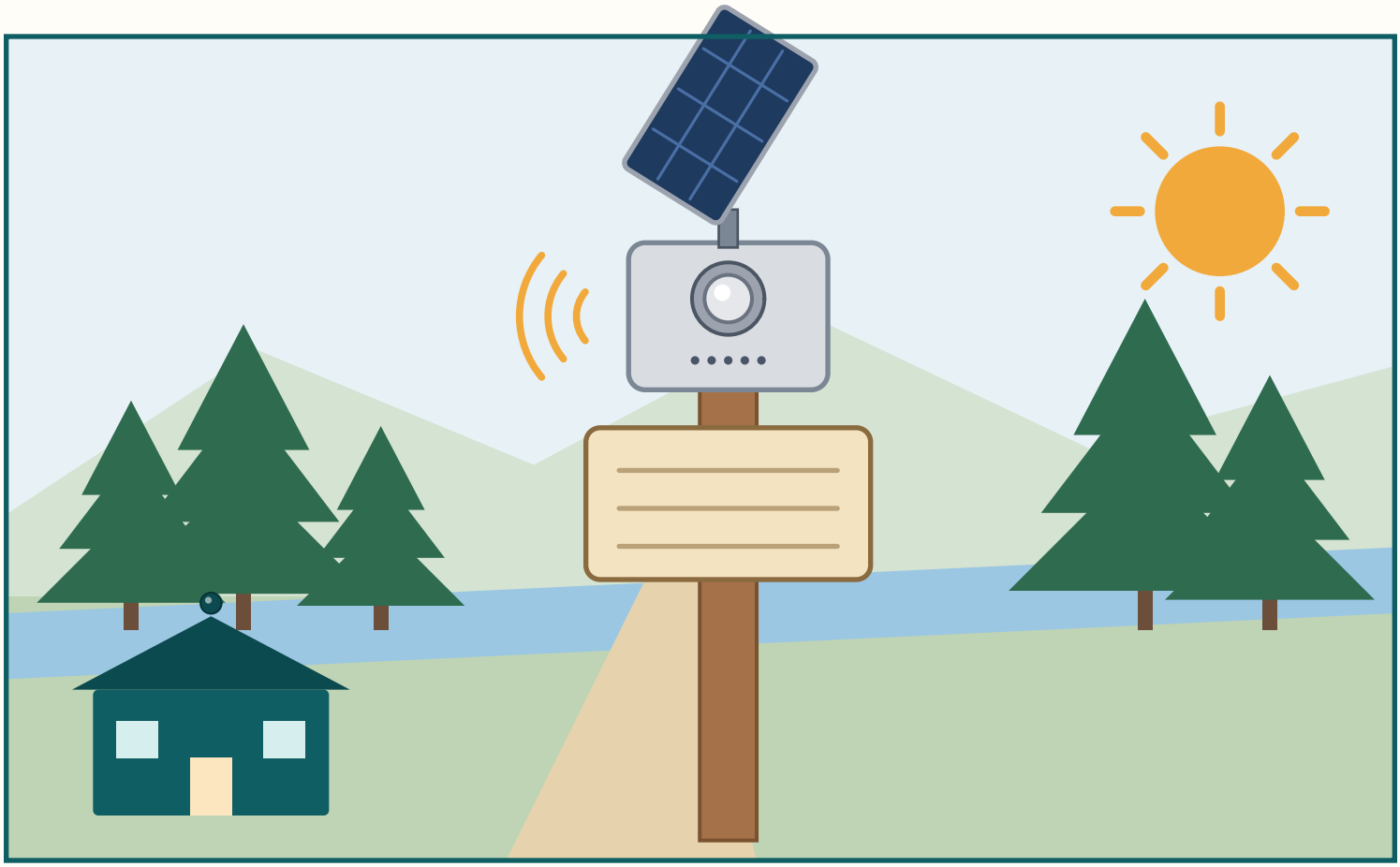
DENE STEAM

BUILD PLAN

What we want to bring to Dillon

Buffalo River Dene Nation, Saskatchewan



A picture plan in eight build steps.

For community members, Chief and Council, and funders.

Trent Billette, Executive Director

denesteam.ca | hellodenesteam@gmail.com

Draft plan. Shown in person and shared.

What's in this plan

Eight steps. Start here.

1 **The why**
Why this is needed in Dillon.

2 **The foundation**
Elders lead. Youth build. Tech helps.

3 **Trail markers**
Press a button. Hear an Elder on the land.

4 **Words and voices**
A robot and a recording corner.

5 **Kits, maps, camp**
Beginner robots, land maps, a summer camp.

6 **The workshop**
A youth space with tools and mentors.

7 **The finished build**
Paths into STEAM futures.

8 **How you can help**
Elders, volunteers, schools, funders, partners.

Program snapshot (draft)

About 20 youth
in Dillon / Buffalo River Dene Nation

April 1, 2027
to March 31, 2028

$80,996 CAD
draft ask, Canadian Heritage ILC

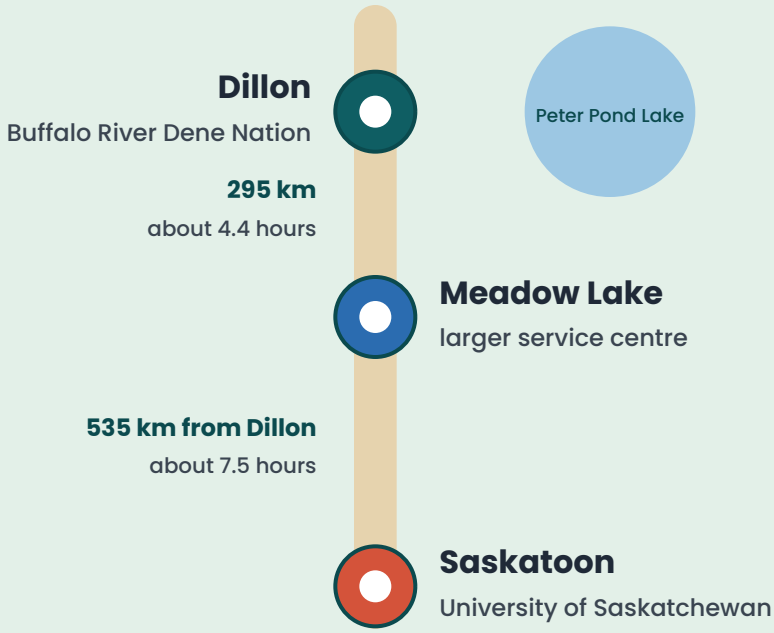
Dene Words in STEAM
project title in the draft application

Figures are estimates. Nothing has been submitted.

1 The why

This is needed where we are from.

Dillon is a long way from universities, labs and many STEAM programs. Youth who want those paths often have to leave home.



Not to scale. Road distances from OpenStreetMap routing (OSRM), checked Nov 14, 2026.

1,827

Registered members of Buffalo River Dene Nation as of October 2026, including 835 living on their own reserve.

Crown-Indigenous Relations, First Nation Profiles, Band 398, October 2026.

295 km / 535 km

Road distance from Dillon to Meadow Lake (about 4.4 hours) and to Saskatoon (about 7.5 hours).

OpenStreetMap routing (OSRM), checked Nov 14, 2026.

38% more

A weekly food basket for a family of four cost $452.95 in the North West in 2025, compared with $327.67 in a large city.

Saskatchewan Health Authority, Cost of Food in Saskatchewan 2025.

About 10%

Share of households on First Nations reserves in Saskatchewan that had the federal 50/10 Mbps target at the end of 2021, versus 99% in urban Saskatchewan.

A 2021 provincial figure, not a current Dillon reading. Auditor General of Canada, Report 2, March 2023 (CRTC data).

1 The why, continued

Language and STEAM gaps.

The Dene language is still spoken, especially in Saskatchewan. Fewer young people speak an Indigenous language than Elders. Indigenous people are still rarely seen in engineering.

11,555

People in Canada could speak Dene (listed as Dene, not otherwise specified) well enough to hold a conversation in 2021. Of those speakers, 69.9% lived in Saskatchewan.

Statistics Canada, 2021 Census, Athabaskan languages report, 2025.

7,010

First Nations people in Saskatchewan who could speak Dene in 2021. That was down 7.7% from 2016. Across the Prairie provinces the First Nations Dene count was 9,515, down 8.3%.

Statistics Canada, Census in Brief: Indigenous languages across Canada, 2023.

4 times

In the Prairie provinces, First Nations adults aged 65 and older were four times more likely to speak an Indigenous language (54.6%) than children 14 and under (13.7%).

Statistics Canada, Census in Brief: Indigenous languages across Canada, 2023.

0.6%

Share of undergraduate engineering students in Canada who are Indigenous. Indigenous people are 4.9% of the population, and 0.73% of the engineering profession.

Engineers Canada, 2022 enrolment report and Indigenous engineering in Canada report.

So we build the path here, in Dillon, with Elders and youth.

Statistics Canada notes that UNESCO considers all Indigenous languages spoken in Canada to be at risk. (Census in Brief, 2023, citing UNESCO's Atlas of the World's Languages in Danger.)

2 The foundation

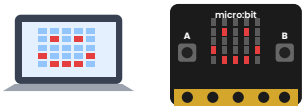
Three baseplates everything sits on.

1 Elders lead



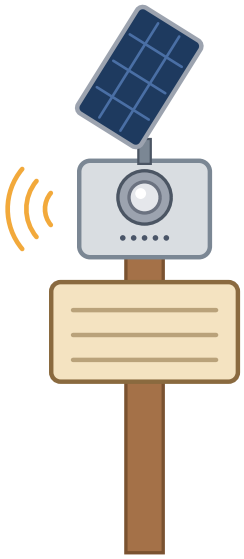
Elders choose the words, place names and stories that are shared, and they are invited with consent.

2 Youth build



Youth design, build and code the tools that carry those words, in camp and at the youth centre.

3 Tech carries the language



Simple tech, used on the land and in town, helps more people hear and practise Dene words.

OCAP: what is recorded stays here.

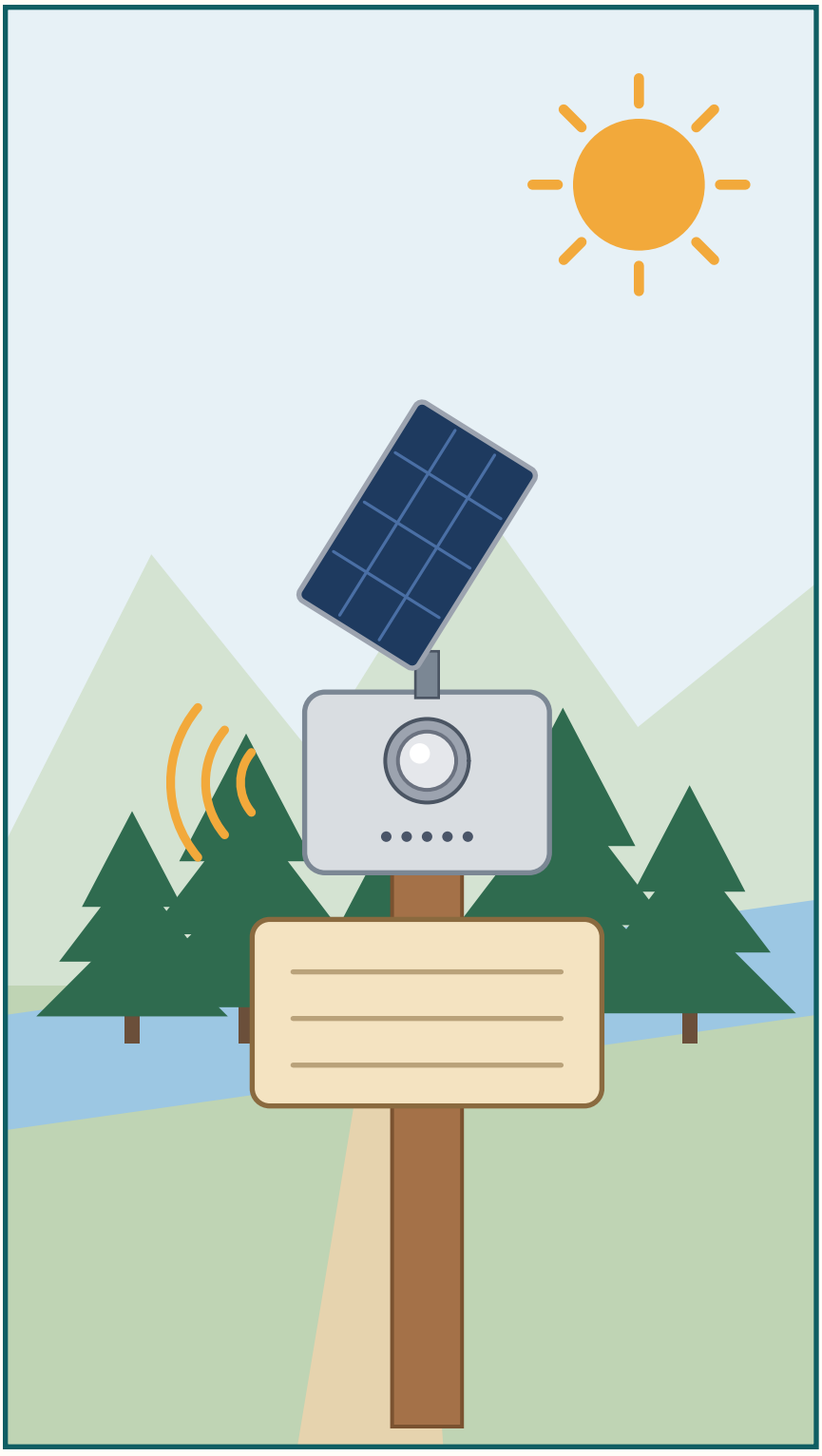
Recordings are community-held. They are never uploaded to AI companies.

Consent comes first. The Nation and families decide what is shared.

3 Talking Trail Markers

Hear an Elder out on the land.

Press a button on a marker. Hear an Elder speak the Dene word for that place, plant or animal. The marker is solar powered.



You will need

- 6 Solar trail markers
- 1 Button and speaker in each
- 1 Elder's voice, with consent
- 1 Youth-built box and post

How it works

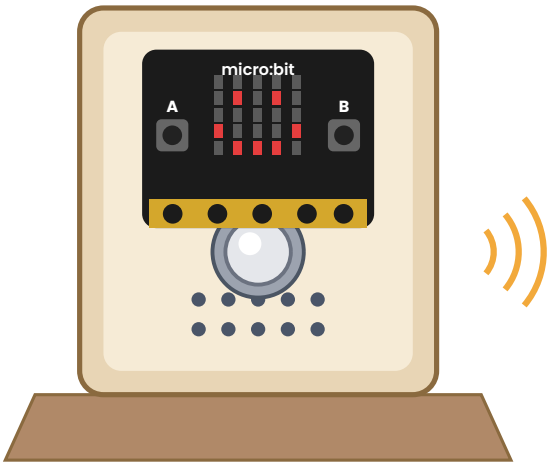
1. Press the button.
2. Hear an Elder speak.
3. Solar power keeps it ready.
4. Youth build and care for it.

4 Words and voices

A robot in town, and a recording corner.

Word of the Day robot

A stand at the youth centre plays a community word. Youth build it themselves.

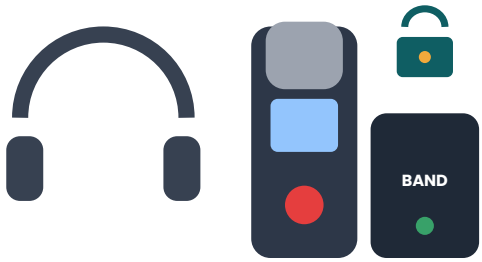


You will need

- 4 Word of the Day robots
- 1 micro:bit, button, speaker
- 1 Stand at the youth centre

Elder Voices corner

A quiet place to record, with consent. Recordings stay community-held.



You will need

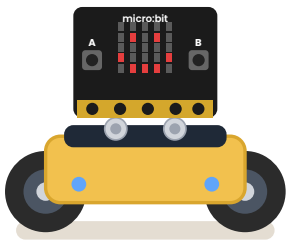
- 12 Recording sessions (draft)
- 2 Handheld recorders
- 1 Community-held storage

5 Kits, maps, camp and a duck

Hands-on STEAM, in our language and on the land.

Beginner robot kits

Youth code a small car with a micro:bit and a Cutebot.

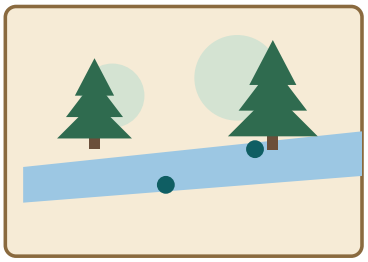


You will need

- 2 micro:bit 10-packs
- 10 Cutebot cars

Land maps

Youth make maps that hold place names and words from the land.



You will need

- 1 Map-making days
- 1 Words chosen by Elders

STEAM camps

An 8-day summer camp, plus weekly sessions through the year.

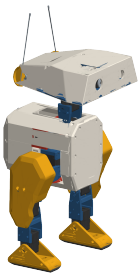


You will need

- 8 Camp days (draft)
- 40 Weekly sessions (draft)

A robot duck (optional)

A walking Open Duck Mini, if we choose to build one.



You will need

- 1 Open Duck Mini kit
- 1 Youth-led build

6 The workshop

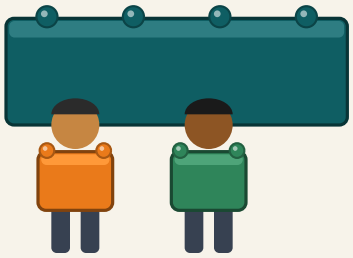
Access to resources, close to home.

A youth centre space in Dillon, with kits, tools, laptops or internet, and mentors. So a young person does not have to leave the community just to start.

Mentors work beside youth, not over them.

Kits and tools

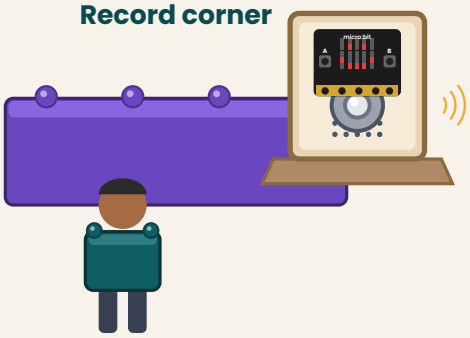
Build table



Code table



Record corner



Kits

micro:bit, Cutebot, trail marker parts, and tools stay in the room.

Tools

Screwdrivers, solder-free builds, and a safe place to try again.

Laptops / internet

A way to code, write and look things up, without leaving town.

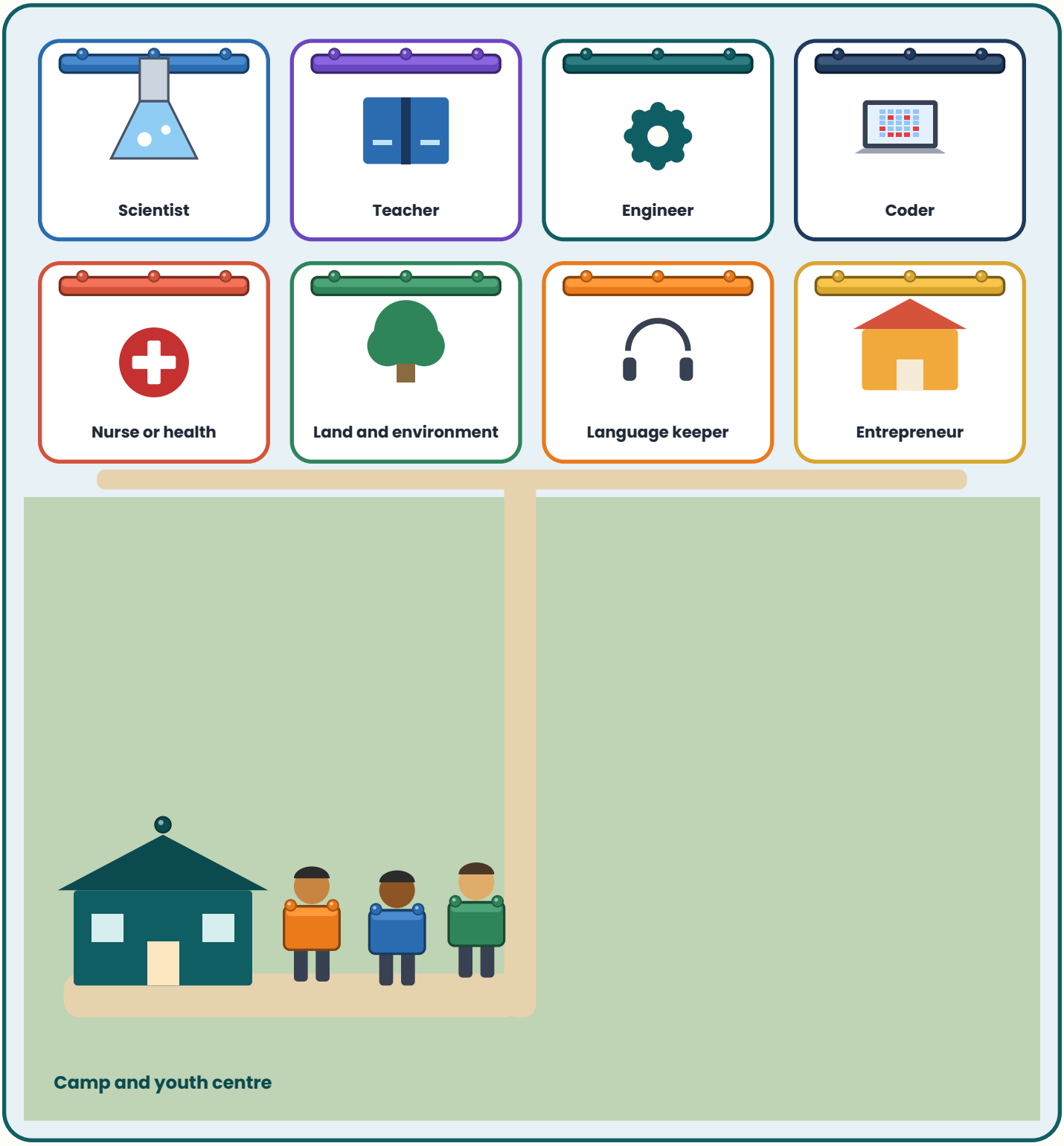
Mentors

Elders, instructors and volunteers who show up and stay with the work.

7 The finished build

Youth walk from camp into their futures.

The camp and the workshop are the start. From here, a young person can walk toward many kinds of STEAM work.



8 How you can help

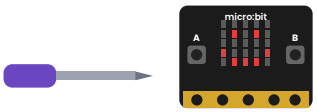
This plan is built with the community.

Elders



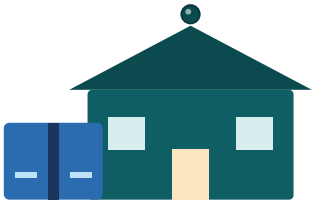
Share words, place names or stories, if and when you want to, with consent.

Volunteers



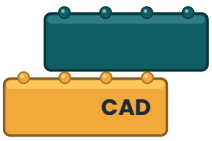
Help at sessions, the camp or the workshop. Bring a skill, or just show up.

Schools



Open the door so youth can take part, and so the work connects to class.

Funders



Help cover kits, Elder honoraria, travel, food and a year of sessions.

Partners



Walk beside the work. The community keeps the language and recordings.

Talk with us

hellodenesteam@gmail.com

denesteam.ca

Trent Billette, Executive Director

Sources and notes

Every number in this plan has a source.

No Dene words, Elder names, partners or local speaker counts were invented for this booklet. If a need could not be sourced as a number, it is described in plain words.

1. Statistics Canada, 2021 Census of Population. Indigenous Language Families: Athabaskan languages, released March 31, 2025. Dene, n.o.s.: 11,555 speakers; 9,815 mother tongue; 69.9% of speakers in Saskatchewan. https://www150.statcan.gc.ca/n1/pub/41-20-0002/412000022025003-eng.htm

2. Statistics Canada, Census in Brief: Indigenous languages across Canada, March 29, 2023. First Nations Dene speakers in Saskatchewan: 7,010, down 7.7% from 2016. Prairie provinces: 9,515, down 8.3%. Age gap: 54.6% of First Nations adults 65 and older vs 13.7% of children 14 and under. UNESCO risk note. https://www12.statcan.gc.ca/census-recensement/2021/as-sa/98-200-x/2021012/98-200-x2021012-eng.cfm

3. Engineers Canada. Indigenous people are 4.9% of Canada's population, 0.6% of undergraduate engineering enrolment (2022 enrolment report) and 0.73% of the profession. https://engineerscanada.ca/reports/enrolment-and-degrees-awarded-report/2022-canadian-engineers-for-tomorrow https://engineerscanada.ca/reports/indigenous-engineering-in-canada

4. Auditor General of Canada, Report 2, Connectivity in Rural and Remote Areas, March 2023. Saskatchewan First Nations reserves: 10.05% of households had 50/10 Mbps at year-end 2021, compared with 99.02% in urban Saskatchewan (CRTC data). https://www.canada.ca/en/auditor-general/our-work/audit-reports/parl-oag-202303-02-e.html

5. Saskatchewan Health Authority, The Cost of Food in Saskatchewan 2025. North West $452.95 per week vs Large City $327.67 for a family of four (National Nutritious Food Basket). https://www.saskhealthauthority.ca/sites/default/files/2026-02/Report-NFS-Cost-of-Food-in-SK-2025.pdf

6. Crown-Indigenous Relations and Northern Affairs Canada, First Nation Profiles, Buffalo River Dene Nation (Band 398). Registered population as of October 2026: 1,827, including 835 on own reserve. https://fnp-ppn.aadnc-aandc.gc.ca/fnp/Main/Search/FNRegPopulation.aspx?BAND_NUMBER=398&lang=eng

7. Road distances from Dillon: Meadow Lake about 295 km (about 4.4 hours); Saskatoon about 535 km (about 7.5 hours). Measured with OpenStreetMap routing (OSRM), checked Nov 14, 2026.

8. Program figures (about 20 youth, April 1, 2027 to March 31, 2028, draft ILC ask of $80,996 CAD) are estimates from Dene STEAM's draft Canadian Heritage application. They have not been submitted.