

Separating Materials - Designing a Homemade Water filter

You will need :(First check that your adult is 'happy' for you to complete this task.)

Dirty water (water mixed with mud/kitchen spices)

Plastic bottle

Clear jug/cup

Pebbles/stones

Sand/salt

Coffee filter/Kitchen roll

Elastic/rubber band



1: Cut the bottom of your plastic bottle off (you might need some help with this).



2: Take 4 or 5 sheets of kitchen roll and wrap it around the top of the bottle, securing it with an elastic band.

Reflection time:

What did you observe when you poured the dirty water into the filter?

How could you improve your water filter?

As your water solution passed through the filter, what materials did you observe separating?

What caused those materials to separate?

What other ways can you separate materials?



3: Fill your bottle with a cup of sand or salt and then add a layer of pebbles. Place your filter in a clear cup.



4: Pour in your dirty water (I created the dirty water using kitchen spices).



5: Observe your homemade filter in action!