



Design a Water-Saving Showerhead

Project spanning multiple lessons (approximately 180 minutes).

Task Description

The shower-card shows that showering has a significant climate impact. The type of shower head used significantly impacts the emissions (there are various types of shower heads on the market). This project aims to investigate the functionality of a water-saving shower head and design one.

Begin by letting the students examine the functionality and appearance of a shower head, identifying design elements that affect water flow. Then, let the students design a shower head that consumes less water, and that can be used in the same way as a regular one. The materials used should be recyclable to the greatest extent possible.

Bonus Task

Design the water-saving shower heads in CAD¹ (Computer-Aided Design).

Tips for Implementation

- The project can be carried out individually or in small groups. To help students get started more quickly, you, as the teacher, can research and explain how low-flow shower heads work.
- Access to a material database can help the students choose recyclable materials.
- Presentations can take various forms, such as a written project report, a presentation, an exhibition, or a sales pitch (or a combination of these).
- If the school has access to a 3D printer, consider printing well-executed projects.
- The project can be expanded by including a life cycle analysis of their shower heads, or by investigating other everyday products where smart ecodesign can result in savings of water, energy or other resources.

¹ CAD blocks for two different shower heads can be found here:
<https://www.archdaily.com/805903/sinks-toilets-shower-heads-and-faucets-down-loadable-bathroom-cad-blocks>