

Soil

The soil is very important to us - as a source of sustenance, a reservoir of water, nutrients and carbon.

Task No. 1

Imagine the earth as an apple. Use the apple as an aid.

- Cut the apple into quarters. $\frac{3}{4}$ put aside - these represent the world's oceans. $\frac{1}{4}$ is the remaining land. Cut it in half and you have $\frac{2}{8}$.

- Set aside one eighth. This is a land where humans cannot live, such as polar regions, deserts, swamps, or mountains. The other eighth is people, where people live, but not everywhere crops necessary for life can be grown.

- Now divide $\frac{1}{8}$ into 4 parts - you have $(\frac{4}{32})$. Set 3 pieces aside. These are areas that are too rocky, wet, cold.. They also include areas with land that could grow crops but is built up.

- We have $\frac{1}{32}$ of our planet left.

- Carefully peel off the skin. This tiny piece represents the earth's surface. Humanity depends on this very thin skin of the earth's crust. Only 1.5 meters deep is the land capable of producing crops

Task No.2

Find out if the soil in your area contains enough organic matter. Dig a hole with a spade and observe how the top soil is colored.

The dark brown color of topsoil means more organic matter.

Project: ACC03P30 „Awareness raising on climate change mitigation and adaptation among school pupils and the public“. The project has been co-financed from the Norway Grants and from the State Budget of the Slovak Republic

Applicant: Spojená škola, Námestie sv. Martina 5, 908 51 Holíč

Programme: „Climate Change Mitigation and Adaptation“

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A gray-brown color indicates a small content of organic matter.

Task No.3

Find out if any land in your neighborhood has been affected by water erosion. The Erosion Events web portal will help you.

- Go out into the field and make a photo documentation of the land.
- Compare the retention capacity of the soil with the retention capacity of healthy soil.
- How could water erosion be prevented?

Task No.4

According to the text, your task is to fold the soil onto A4 paper.

Text:

Half of the soil volume consists of solid particles and half of pores. The pores are half filled with water and half filled with air. The greater majority (95%) of solid particles in the soil are made up of mineral particles that were created by the breakdown of rocks. The remaining 5% of the solid particles is the organic part. In the organic part we find mainly humus (80%), roots (10%) and living organisms (10%).

Soil description	Paper colour	Sizes of colored papers
Pores filled with water	Blue	A6
Pores filled with air	White	A6
Solid particles	Grey	A5
Organic part	Brown	10,5x148mm
Roots	Green	10,5x15mm
Living organisms	Pink	10,5x15mm
Hummus	black	10,5x118mm

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