Summary

Re-use creatively! – Geopolymer pot

Target age

Age 14 and over
(According to the age of students and typology of school and laboratory equipment it is possible to adapt this activity)

Level of difficulty

☐ Easy ☐ Medium X Hard

Keywords:

Sustainability, Recycling, Hazardous waste, Fast fashion, Textile waste

Abstract of the activity:

This toolkit shows how to recycle power plant fly ash using old textiles in a fun and creative way. Clothes are made to be worn, but when you get bored or worn out, you can turn them into fashionable flower holders using a geopolymer solution and old textiles. The two materials with unknown densities should be thoroughly mixed and put in the gold pan.

The target group is students aged between 14 and 19 years old, as the experiment will be carried out in the following step:

- Making a geopolymer pot using old, unused textiles; in this case, the teacher has to work in a chemistry lab for students aged 14 and above

Learning goals

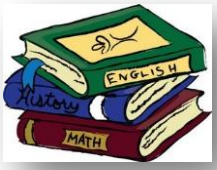
- - Geopolymers, the concept of geopolymerisation
- - Positive properties and applications of geopolymers
- - The environmental impact of the fast fashion industry

EIT RawMaterials is supported by the EIT, a body of the European Union

Summary

Special ability– *By the end of the activity the students will be able to:*

- The student will know what geopolymers are and why they are important for the circular economy
- The student will know the environmental risks of pollution from the fashion industry.
- The student will know be able to produce geopolymer cassettes under laboratory conditions



Cross-curricula links

- Ecology/Environment
- Chemistry
- Earth Sciences
- Fashion
- Crafts

Prerequisites – *Knowledge and skills necessary for carrying out the activity:*

- Basic physics, chemistry knowledge
- Laboratory methods (mixing, separation)

Time requirement plus eventually other boundary conditions (i.e. Instruments)

☐ 3 h

Learning and Teaching Support Materials -What you can find in the toolkit

1. Students' card
2. Teachers' card
3. Description of the laboratory experiment
4. Questions for learning

Authors

Tamás Kurusta ejttamas@uni-miskolc.hu

Ildikó Fóris ejtforis@uni-miskolc.hu

Mária Ambrus ambrus.maria@uni-miskolc.hu

EIT RawMaterials is supported by the EIT, a body of the European Union