



DISCOVER YOUR WATERSHED

WHAT IS A WATERSHED?

Did you know that you are standing in a watershed right now? No matter where you are, as long as you are on land, you are in a watershed!

A watershed is an area of land where all the water that is under it, or drains from it collects into the same place, usually towards a major river and then the ocean!

This water can come from **precipitation** in the form of rain, snow, hail or sleet. When this precipitation falls onto the steep mountain sides, gravity pulls it downhill. Eventually, enough precipitation comes together to form a small stream which flows downhill towards other small streams which eventually form a river!

Along the way some of this water evaporates, or seeps into the ground as **ground water**. The rest of it passes through towns, schools, factories, forests, dams, farmland and fields.

The water comes into contact with all of us: the oil from our cars, the trash we left on the playground or the ice cream we spilled on the sidewalk!

It's important to know more about your watershed so that you can keep it clean and protect it!

Want more information on watersheds? Check out these awesome videos!

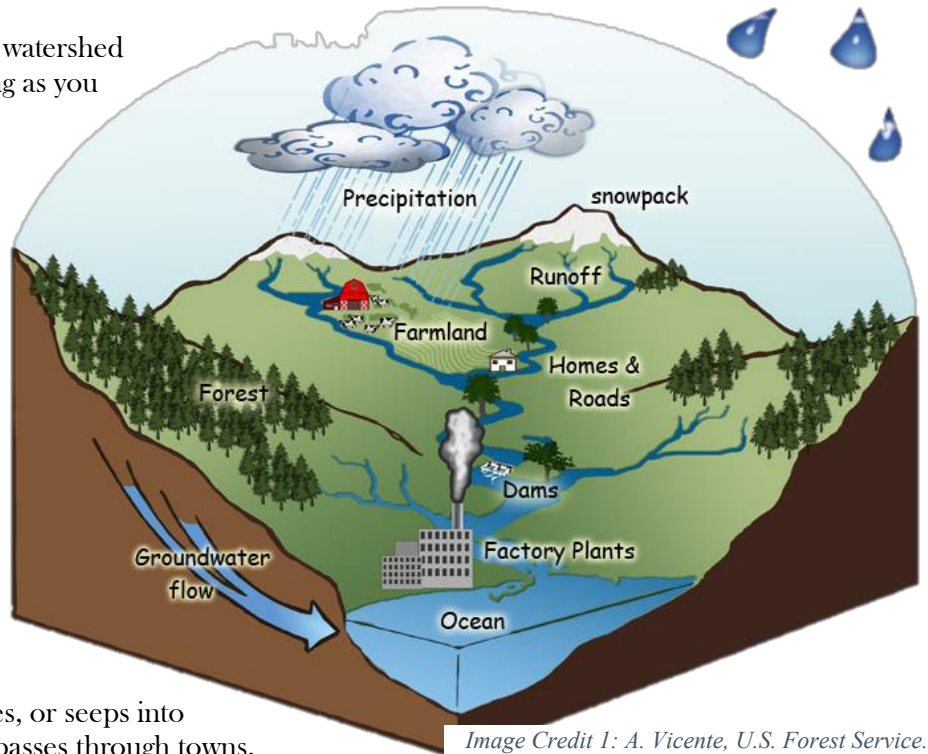
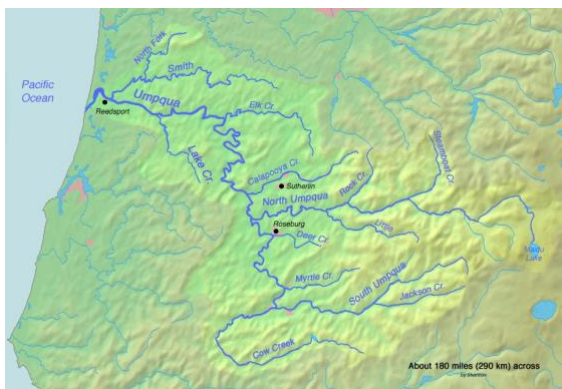


Image Credit 1: A. Vicente, U.S. Forest Service.

WHAT IS THE UMPQUA WATERSHED?



I'm so glad you asked! If you're like me and living near the Umpqua River, then you're currently standing in the Umpqua watershed! See this map on the right to look for the closest major river to you! You will notice that all of these smaller streams eventually flow into the Main Umpqua River and then into the Pacific Ocean! The Umpqua watershed covers over 3 million acres of land (that's bigger than the island of Puerto Rico)!

Within Oregon, it's not even one of the biggest watersheds. **Which one on this map on the left is the biggest watershed in Oregon?**





Activity 1: Fill in your watershed!

You will need:

- Pencil
- Colored Pencils
- Printer

Instructions:

1. Ask an adult in your house to help you print off the watershed diagram on the next page!
2. Label all parts of the watershed using the key words in the box
3. When you're done labeling, color in the watershed!
4. Sign your name and [send in a picture to Ms. Robyn](#) to be entered for a prize!
5. *Don't have a printer? No problem! Get a blank piece of paper and design your own watershed with labels! It will look amazing 😊*

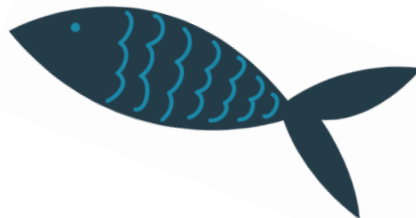
THINK ABOUT IT! Pollution is one of the biggest threat to a watershed! **Pollution** is the build-up of chemicals, garbage and other things that can flow from our towns, storm drains, farms, or factories into our major rivers and oceans. Follow three pieces of trash in this video to see how they interact with our watershed:



I know that video may seem a bit sad, but **YOU CAN HELP!**

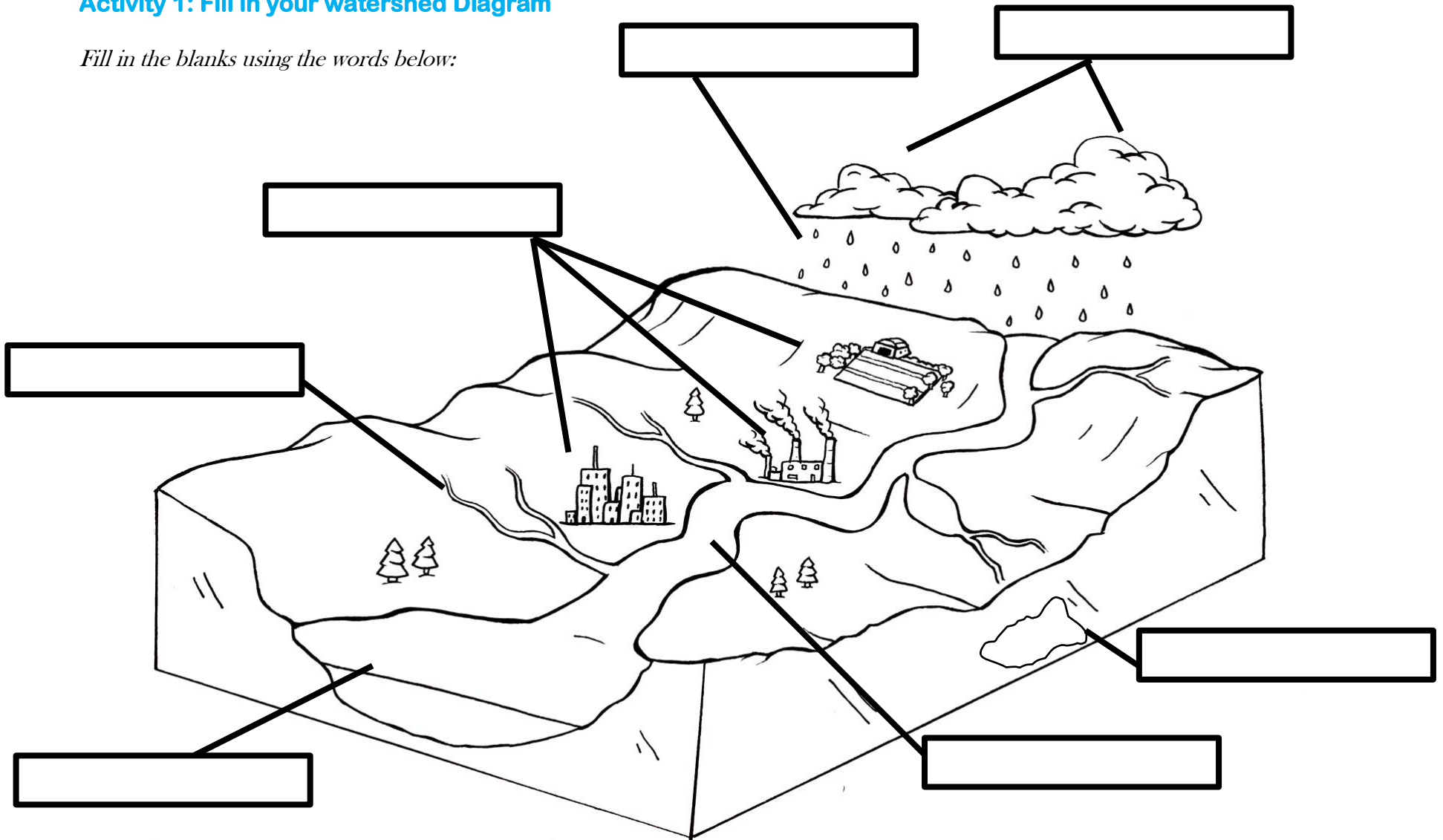
There's lots that you can do to help keep your watershed clean... keep following my Home Explorer Series for ways you can make a difference!

For starters, here are some ways you can reduce the amount of plastic that goes out into the planet and in our watershed! Just click on the fish:



Activity 1: Fill in your watershed Diagram

Fill in the blanks using the words below:



- | | | | |
|---------------|---------------|----------------------|--------------|
| Clouds | Precipitation | Stream | Umpqua River |
| Pacific Ocean | Ground Water | Sources of Pollution | |



EXPERIMENT 2: Building your watershed

We will now design our own watershed using materials from around the house. Ask an adult for assistance and to help find the right supplies!

You will need:

- A cookie sheet or the lid from a plastic box
- Towel for clean up
- Tupperware
- Plastic garbage bag
- Empty Spray bottle
- Water
- Markers (non-permanent)

Instructions:

1. Put your cookie sheet or lid on a flat surface on top of your towel. Imagine that the cookie sheet is your watershed.



2. Start stacking all of your different tupperwares to form 'mountains' and leave a space in the middle to be the big lake where all of the precipitation will flow. You can stack multiple containers on top of each other.



3. Cover the tupperware with a plastic garbage bag - *you can cut a small bag in 1/2 if you need to make it fit over the entire watershed.*





4. Use a blue marker to color in your streams and major rivers and big lakes following the 'hills' and 'valleys' of your watershed. The marker won't show up very well at first, but don't worry, it will get brighter!

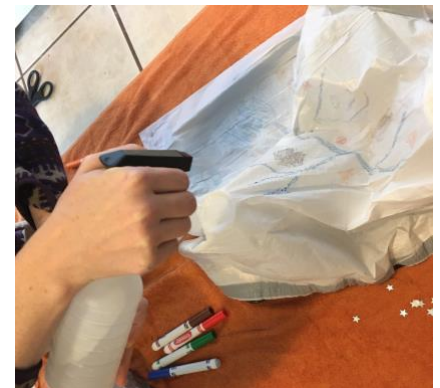


5. Next add in colors to represent different ways humans might change the watershed. For example, red circles for cities, or orange triangles for farms. Be creative! Add lots of activity and color to your watershed. At this point you could also add in optional things like glitter or cooking oil to represent other kinds of pollution like pieces of trash or oil spills.

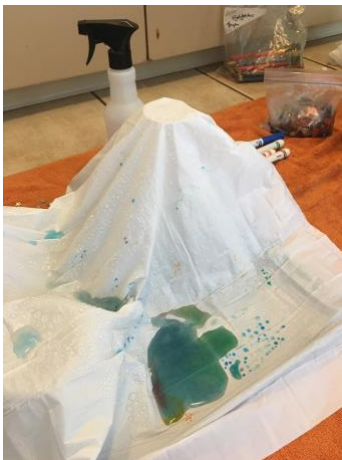


6. Fill up your spray bottle with water and prepare to spray the water at the top of your watershed.

7. **STOP!** First make a hypothesis on what you think will happen once you start making it 'rain' on your watershed!
 - a. A **hypothesis** is a scientific guess and it's important to make your guess before you start your experiment.
 - b. It's totally OK if your hypothesis is wrong - it means that you've learned something new and exciting!



8. Begin spraying the water on the tops of the mountains and watch where the water goes and how the colors interact!



THINK ABOUT IT! You've just watched the water all move towards a common body of water. All of the water that you sprayed on the watershed either went towards this common source or off the other side onto your towel. Hopefully you were able to see all of the different colors run together - if we hadn't added in all of those farms or cities, the water at the bottom would still be blue!

TRY IT AGAIN WITH A TWIST! Gently lift at the corners of the bag and bring the water to the center, lift up the bag and drain the water down the sink. Dry off the bag and start over. This time try adding more of one kind of pollutant, or adding in cooking oil or other things around your house that could change the watershed.

Check out more variations [HERE!](#)



Digging Deeper:

While you're at home, you have the chance to explore the watershed around your house! The next time it rains go outside and see how water comes off your roof, flows down the street or gets stuck in puddles in your yard. All of these are small watersheds, which ultimately become part of the Umpqua Watershed (or whatever watershed you're in!).



Thanks for conducting science with me for this Home Explorer activity from Umpqua Watersheds Education Program.
Join me for new activities posted every week!

- Ms. Robyn

