Summary

Gold panning for beginners

Target age

Age 10 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

X Easy ☐ Medium ☐ Hard

Keywords:

Sustainability, Physical properties, Raw material preparation

Abstract of the activity:

This toolkit helps teachers to demonstrate and students to understand a diverse mineral processing method, the separation based on density, through an interesting application, using only a simple physical property of materials. With the help of the experiment, it will be easy to distinguish between a high and low density material, even if the actual densities are unknown.

The target age group is 10 years and older students, as no chemicals are needed, and the experiments can be done in a few very easy steps:

- The two materials with unknown densities should be thoroughly mixed and put in the gold pan
- Put water in a bowl or basin that is bigger than the gold pan, then carry out the separation of the materials

Learning goals

- Understanding the definition of density
- Understanding the importance of density based separation in raw material processing

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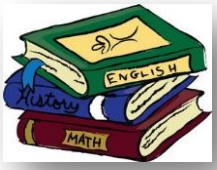
Summary

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

- The students will understand the basis of density based separation methods and the importance of it in primary raw material preparation
- The students will be able to determine which of two unknown materials has a lower / higher density



Cross-curricula links

- Ecology/Environment
- Physics
- Geosciences

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

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

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

☐ 30 min
☐ gold pan
☐ two small particle sized material with different densities

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

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