



Engineering a Water Filter

One of our most valuable resources is water. We can survive for a few weeks without food, but only a few days without water. Having clean water to drink is a luxury. Clean water is not available in all parts of the world. Many people live with polluted water that is unhealthy for them to drink. Civil, environmental, materials and mechanical engineers all contribute to developing technologies and systems to purify unclean water.

Your engineering firm has been hired to construct a water filter using the materials below. You may use as much or as little of the materials listed, but you must track your spending and keep a record of all materials used.

Materials List & Pricing

<u>Materials</u>	<u>Price</u>
Cotton balls	\$2.50 each
Coffee filters	\$5.00 each
Cup of soil	\$15.00 per cup
Cup of sand	\$15.00 per cup
Cup of gravel	\$15.00 per cup
Paper towels	\$5.00 each

After designing, building, and testing your filter, your team will be paid for the supply of filtered water produced. Your salary will be based on the following scale:

 **A grade water gets \$20 per ml**

 **B grade water gets \$10 per ml**

 **C grade water gets \$5 per ml**

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Materials Request Form

<u>Materials</u>	<u>Price</u>	<u>Quantity</u>	<u>Cost</u>
Cotton balls	\$2.50 each		
Coffee filter	\$5.00 each		
Cup of soil	\$15.00 per cup		
Cup of sand	\$15.00 per cup		
Cup of gravel	\$15.00 per cup		
Paper towels	\$5.00 each		

Total cost of all materials: