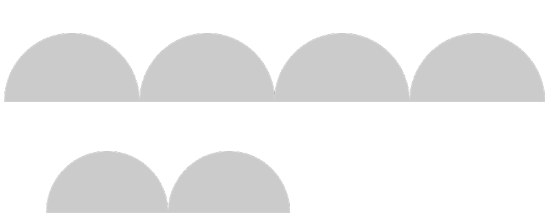
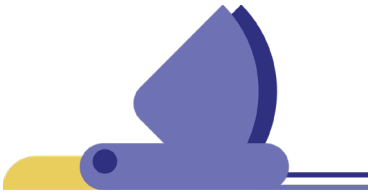
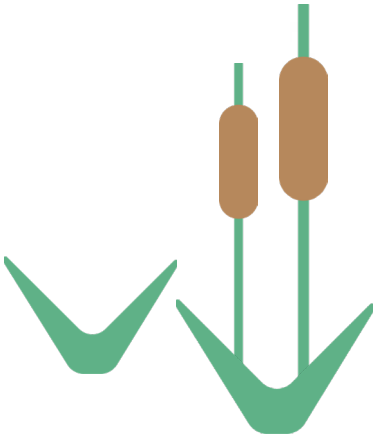
WATER FIRST

INTRODUCTION TO WATERSHEDS

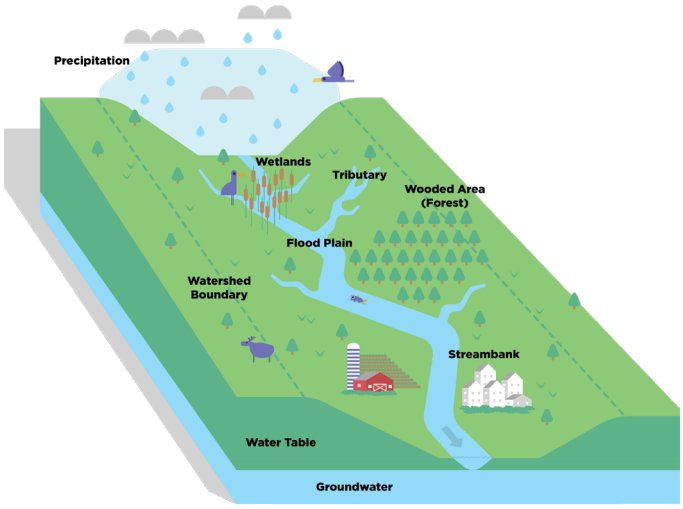
STUDENT WORKSHEETS







WHAT IS A WATERSHED & WHY ARE THEY IMPORTANT?



Aki (the Earth) is made up of many different watersheds. A watershed is an area of aki (land) whose streams and rivers all drain into a single larger body of water, such as a larger river, a lake or an ocean. Every watershed or land mass looks different. Your community is on a watershed because all of the water that falls there is flowing towards a body of water. Sometimes it takes the water years to get there, but it inevitably does, even if it has to flow under the ground! All of the nibi (water) on aki (the earth) is connected through the watershed, and as a community, we are connected to the water as well, because we depend upon water for our well-being.

The way that we treat aki (our land) will affect nibi (our water). For example, if we built a factory on a wetland, nibi may not be filtered as it should, causing us to swim in and even drink unclean water. Many actions taken by people have a direct impact on aki and this changes nibi in the same way. If we spill gasoline on the ground, aki soaks it up and that gasoline will mix with nibi in groundwater. We can stop people from doing these actions, but we need to be able to explain to them why it is harmful to nibi.

We can protect aki and nibi by planting more trees, or moving things that cause pollution to safer locations that do not have a large negative impact on nibi. Each community has possibilities to protect nibi. Protecting nibi is important because it connects everything on Aki.

Major Watershed Components:

Tributaries are the paths water takes when it flows over the land. They are created by the landforms in the watershed. Hills and mountains create valleys so rivers and rain can run down and flow through. Tributaries tell the water which way to flow across the land, and control the **madaagmin** (how turbulent the water is). Sometimes a mountain can cause waterfalls and rapids in a river.

Wetlands, or marshes, are very important to our watersheds. Wetlands are a complex natural filtration system. One filtration process occurs as the water moves slowly through wetlands and dirt that **agonde** (is in the water) sinks to the bottom.

Vegetation is another word for plants. Trees and other plants help to control flooding in rivers, lakes and on the land because they absorb water to prevent overflow. The roots also prevent dirt and soil from **bakobiibide** (falling into the water) because the roots hold the dirt in place.

Large water bodies such as lakes and oceans determine the name of your watershed. If you live near Lake Ontario you may be in the Lake Ontario watershed because all of the water that falls in your area is flowing into Lake Ontario. A large lake is often the original onda'ibaan (a source of water) for water going to your home from water treatment plants.

LET'S TALK WATERSHEDS!

1 What might happen if there were no wetlands in your watershed?

2 List the 4 watershed components we shared:

- _____
- _____
- _____
- _____

3 Brainstorm how water could enter and move through the watershed.

4 Use a drawing to show how the roots of a tree help soil stop erosion (bakobiibide).

5 What Anishinaabemowin words did you learn from the reading?

ANISHINAABEMOWIN	ENGLISH

WATER REFLECTION

Write a one paragraph reflection about watersheds.

Explain how you are part of the watershed, how do you interact with **aki** and **nibi**? How do you affect the watershed health in your community? Include, as best you can, 5 **Anishinaabemowin water words** in your response. Use the ones provided, or ask a language speaker for help.

A Selection of Anishinaabemowin Water Words:

aki: earth, land, ground

nibi: water

dakib: cold water

abaagamide-nibi: warm water, lukewarm water

nibiikaa: there is (a lot of) water

agonde: it is in or on the water, floats, soaks

agamiing: at the lake, at the water, on the shore

bagaskaadagaazii: s/he wades splashing through the water

bakobiibide: it falls, dives, plunges into the water

bakobiiwebin: throw into the water

madaagamin: it is turbulent water

onda'ibaan: a source of water, a well

Draw a picture to help explain part of your reflection.

HANDS-ON ACTIVITY

Create a mini watershed!

Materials:

1 piece of blank white paper

3 different coloured washable marker (blue is strongly recommended to represent water)

1 black permanent marker

1 spray bottle filled with water

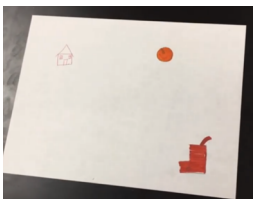
Point-source pollution is pollution that comes from an obvious pace or thing. In this demonstration we can see what it looks like on a watershed. We can see how buildings people live and work in can cause pollution to enter water systems.

Our models show us something called **surface runoff**. We can literally see the pollution on our paper running into our water. This is how pollution mixes with our rivers and streams during rain.

Step by Step:

Follow these steps to create your paper watershed.

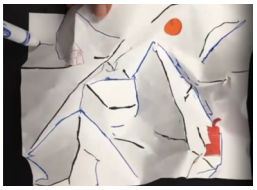
1. Draw a house, a school a factory and a water treatment plant on your paper with washable marker.



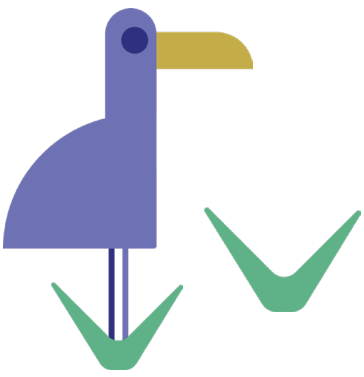
2. Gently crumple the paper to make mountains, hills and valleys for your watershed.

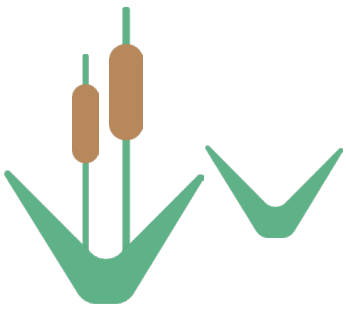
3. Spread it out gently, and take a permanent marker to trace the highest peaks of the hills and mountains.

4. Take a blue washable marker and trace the valleys where rivers and streams would flow.



5. Once everything has been coloured spray the paper with water and watch the marker flow where the rain water would flow.





MINI WATERSHED ANALYSIS

1 **Share a picture of your watershed.**
After you have built your model, take a picture of your watershed and share it with your teacher.

2 **Explain how the water flows in your watershed.**
What helps decide where the water goes?

3 **Describe where your factory is in your watershed:**
Is it on a hill or in a valley? Does it have any rivers or lakes nearby?

- _____
- _____
- _____
- _____

4 **In what ways is your factory polluting the water in your watershed?**
Look at how the marker from your factory is bleeding.

THANK YOU
FROM WATER FIRST FOR THINKING ABOUT THE EARTH AND YOUR WATER!