

Candidate 6 evidence

Porosity & Permeability throughout Rock Types

Aim: To find out the porosity and permeability of certain different/unique rocks.

Underlying Science: Porosity and permeability are two important details within environmental science. Porosity and Permeability relate towards rocks and the structures of different rocks in relation towards water. Porosity is a measure of the space in between grains or cavities of rocks. While permeability is a measure of how easily or difficult water can pass through a rock. These are both closely related as high porosity usually equals a fairly equal level of permeability. The 3 different types of rocks we tested were; Sand, Grit and Gravel which are all sedimentary rocks and all but sand have reasonably high porosity and permeability.

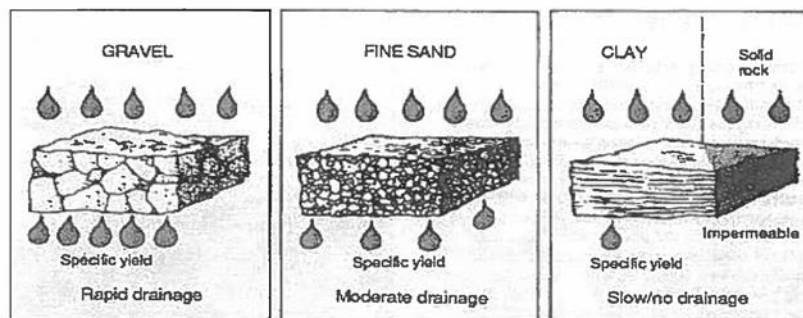
Description of Experiment: We filled funnel-like tubes with different rock types then recorded how long it took for water to get to the bottom.

Results/Raw Data:

<u>Attempt</u> <u>Type Of Rock</u>	<u>Time Taken For Water To Pass Through Rock</u>		
	<u>Sand</u>	<u>Grit</u>	<u>Gravel</u>
<u>1</u>	34.49s	4.39s	1.86s
<u>2</u>	31.1s	5.53s	1.66s
<u>3</u>	33.29s	3.95s	2.56s
<u>Total</u>	98.88s	13.87s	6.08s
<u>Average</u>	32.96s	4.62s	2.03s

Graph:



Internet Source:

Analysis: The source agrees with me on both the high permeability of Gravel and the extremely low permeability and porosity of Clay and Sand. The source also agrees with my underlying science of permeability and porosity.

Conclusion: Using the two sources provided I managed to successfully discover the porosity and permeability and 4 different rocks. Those being, Sand, Gravel, Grit and Clay.

Evaluation: During our experiment we did several things to make sure our results were as accurate as possible such as, making sure we poured exactly 90ml into all of the containers, And making sure all of the funnels were exactly the same size for if these weren't accurate we may have gotten inaccurate results.