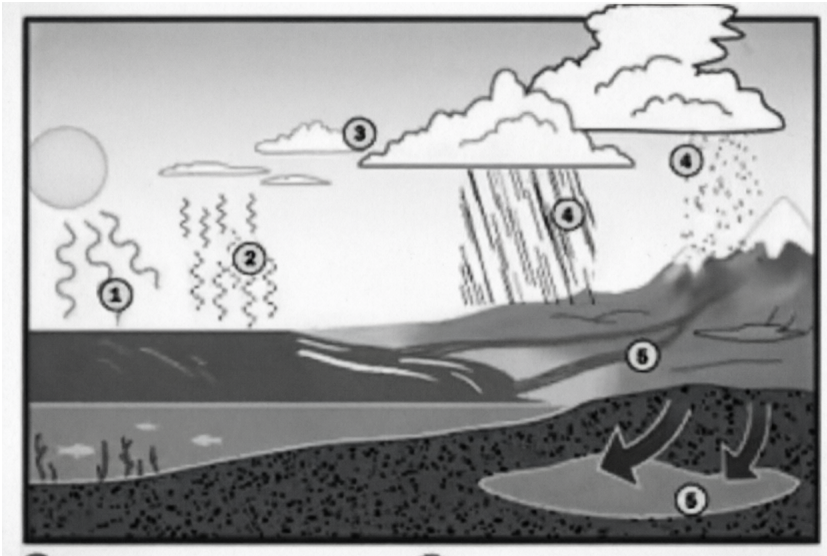


# Groundwater

## Engage

1. Look at the graphic below.
2. Work with your partners to remember what you learned about this cycle in your elementary school.
3. Write what you remember on the lines below the graphic.



- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

What is this cycle called? \_\_\_\_\_

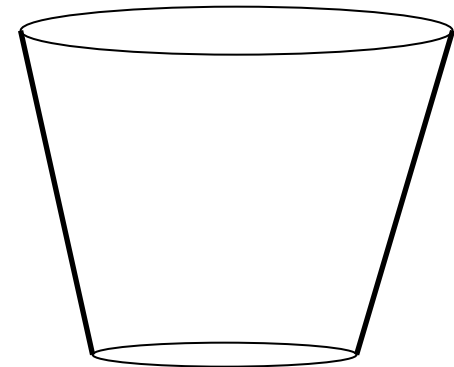
## Explore

### Materials:

Clear plastic cup, modeling clay, sand, gravel, water

### What To Do:

1. Pour  $\frac{1}{4}$  inch of sand in the cup making sure to cover the bottom.
2. Add enough water to the sand so it is wet but no water is standing on top of it. Observe the water and the sand.
3. Flatten the modeling clay (like a pancake) and cover  $\frac{1}{2}$  of the sand with the clay. Be sure to press the clay to the side of the cup to seal off that side.
4. Pour a small amount of water on to the clay and observe the water.
5. Place the pea gravel over the sand and clay, covering the entire container. Slope the rocks forming a high hill and valley.
6. Pour water into the cup until the water in the valley is about 1 cm from the top of the hill.



1. What happened to the water you poured on the sand?  
\_\_\_\_\_

2. What happened to the water you poured on the clay?  
\_\_\_\_\_

3. Why did they interact differently?  
\_\_\_\_\_

Explain



# WATER TABLE

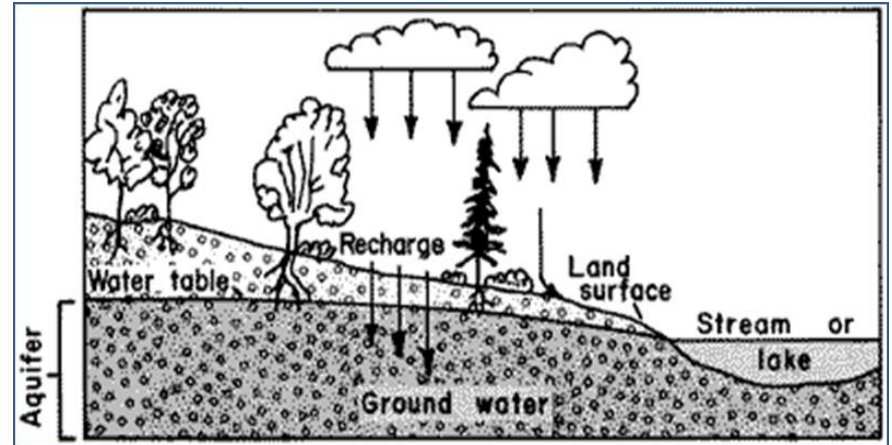
# GROUNDWATER

# AQUIFER

Elaborate

### What To Do:

1. Circle the word Aquifer in yellow.
2. Color the groundwater blue.
3. Color the land surface brown.
4. Trace the water table in red.
5. Color the trees and bushes green
6. Color clouds light grey.



(US Geological Survey, 2009)

7. Watch the video “What is an Aquifer?” at <https://www.youtube.com/watch?v=gRY7TYBx-is>
8. Fill in the blanks below by using the Word Bank

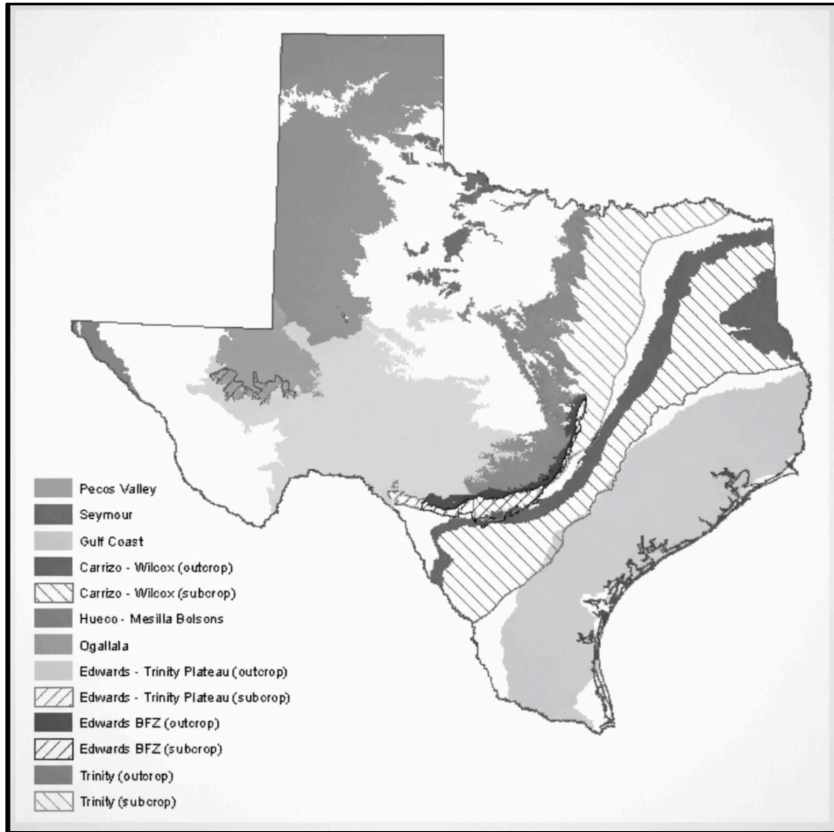
### Word Bank

aquifer   dinosaurs   stored   beneath   sponge

1. Our water today is the very same water that rained on the \_\_\_\_\_.
2. Groundwater is simply water held \_\_\_\_\_ the Earth in soil and rock.
3. The layer of rock holding this water near the surface of the Earth is called an \_\_\_\_\_.
4. The aquifer is like a \_\_\_\_\_ where the water filters down through tiny pores and cracks in permeable rock where it's \_\_\_\_\_ over many years moving and flowing underground.

**What To Do:**

1. Use the picture your teacher shows you to color all of the major aquifers in Texas or find it at <https://www.twdb.texas.gov/groundwater/aquifer/major.asp>
2. Don't forget to color the key.
3. Answer the questions.



**Questions:**

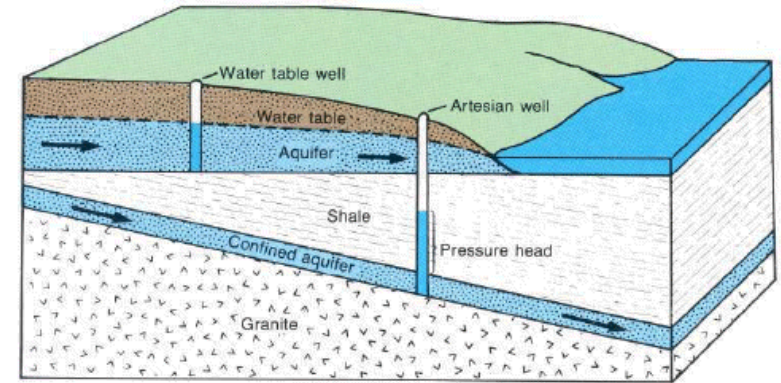
1. From which aquifer does your community get its drinking water?  
\_\_\_\_\_
2. Which aquifers come from other states but doesn't leave Texas?  
\_\_\_\_\_
3. Which aquifers go into Mexico? \_\_\_\_\_  
\_\_\_\_\_

Evaluate

Name \_\_\_\_\_ period \_\_\_\_\_

# EXIT TICKET

Groundwater



1. Place the letter G in the two areas on the diagram that represents groundwater.
2. What is the Water Table?
  - A. An underground layer of water.
  - B. The boundary separating groundwater from dry area.
  - C. Freshwater stored underground.
3. What is an aquifer?
  - A. An underground layer of water.
  - B. The boundary separating groundwater from dry area.
  - C. Freshwater stored underground.
4. Where does the groundwater appear on the surface?
  - A. Under the granite layer
  - B. In the lake or river.
  - C. Under the shale layer
5. What is groundwater?
  - A. An underground layer of water.
  - B. The boundary separating groundwater from dry area.
  - C. Freshwater stored underground.