Colorado Springs Utilities
It's how we're all connected

Student worksheet

Get to Know Your H_2O

Materials Needed:

- 100 macaroni pasta, beans or small items
- Blue, red and green markers

We have a limited amount of useable fresh water. In Colorado Springs, water is brought to town from the Rocky Mountains, over 100 miles away.

Directions:

- Estimate amounts of salty, frozen groundwater and surface water on Earth.
- Use pasta pieces (or something small) to graph amounts.
- Watch the video, read about where your water comes from and answer questions.
- Complete the maze.

People plants and animals needs fresh water to survive. Fresh water is found in surface water (lakes, streams, rivers and wetlands), groundwater (underground in aquifers) or as frozen water stored in ice, glaciers, ice caps and snow.

Part 1 - HOW MUCH WATER IN THE WORLD?

Instructions:

1. Look at a globe or world map. Find where you live, locate the seven oceans and other surface water features.
   - Do you think there is more water or land on the globe? _____
   - Have you ever tasted salt water? Was it good? _____
   - Is there more water beneath the surface of the ground that you cannot see on the globe? _____
2. Get 100 pieces of macaroni pasta, beans or other small items. These 100 items will represent all the water in the world. Let's pretend they are gallons of water. If 100 gallons represented all the water in the world, estimate how many of these gallons would be in each of the four distinct groups of water. Divide the pieces into each of the four water categories below. 1st Estimation – This is your own guess.
3. 2nd Estimation – Now compare your guesses with a friend's guesses. Do you want to change any of your guesses? _____ If you want to change your guess, please enter your new answer in the second column.
4. Actual Answer - Now write down the actual answer that your teacher gives you. Were you right? _____
5. Color the pasta pieces according to type of water (coloring is optional) and arrange them into a graph or pie chart on a flat surface. Draw your results in smaller scale below.
6. Watch this four-minute video on the percentage of fresh water on Earth: https://www.youtube.com/watch?v=oaQCiwzjnCM

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HOW MUCH WATER IN THE WORLD?

Estimate the percentage of water in each category

How much water is:	**1st Estimation – your guess** (# of gallons out of 100)	**2nd Estimation – your revised guess after talking to a friend** (# of gallons out of 100)	**Actual Answer – provided by your teacher** (# of gallons out of 100)
Salt Water – Oceans, seas			
Frozen Water – Glaciers, ice caps, icebergs			
Groundwater – aquifers, water underground			
Surface Water – Rivers, lakes, wetlands, streams			

Using the Actual Answers, lay out your pasta pieces on a flat surface as a graph or pie chart of the four types of water and draw a smaller-scale version of your results here.

Graph - don't forget to label your X and Y axis

Pie Chart – add a label and percentage to each slice of pie

Water Amounts Data:

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Part 2 – WHERE DOES YOUR WATER COME FROM?

Read the passage, then answer the questions below.

A **reservoir** is a man-made lake used to store water.

Communities in Colorado get their water from streams, lakes and reservoirs that are supplied by snowmelt and rainfall. The amount of water that is available for use varies from year to year and depends on snowpack in the mountains. In fact, about 80% of our water in town comes from snow that fell in the Rocky Mountains.

Everyone in the world lives in a watershed. A watershed is an area of land that drains into a stream or lake. Here in Colorado Springs we live in the Fountain Creek watershed which is part of the Arkansas River Basin. We use this water as part of the city water supply.

The Arkansas River Basin water available in town isn't enough for the size of our city so we also bring in water from the Colorado River and South Platte River Basins.

In fact, most of our drinking water comes from 100 miles away from the Western Slope of the Rocky Mountains through a series of tunnels, canals and pipes. The water is stored in reservoirs before it is treated and distributed in our community.

By cleaning and testing the water, Colorado Springs Utilities makes sure that we have safe, delicious water for drinking. Our water utilities do more than clean the water. They also fix leaky pipes and install new ones, monitor water levels in our waterways and much more!

The water used inside your house goes down the sanitary sewer pipe to the Water Resource Recovery Facility where it gets cleaned again.

1. What percent of our water comes from snow? _____ %
2. Write the name of the watershed you live in:

   _____
3. Name the three river basins that supply your water:

   _____

   _____

   _____
4. How far has some of your water traveled to get to town? _____ miles
5. What is the name of the utility company that supplies your drinking water?

   _____

How Does Water Get to You?

1. Use a blue marker to trace the path of the water to the sink in the house.
2. Circle all the places where water is being used in the house.
3. Use a red marker to trace the path of the water after it has washed this person's hands.