

Session 3

Mapping Our Watersheds

Learner's Guide



Focus on learning and exploring the features of the watersheds in your area. You will be identifying well-known places, like mountain peaks and rivers, and directly connecting them to the concept of watershed systems and your local experiences.



Today's Big Question: What does our local watershed look like?

Introduction

Now that you know a bit more about how watersheds fit into Earth's water cycle, you are going to explore and learn more about the bigger picture of the watersheds where you live! If you have done any hiking, kayaking, river tubing, or other recreational activities in the area, you may be familiar with some of these places already.

Watersheds are fed from high points, such as mountains, and they flow downwards into basins made up of rivers, lakes, marshes, aquifers, and estuaries.

There are many kinds of maps. A physical map is a drawing or image that shows relationships and locations of elements and features of a specific area. Maps can be created to represent features of a specific theme – in our case, the local watershed. In this session, you will use maps to identify features of your watershed.

In this learning project you will explore the important role of watersheds in the global water cycle. You will also get to know more about your local watersheds, and how to take good care of them so they can continue to take good care of our water (and us!).

As you can see in the image above, the Earth's surface has many different features such as mountains, tributaries, rivers, sub-surface aquifers, riparian ecosystems, marshes, and estuaries. These features are part of the watershed, and they work together to catch, collect, clean, and transport precipitation in the form of snow, rain, mist, and dew.

Indigenous peoples of an area have their own place names for features within the watershed. Learning and practicing these names in the local Indigenous language shows respect for their culture and history and helps us understand the Indigenous ecological knowledge of each place.

Your Words and Terms

The following terms will help you to understand key watershed features, and to help map your local the watershed.

- › Topographic map
- › Ecosystem maps
- › Elevation
- › Contour lines and intervals
- › Gully
- › Valley
- › Slope
- › Watershed boundary line (or divide)



Activity 1: Mapping Our Watersheds

Part 1

Using the maps and books provided, as well as the internet, research and answer the following questions with your group:

1. Identify all the mountains, hills, and high ground within your region, and include the watershed boundary lines. What are the contour lines and intervals, and what do they mean? Can you find an Indigenous language name for any of the mountains?

2. Look for the valleys, gullies, streams, and rivers in the area. What is the difference between a valley and a gully? How about a stream and a river? Can you find an Indigenous language name for any of these features?

3. What are the lakes, marshes, and estuaries in the area? Can you find any Indigenous names for these features?

4. Find the places where waterways flow through local cities and towns. What spots are most populated? Where are the bridges?

5. Identify where your school is on the map. Also, explore/identify where you live (generally) on the maps provided.

Part 2

Using a map template provided by your teacher and the feature labels provided, label the names of mountains and high ground features, and details like rivers and lakes.

You can shade in the contour lines according to slope and steepness, and collage on the map with magazine images such as forests, mountains, and towns.

Draw in or label (generally) where you live on the map, as well as where your school is.



Activity 2: Watershed Wiz Quiz

Have someone from your group carefully take your map from the mapping activity above and tape or pin it at the front of the room so everyone can see.

Put your notebooks away and let the quiz begin!

Draw a word or term from a container and match it with a corresponding feature on one of the maps. Explain what it is.

If you are challenged, perhaps you can get a friend to help. When you get it right, you can choose who goes next.

They will draw a word or term from a container and match it to the correct chart paper. When they get it right (maybe with a little help from their friends), they will read out the bulleted notes about the word or term. And then they will get to pick who goes next!



Activity 3: Watershed Reflection

Write or draw about facts and ideas that stood out for you in today's session about watersheds. Include your thoughts on what you have learned.

In your reflection, touch on three or more of the following themes:

- › The largest watershed system in your area
- › Two smaller watershed systems in the area
- › Mountains in the area and which watershed they belong to
- › Local Indigenous language place names for watershed features
- › Streams in the area and which system they belong to
- › Rivers in the area and the watersheds they are part of
- › A marsh (or bog or fen) near you
- › An estuary in the region

Watershed Reflection: *Mapping Our Watersheds*

Labels for *Mapping Our Watersheds* Session

- › Research Indigenous names as well as common names
- › Consider collaging with magazine pictures to add visuals for a graphic style map

<p>River</p> <p>Names:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>River</p> <p>Names:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>River</p> <p>Names:</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Wetland</p> <p>Names:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Wetland</p> <p>Names:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Wetland</p> <p>Names:</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Stream/Creek</p> <p>Names:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Stream/Creek</p> <p>Names:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Stream/Creek</p> <p>Names:</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Mountain</p> <p>Names:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Mountain</p> <p>Names:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Mountain</p> <p>Names:</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Valley</p> <p>Names:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Valley</p> <p>Names:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Valley</p> <p>Names:</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Estuary</p> <p>Names:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Estuary</p> <p>Names:</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>Estuary</p> <p>Names:</p> <p>_____</p> <p>_____</p> <p>_____</p>