

Summary

Pee on your plants



Target age

Age 15 and over

Level of difficulty

Medium



Key words:

Sustainability, recycling, circular economy, growth, agricultural crops, depleting



Abstract of the activity:



Normally we flush our urine down the toilet. Like domestic wastewater, it goes down the drain and then it's gone. However, it contains still valuable components. Valuable enough to grow plants on?

With this toolkit you can make your own setup to test whether you can use waste streams (for example urine or waste water) for better purposes: growing plants. We also hope to stimulate students to explore and experiment. To create enthusiasm for science, technology and the environment.







In this toolkit we don't focus on recover valuable compounds but offer you an setup to experiment. To try if you can use waste streams as something valuable instead of something you have to get rid of. It could also be an opportunity to show that you can save water at the same time, which can be very necessary in times of water scarcity.

Learning Goals (max 250 characters)



- Obtain understanding about depleting in grounds
- Learn about solutions to this problem
- Learning about recovering nutrients from waste water streams (think of Phosphor cycle)
- Get familiar with growing plants/crops

Summary

	<p>Specific Abilities - <i>At the end of the activity the student will be able to:</i></p> <ul style="list-style-type: none"> • Germinate seeds • Growing crops on urine • Investigate different concentrations • Build a setup to do experiments with and analyse the results
	<p>Cross-curricula Links</p> <ul style="list-style-type: none"> • Ecology/Environment • Biology • Geography • Technology • Economics/Economy • Politics
	<p>Prerequisites - <i>Knowledge and skills necessary for carrying out the activity</i></p> <ul style="list-style-type: none"> • pH • Concentration calculations (mols/grams/molecular weight)
	<p>Time requirement</p> <p><input type="checkbox"/> 20-25 h (distributed over 5 days)</p>
	<p>Learning and Teaching Support Materials - What you can find in the toolkit</p> <p>The setup: With instruction manual, without urine/waste water.</p>
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