The Science of Groundwater

Observe how different types of rock store water

Try dripping water on your sedimentary rocks with Pippi Pipette. Observe whether the rocks absorb the drops of water and count the drops that soak in.

00

000

0

00

Sandstone

Τ	ĥi	İS	ro	ck	1	ıb	so	rb	ee	1_			Ċ	lrc	p	S	of	W	at	er	•

Is sandstone a good reservoir rock or cap rock? Describe why or why not.

I				
I	<		1	
	-	 ١C	~ 1	

This rock absorbed _____ drops of water. Is shale a good reservoir rock or cap rock? Describe why or why not. STEMTaughte

The surface tension of water allows it to cling around the sediment and rocks that store it. Surface tension causes some water to remain permanently in groundwater reservoirs.

Try this:

You can see the effect of water's surface tension if you try to balance many drops of water on a single penny.

Penny Experiment

How many drops of water can you balance on a penny?

drops

Note: Rocks that can take in water make good groundwater reservoirs. Rocks that do not take in water make good caps for those reservoirs to keep the water escaping or evaporating.



How much water can a rock hold?

There are many different kinds of rocks and sediment in the earth and each stores ground water differently. How much water a rock type can hold is determined by the amount of void space between the grains that make up that rock or sediment. The size and shape of the grains determines how much space there is that can be filled with water. Rocks with large grains can have a lot of void space between them which makes them good groundwater reservoir rocks. Although tiny grains can be impenetrable to water, they are useful too. These rocks act like barriers and can be good to help contain groundwater.