



Name: _____

Mapping Our Resources

> Section A) Mapping the Proposed Route for the Mackenzie Valley Pipeline

When studying the Mackenzie Valley, and the proposed pipeline, it is important to know where it is!

1. On the map of Canada, locate and label the following:

- 13 Provinces & Territories
- 13 Provincial and Territorial Capital Cities
- National Capital
- Bodies of Water
 - Great Lakes
 - Great Bear Lake
 - Great Slave Lake
 - Lake Winnipeg
 - Mackenzie River
 - Hudson Bay
 - Arctic Ocean
 - Atlantic Ocean
 - Pacific Ocean

The proposed Mackenzie Valley Pipeline will run from the north end of the Mackenzie River near Inuvik to the Northwest corner of Alberta. Draw a line where you think the pipeline will go.

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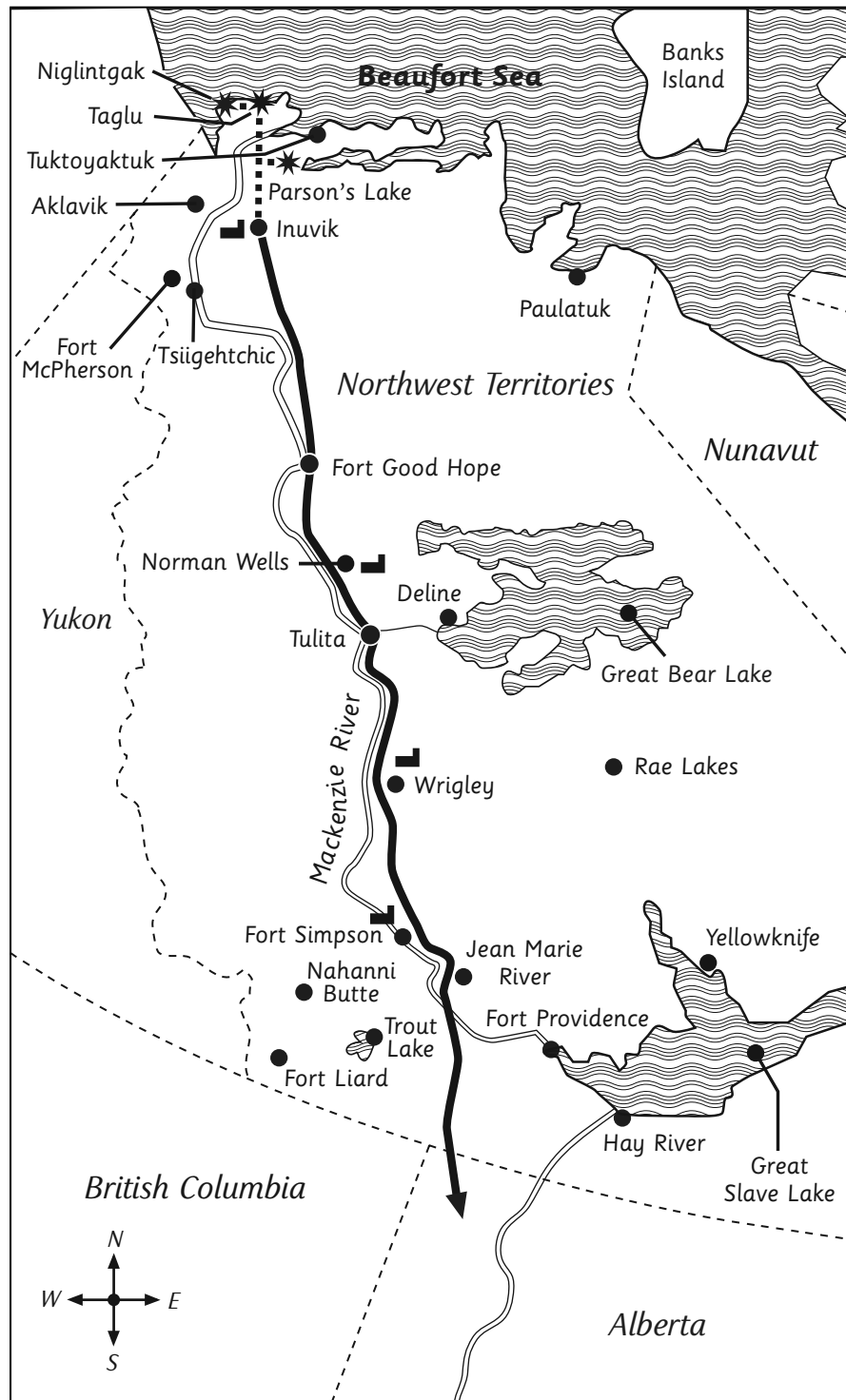
Mapping Our Resources





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2. Now that you have found where the proposed pipeline would run, use the map below to answer a few questions:



- Pipeline**
The route of the proposed pipeline.
- Gathering system**
Collection pipes that move gas from wells to pipeline.
- Compression facility**
Stations along the pipeline that help the gas move down the line (like squeezing toothpaste out of a tube).
- * Gas wells**
Holes drilled into the earth to reach the natural gas.





Name: _____

i) What are the names of the gas wells?

ii) What communities have compression facilities?

iii) List five communities, from north to south, which the pipeline passes through.

iv) What body of water does Taglu sit south of?

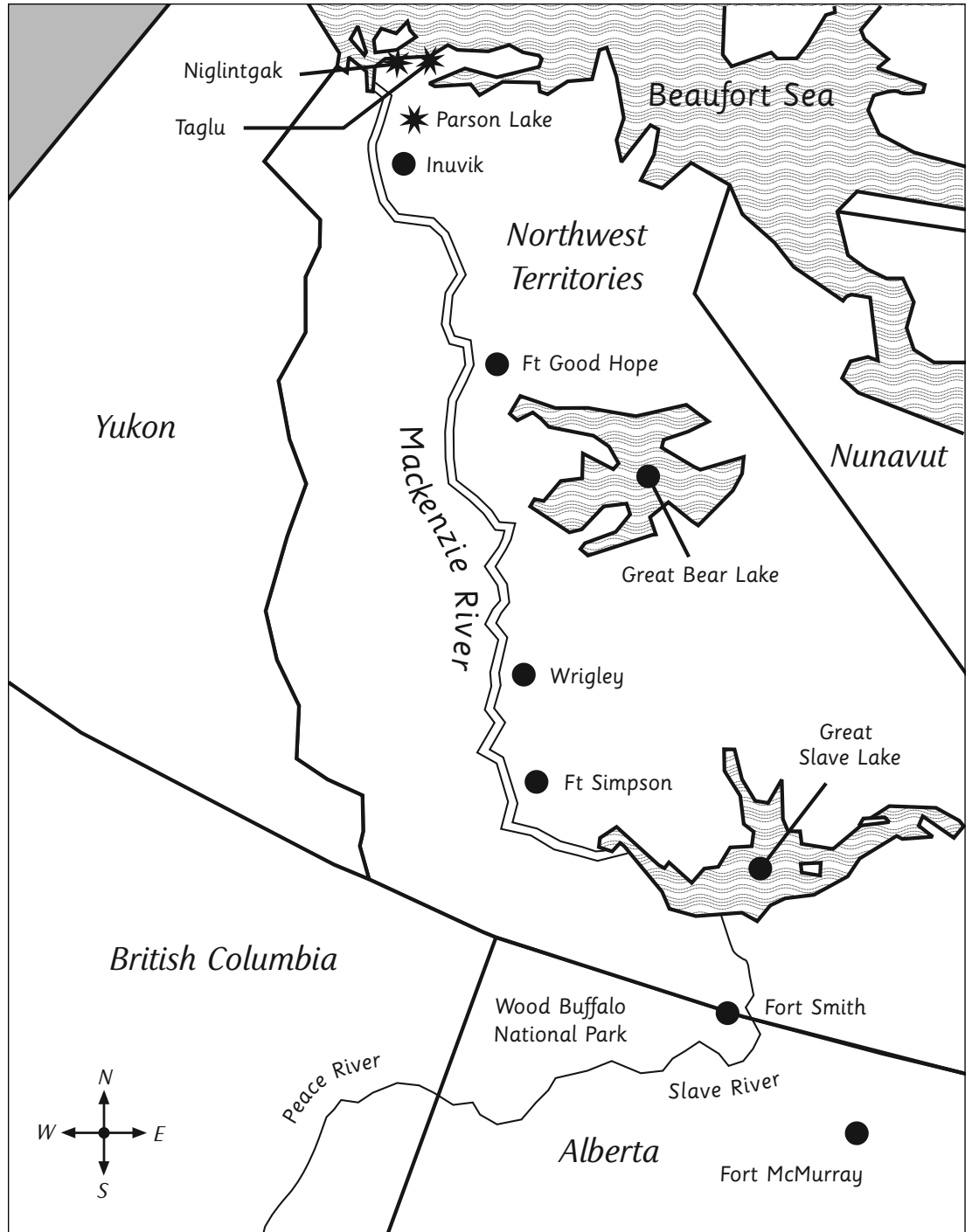
v) What communities are west of Great Bear Lake?





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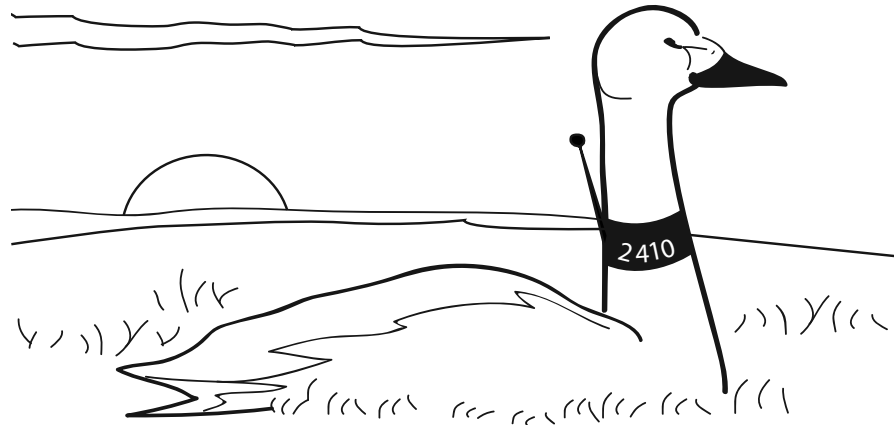
> **Section B) Mapping the Migratory Routes of Caribou and Tundra Swans in the Northwest Territories**





Name: _____

1. Meet Waterfowler



She is a female Tundra Swan who was fitted with a transmitter by scientists. A transmitter allows scientists to electronically track where she is. They tracked Waterfowler's migratory route from Michigan all the way to the Mackenzie Valley, then back. Between the months of March and November in 1999, she traveled 6515 km!

Using the chart below, map out Waterfowler's route in coloured pencil on the map.

| Date | Waterfowler's Location |
|--------------|--|
| May 8th | Wood Buffalo National Park |
| May 12th | Lower Mackenzie River (near Inuvik) |
| October 4th | Mills Lake, Northwest Territories (on South end of Mackenzie River, near Great Slave Lake) |
| October 14th | Wood Buffalo National Park |
| November | Off the map! Back in the U.S.A. |





Name: _____

2. The Bluenose West Caribou



Many herds of Caribou rely on the Mackenzie wetlands. The Bluenose West Herd, in particular, migrates in the area that borders the upper Mackenzie River, right where the pipeline will be built. Though their route changes every year, depending on the available food, they do need a lot of land.

The chart below shows an example of one year's migration of the Bluenose West herd. Chart this route in coloured pencil on the map.

| Season | Caribou Location |
|--------|--|
| Spring | Northern Shore of Great Bear Lake |
| Summer | Near Nunavut / Northwest Territories border, on the Beaufort Sea |
| Fall | Mouth of Mackenzie River |
| Winter | Fort Good Hope, Northwest Territories |

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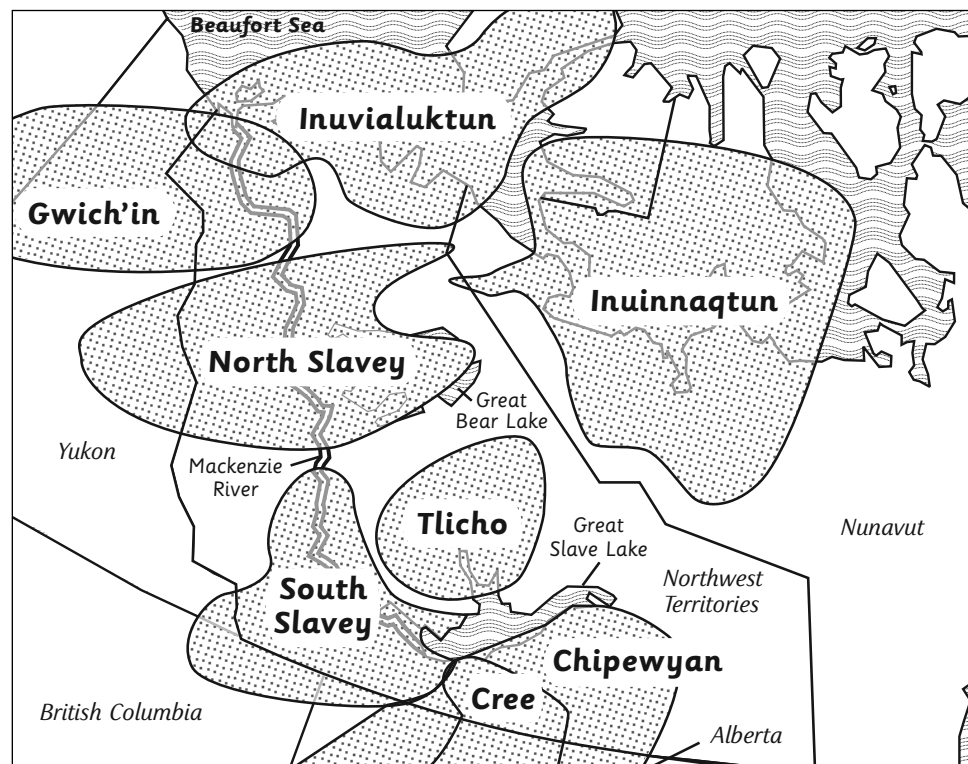
Name: _____

> **Section C) The Northern People of the Mackenzie Valley**

The north is a diverse place with ten official language groups (eight Aboriginal and English and French). To the far north the Inuvialuit people speak two dialects (versions) called Inuvialuktun and Inuinnaqtun. The Dene people in the Mackenzie Valley speak Gwich'in, North and South Slavey, Tlicho, Chipewyan and Cree.

Look at your map of the proposed route and compare it to the official languages map of the Northwest Territories. Which language groups will be most impacted, either positively or negatively, by the proposed pipeline?

Official Languages of the Northwest Territories





Name: _____

> Section D) Connecting the Dots

1. Using your maps, make a list of at least five of the language groups and animals that live in areas that will be affected by the pipeline. Look for more animals by researching the Northwest Territories in your library or using the Internet.

2. List some changes that these people and animals might experience if the pipeline is built. Which of the changes do you think will be negative and which will be positive?

3. Can you think of any other energy resources that Canada is rich in, and that we could use instead of mining for fossil fuels?





> **Section E) Mapping Key Energy Resources**



nuclear station



wind farm



hydro station



coal plant



diesel power generatiton

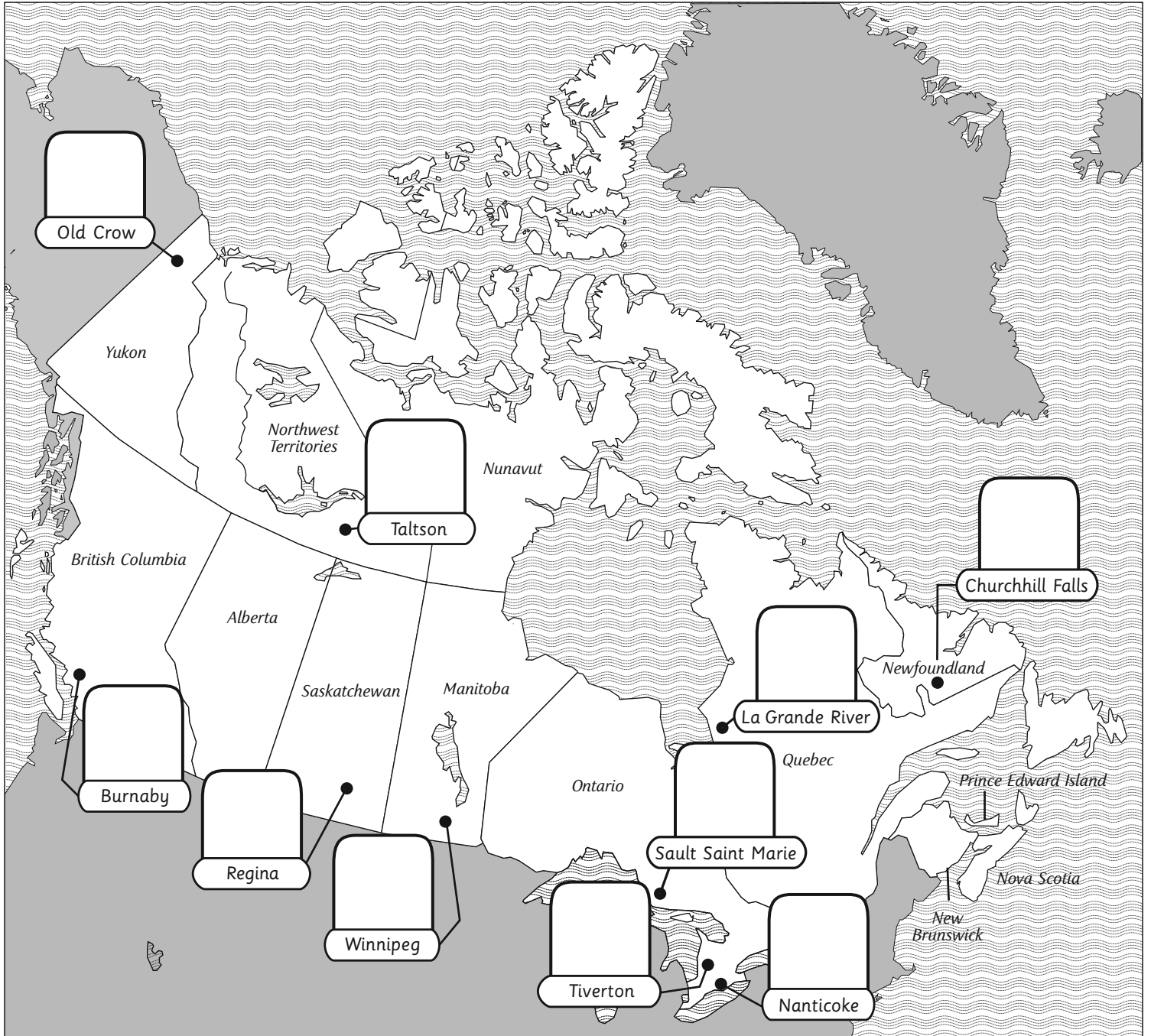
On your map, draw the icons above to map the following power stations:






1. The Bruce Nuclear Power Station in **Tiverton**, Ontario is the fifth largest power plant in the world.
2. **Churchill Falls** in Labrador is the second largest hydro generator in the world.
3. Bourassa Hydro on the **La Grande River** in Quebec is the largest underground power plant in the world.
4. **Nanticoke**, Ontario is home to the largest coal plant in North America. It will be shut down by 2009 because it produces as much pollution as 3.3 million cars.
5. The largest wind farm in Canada will soon open in **Sault Saint Marie**, Ontario.
6. Manitoba Hydro has its main office in **Winnipeg**; it produces the majority of Manitoba's power from various rivers and falls across the province.
7. The Centennial Wind Power Facility in **Regina**, Saskatchewan is currently the largest operating wind farm in Canada.
8. B.C. Hydro in **Burnaby** gathers 90% of the power used in British Columbia from local rivers and falls.
9. Communities such as Yellowknife and Fort Smith in the Northwest Territories use electricity generated from hydro stations, including **Taltson**, south of Great Slave Lake while the rest of the communities in the Northwest Territories use diesel fuel shipped in.
10. Many small communities in the north, like **Old Crow** in the Yukon, use diesel generators for energy.



Name: _____

Key Canadian Energy Resources



-  nuclear station
-  hydro station
-  diesel power generation
-  wind farm
-  coal plant





Answers: Mapping Our Resources

Section A) Mapping the Proposed Route for the Mackenzie Valley Pipeline

1.



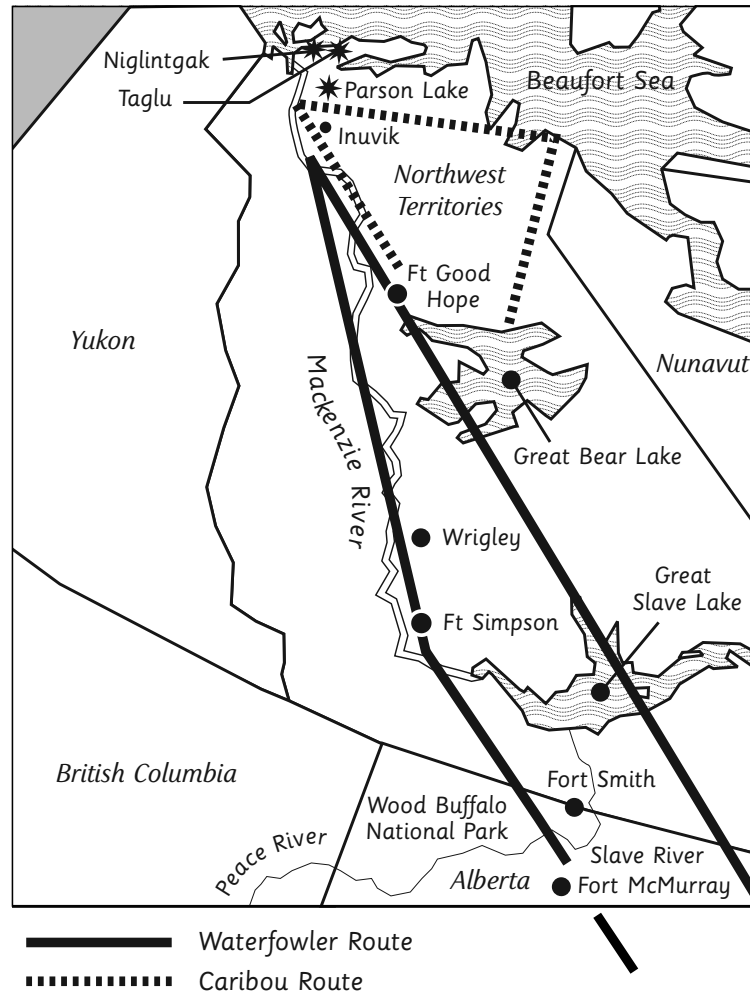
2. i) Niglintgak, Taglu & Parsons Lake
- ii) Inuvik, Norman Wells, Wrigley, Fort Simpson
- iii) Five of: Inuvik, Fort Good Hope, Norman Wells, Tulita, Wrigley, Fort Simpson & Jean Marie River
- iv) Beaufort Sea
- v) Norman Wells, Deline, Tulita





Answers: Mapping Our Resources (continued)

Section B)



Section C) The Northern People of the Mackenzie Valley

- Inuvialuktun
- Gwich'in
- North Slavey
- South Slavey

Possible:

- Chipewyan
- Cree
- Tlicho



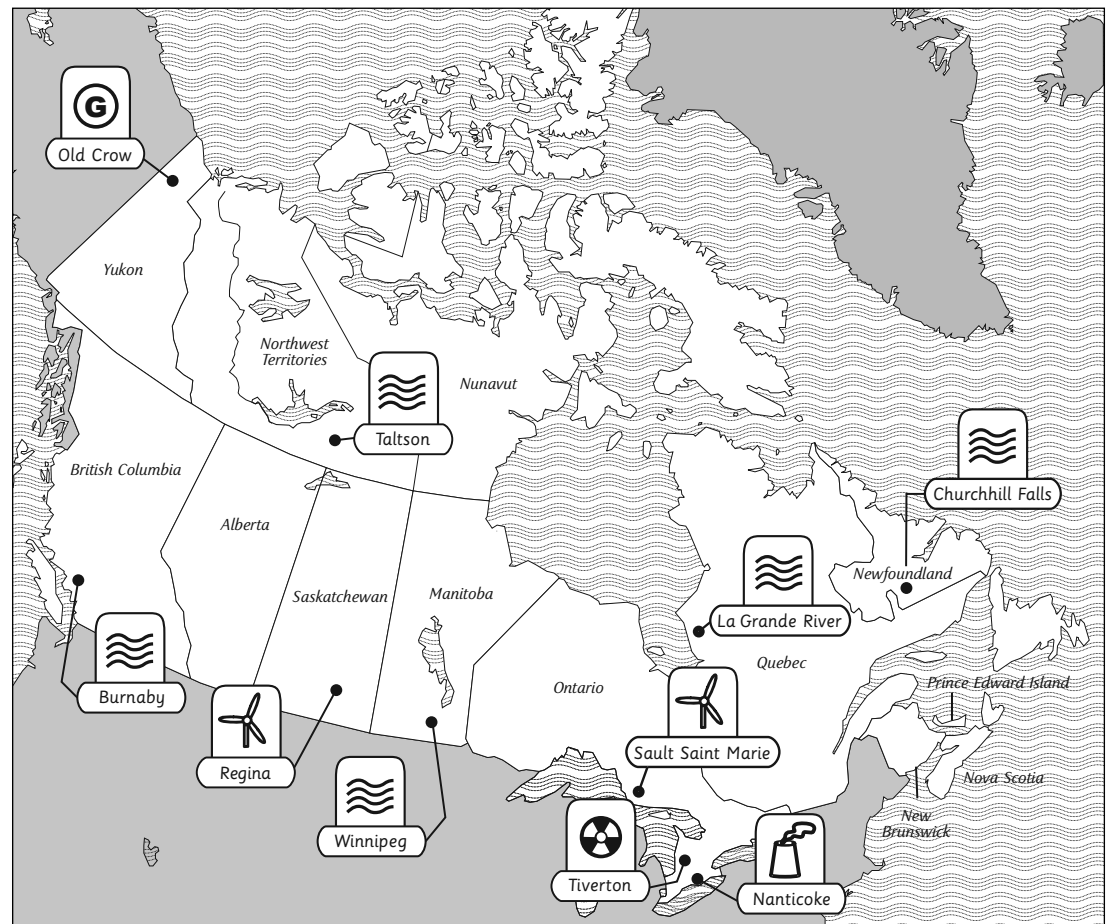


Answers: Mapping Our Resources (continued)

Section D) Connecting the Dots

1. Open – student should include the Tundra Swan, the Bluenose West Caribou, the Tli cho, Inuvialuit, North Slavey, South Slavey, and Gwich'in. Inuvialuit speak Inuvialuktun and Inuinnaqtun. The rest are Dene people.
2. Open – student should review some of the environmental impact of building the pipeline. Possibly cutting off migratory routes of animals, more development, less wetlands. Student could also talk about development in the communities that could have both positive or negative effects. More highways, but also maybe more resources and jobs, etc.
3. Open – student should use what they know about energy to provide some other examples. Could include nuclear, wind, hydro, etc.

Section E) Mapping Key Energy Resources



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