade 5: Describe the likelihood of a single outcome occurring, using words such as impossible, possible, and certain Compare the likelihood of two possible outcomes occurring, using words such as less likely, equally likely, and more likely
Materials Needs	 Trudy's Rock Story Whiteboard Whiteboard markers Pencils Paper Outdoor space with different types rocks or gravel
Rationale	Big idea: Math is all around us and is found in nature, in a similar way to how Trudy found her rock in nature. When we connect math and learning to the outside world and to nature,

we foster a deeper connection with the land.

Purpose: This lesson is part of a larger unit on probability. Students should have a basic understanding of outcomes being certain, likely, unlikely, possible, and impossible. After reviewing the concepts and listening to *Trudy's Rock Story*, students will explore the concept of probability in a hands-on way by designing and completing rock probability experiments where they find rocks, like Trudy's rock and experimenting with the rocks.

Lesson/activities

- 1. Warmup write three statements on the board (I will play basketball at recess today, I will eat dinner this evening, I will pop a balloon today (modify to cater to your specific students). Read the statements to the class. Have students think, pair, share as to if they think the statements are likely, unlikely, certain, or impossible. After 5 minutes of think, pair, share time, have students pause. Go through each statement and call on students to share their thoughts on the probability of each statement.
- 2. Explain to students that today we will create probability experiments with rocks, but first we need to read a story *Trudy's Rock Story*. To set up the story, give a quick synopsis of the story and talk to them about the author.
- Read the story out loud and pause at different intervals to discuss events with students and help them connect to the story (e.g. who has helped you when you were upset?).
- 4. After the story, debrief the events and ask students their thoughts on using rocks to help them with their negative feelings.
- 5. Explain that we will be going outside to find rocks in a similar way that Trudy found her rock. We'll be using these to make probability experiments. A probability experiment is when we do a test where we perform a number of trials that lets us measure the chance of an event occurring in the future. Examples include bottle flipping, tossing a pen into a cup, rolling a dice to get a certain number, picking a certain playing card from a deck, picking a certain colour marker from a jar. They will conduct their experiment 20 times and count how many times they were successful in the outcome. They will record their answers and then calculate the probability of the outcome as a fraction and indicate if it was likely, unlikely, certain or impossible.

	 6. Split students into groups of 3-4 and have students brainstorm ideas for experiments that they could do with rocks. Examples could include tossing a rock past a certain line, flipping a rock to see which side it lands on, or throwing a rock into a cup and seeing how many times it gets in. Have students write a brief plan for their experiments. They need to describe what their experiment will test, how they will do their experiment, and who will record the data. Check on students to see what they have come up with for their experiment ideas. 7. Once all groups have their ideas written down, take students outside to find rocks to do their experiments. Remind students that they need to record their data. 8. After all students have completed their experiments, have students return to the classroom to calculate the probability of the outcome as a fraction and indicate - if it is likely, unlikely, certain, or impossible. 9. Have students share projects in gallery walk style. 10. As an extension: students can choose a rock to use as their own rock to use to share their feelings with. Students could keep a journal where they write to their rock to share their feelings. Students may also like to paint their rocks.
Total Time	Approximately 90 minutes (could be broken into two sessions of 45-50 mins each if you have shorter math blocks).

Supporting Sources (APA): Trudy's rock story. Medicine Wheel Education. (2017). Retrieved July 9, 2022, from https://medicinewheel.education/collections/english-books/products/trudys-rock-story

Interested in learning more? Resources for additional reading:

- Archibald, J-a. (2008). Storywork: Educating the heart, mind, body, and spirit. UBC Press.
- Battiste, M. (2013). *Decolonizing education: Nourishing the learning spirit.* Purich. Donald, D. (2016). From what does ethical relationality flow? An Indian Act in three artifacts. In J. Seidel & D.W. Jardine (Eds.) *The Ecological heart of Teaching: Radical Tales of Refuge and Renewal for Classrooms and Communities.* Peter Lang (pp.10-16).
- Garneau, D. (2012). Imaginary spaces of conciliation and reconciliation: Art, curation, and healing. *West Coast Line*, 46(2), 28-38.
- Hanson, A. (2017). Reading for reconciliation? Indigenous literatures in a post-TRC Canada. *English Studies in Canada*, 43(2-3), 69-90.
- Hanson, A. (2018). Relational encounters with Indigenous literatures. *McGill Journal of Education* 53(2), 312-330.
- Hanson, A. (2020). Literatures, communities, and learning: Conversations with Indigenous writers. Wilfrid Laurier University Press.
- Hanson, A., King, A.-L., Phipps, H., & Spring, E. (2020). Gathering stories, gathering pedagogies: Animating Indigenous knowledges through story. *Studies in American Indian Literatures, 32*(3-4), 63-87.
- Justice, D.H. (2018). Why Indigenous literatures matter. Wilfrid Laurier University Press.
- King, T. (2003). The Truth About Stories: a Native Narrative. House of Anansi Press.
- MacDonald, J., & Spring, E. (2021). Learning with the river: Honouring place as white women teaching Indigenous education. In J. Macdonald & J. Markides (Eds.), *Brave Work in Indigenous Education*. In press.
- Martin, K. (2016). On the hunting and harvesting of Inuit literature. In D. Reder & L. Morra (Eds.), Learn, teach, challenge: Approaching Indigenous literatures (pp. 445-458). Wilfrid Laurier University Press.
- Simpson, L.B. (2017). As we have always done: Indigenous freedom through radical resistance (pp. 191-210). University of Minnesota Press.
- Tuck, E., & Yang, K. W. (2012). Decolonization is not a metaphor. *Decolonization: Indigeneity, Education & Society*, 1(1), 1–40.
- Proulx, S. & Srivastava, A. (2002). A moose in the corridor: Teaching English, Aboriginal pedagogies, and institutional resistance. In R. Eigenbrod & J.-A. Episkenew (Eds.), *Creating community: A roundtable on Canadian Aboriginal literature* (pp 187-208). Penticton, Canada: Theytus Books.
- Truth and Reconciliation Commission of Canada. (2015). Truth and reconciliation commission of Canada: Calls to action.