

Sample essay on how to build a water filter

[Literature](#), [Russian Literature](#)



- pour the unfiltered water through the build filter and collect the filtered water with a glass from the hole made on the cap
- Conclusion

Water we consume comes from rivers, lakes and some of it from ground water. This water may appear clean for consumption; however, it is crucial to ensure that it is properly cleaned before use for domestic purposes. There are several ways in which water can be cleaned. First, it can be boiled to kill harmful bacteria; however, this process does not remove lead and other substances that may render water harmful for consumption. Another approach to cleaning water is filtering using water filters that can be bought from the stores. These filters can remove up to 99% of bacteria, viruses and dirt particles. Since charcoal is a key component in this process, the water filtered has carbon which improves the taste of water. As a result, this has become the most recommended process of cleaning water.

Instead of buying a water filter from the stores, one can easily make one at home using readily available materials (Thomas n. p). The following is a 15-30 minutes 6 step process of building a water filter from a plastic bottle. Materials required in this entire process include; water bottle, scissors or knife, coffee filter, cotton balls, sand or charcoal, gravel, Large gravel or small rocks, cups to hold water; filtered and non-filtered.

First, using a pair of scissors or a knife cut the bottom of the plastic bottle to create a cone shape. In some other cases, plastic bottles can be substituted with bamboo sticks. Using a sharp object, make a hole on the cap of the bottle using a pair of scissors or a knife. The purpose of making the small hole at the cap is to provide an outlet for the filtered water. Using a plastic

bottle in this stage is of great benefit to the environment since it encourages the re-use of waste non-biodegradable materials.

Secondly, insert the coffee filter or cotton balls into the conical shaped bottle after which you pour in the sand or crushed charcoal about 2-3 inches. The cotton balls are used in this stage to remove tiny dirt particles. However, charcoal is the best since it not only traps dirt, but also removes bacteria. Charcoal is carbon and is used to adsorb substances from liquids and gases. In this stage charcoal is more preferred as it attracts chemicals to its surface and traps them. One challenge likely to be experienced in this stage is that as one pours the water, charcoal will be displaced. To resolve this problem, some grass maybe stacked on top of the charcoal to keep it in place.

Afterwards, add in the gravel of an equal measure to charcoal or sand.

Although charcoal traps most of the impurities in water, it ignores some and hence the need to use gravel to continue with the filtering process. Gravel is used to attract particles and debris and has for a long time been used in water filtering for domestic use but also for filtering pond water. This gravel can be collected from the river and since it is not for aesthetic purposes, it should be fine and clean before use.

The last step is adding the small rocks onto the layer of gravel. Once this is done, pour the unfiltered water through the build filter and collect the filtered water with a glass from the hole made on the cap. The water collected is then ready for consumption; however, since carbon only removes chemical and some particles, it would be necessary to further boil the water before consumption especially if the charcoal has been used severally.

This process is very important to the society since it can be easily made at

home or even at the office and the environment. Through this process, people are made aware of the importance of filtering water which is to enhance safety of drinking water. In addition to this, this process contributes towards environmental conservation. Rather than use harsh chemicals to clean and purify water for domestic use which contaminates groundwater, filtering makes use of safe materials. Moreover, using water filters help eliminate dependence on bottled water which greatly contribute to pollution of the environment since the empty bottles are not properly disposed (Pure1 n. p).

Works Cited

Pure1. " The Environment Benefits of Home and Office Water Filters." 23 September 2013.

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