



# IT'S TIME TO CARE!

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ERASMUS+ 2018-2020

PROJECT DURATION: 1 SEPTEMBER 2018 - 31 AUGUST 2020



# SUSTAINABLE USE OF WATER

## Methodology

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**Experiment carried by the team of Olaines 1.vidusskola on the topic Sustainable Use of Water. Experiments with dirty (colored) water.**

## Introduction

Worries about worsening water shortages have led to heightened interest in water recycling. The method can be simple, such as reusing water from the shower to flush toilets. Alternatively, water re-use can be technologically sophisticated, what with advances in membrane and filtering technology, to involve washing machines that can use water over and over again.

Actually, water reuse is not new. The early Greeks and Romans put wastewater - mainly sewage - to use as a fertilizer in fields.

Modern wastewater technology can now make the foulest water potable. That and other possibilities led 30 years ago to the founding of the Water Reuse Association - an industry group that works toward expanded water reclamation.

The range of possibilities is impressive. Consider the field of activity of Sustainable

The prospects for water re-use aren't restricted to large settings such as factories.

Then there are the sorts of things that you can do at home today, right now and without any technological wizardry, to recycle fresh water; (a) irrigate house plants with water from the home aquarium that you were planning to flush down the drain, (b) do the same thing with the water that you used last night to cook spaghetti or wash vegetables, (c) toss old ice cubes out on the lawn.

These and similar steps do more than give water a new use; They also reduce water consumption, which saves on the energy that it takes to provide fresh water to your home.

In a way, such steps mimic the natural movement of water on the planet. Water is always in motion as H<sub>2</sub>O molecules move from the liquid state in lakes to the evaporated state in clouds to the precipitation that brings the water back to earth and then perhaps down to subsurface aquifers only to be pumped out later for another round through the hydrologic cycle.

**In summary : it's one big water circle.**

## Water treatment methods in city Olaine

Living house water recycling system that recycles 62 % of water in the home, one effect being a 34 reduction in water consumption.

Then there are the sorts of things that you can do at home today, right now and without any technological wizardry, to recycle fresh water.

Our schools in city Olaine also use this system.





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## Procedure:

### Experiments with dirty (colored) water.

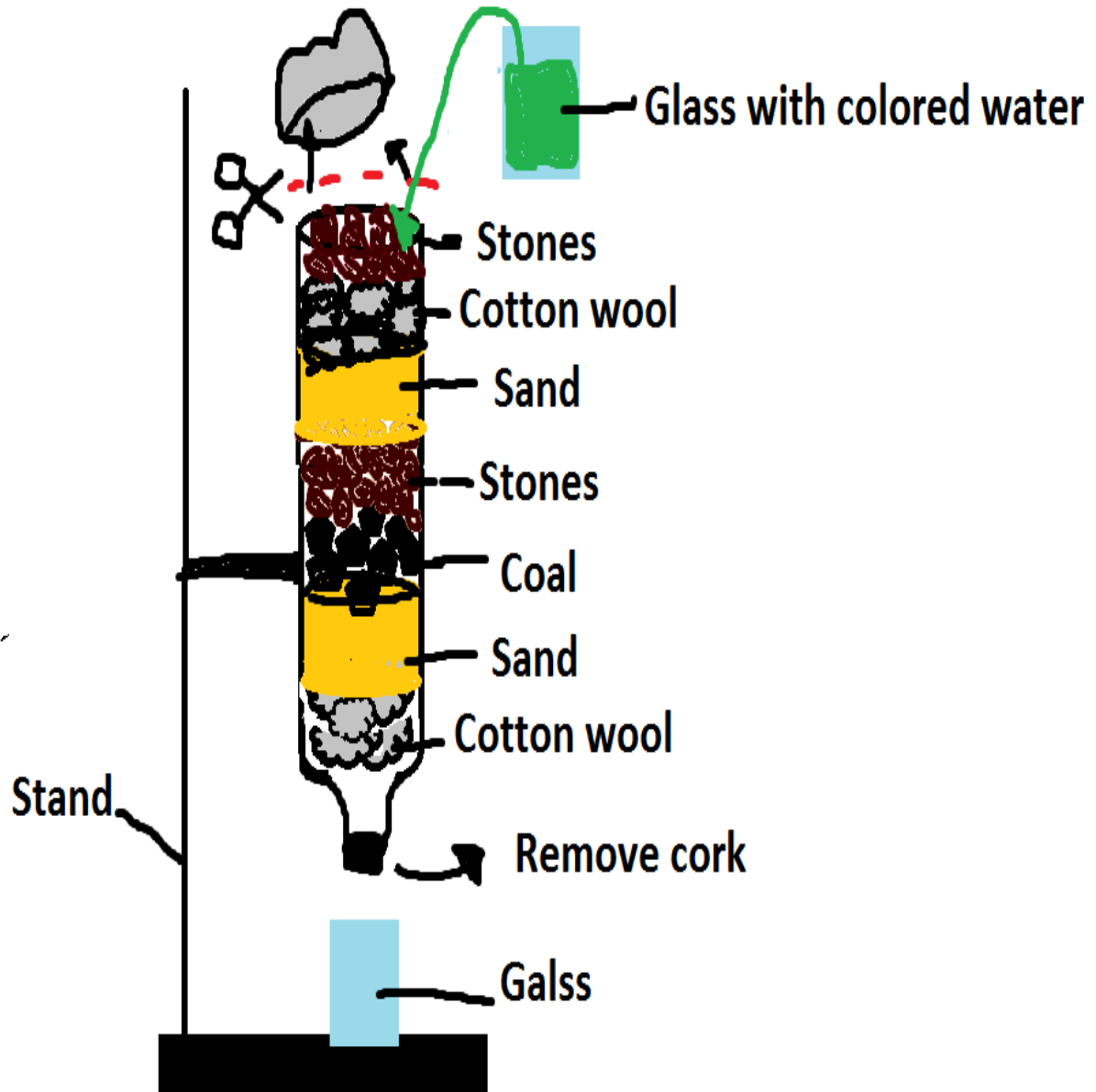
The goal of the experiment is to show how dirty water can be treated to clean with homemade filter.

### For this experiment we need:

- Scissors
- PET bottle
- Two clear glasses
- Sand
- Stones
- Food colors
- Stand
- Coal
- Cotton wool
- Water

Attention! **Work carefully with scissors!!!**

## How to Prepare a homemade Water Filter





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## Step by step

1. Cut off PET bottle's bottom
2. Turn over
3. Put inside Cotton wool
4. Then pour sand
5. Pour coal
6. Pour stones
7. Pour sand
8. Again put cotton wool
9. And last again pour stenes
10. Mix water with food color
11. Pour water from above
12. Remove the cork
13. And wait about 5 min
14. ENJOY!!! 😊

## Results

After 5 minutes colored water stay clear, this method can help clean dirty water and can use second for washing or drinking.