Preparation for the Porosity and Permeability Online Lab

Earth Science Extras
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The videos and interactive text for the Porosity and Permeability lab will lead you through an actual experimental measurement of porosity and permeability, but, as with a 'real' lab, you will need to do more than passively watch and mindlessly answer questions! You will need to record data, calculate values, and interpret results.

Ideally, you should watch the experiment, record results, and figure out for yourself the best way to chart the results in order to keep track of what you need to keep track of. However, online 'labs' can sometimes make us a bit too laid back and unengaged, so, to help keep you on task, I'm providing an example data chart for you. Some of the values can be recorded directly from the experimental measurements in the videos, while others will need to be calculated from those basic measurements. Before watching the experimental videos, you should make a chart of your own, or you print out the charts below for your use.

Porosity Experiment Data Chart (example)

Expts	Total volume—sediment + pore space (ml or cc)	Initial volume of water (ml or cc)	Volume of water after filling to total-volume level (ml or cc)	Calculated volume of water added (pore space) (ml or cc)	Calculated percent porosity (%)
Marbles					
Smaller glass beads					
Mixture of small and large					

Permeability Experiment Data Chart (example)

Expts	Length of sed-iment in tube (cm)	Tube diam eter (cm)	Cross-sectional area of sediment in tube (cm^2)	Volume of water passed through (ml or cc)	Time for volume to go through tube (s)	Dis-charge (cc per second)	Pressure difference across sediment (atm)	Value of P (Darcies)
Mar-bles								
glass beads								