

Water Filter Activity

United Kingdom



Quick Facts

- “The UK is a leading trading power and financial centre” CIA World Fact book
- **Population:** 60,943,912
- **GDP:** \$1.93 trillion
- **Literacy:** 99% of the population have completed 5 or more years of schooling
- **Natural Hazards:** Winter windstorms and floods
- **Annual Rainfall:** 754mm (*World Average 962.7mm*)



Project Brief

You need to build a filter, to clean your water supply. Use the instructions below:

1. Loosely plug neck with cotton wool
2. Secure cheesecloth around neck of bottle, using an elastic band
3. Pour a 1 cm layer of fine sand into the bottle (as illustrated)
4. Add a layer of activated charcoal
5. On top of this, insert coarse sand
6. The next layer should be made up of fine gravel
7. The upper-most layer should be 1 cm deep with coarse gravel.
8. Remember to pour clean water through your filter to get it working.

You have **160 credits** to build your filter from the resources supplied. The cost of materials is listed below

Material	Description	Cost
Activated Charcoal	Highly porous carbon with large surface area. Carbon based compounds and chlorine adsorbed to surface	30 credits / cup
Cheesecloth	Fine non-water resistant cloth	4 credits / square
Cottonwool	Fine wadding	2 credits / ball
Gravel - Coarse	Act as a sieve, allowing different particle sizes past	5 credits / cup
Gravel - Fine		5 credits / cup
Sand - Coarse		10 credits / cup
Sand - Fine		10 credits / cup
Rubber Band	-	2 credits each
Plastic Bottle	-	10 credits
Capture Cup	Collects water	2 credits