**Water Filter Activity**

**Objective:**

Design a filter to clean dirty water.

**Your team has a $50 budget to buy materials for your water filter. All filter materials must be put into the cup with a hole at the bottom. You must use *at least* 4 of the materials provided.**

**Materials:**

* Beads (Pretend Gravel) $10 per ½ cup
* Sand $10 per ½ cup
* Cotton Ball $1 each
* Coffee Filter $10 each
* Activated Charcoal $10 per portion

**Rules:**

1. 30 Minutes to purchase materials and construct the filter
2. Must fit into the filter cup with hole at the bottom
3. Must use 4 or more of the materials
4. Effectiveness of the filter will be based on water quality - how clean it looks
5. Your filter will have 10 minutes to get clean water.
6. You can put water through the filter more than once in the 10 minutes – BUT YOU CANNOT CHANGE/REDO YOUR FILTER.

DO NOT DRINK THE WATER!

**Order Form:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Material**  (select at least 4) | **Cost Per Unit** | **Amount Purchased** | **Total Cost Per Material** |
| Beads (Gravel) | $10 per ½ cup |  |  |
| Sand | $10 per ½ cup |  |  |
| Cotton Ball | $1 each |  |  |
| Coffee Filter | $10 each |  |  |
| Activated Charcoal | $10 per portion |  |  |
|  | | **Total Costs** |  |

**Explain Your Designs:**

In the space below, draw your design and write a short explanation of what materials you used and why.