

TOPIC

Microbes, Soil

SDGS



LEARNING OUTCOMES

- 5.7.2 I can understand the importance of soil to support life.
- 5.7.3 I can observe that soil is made of different organisms, organic matter and rocks.

LEARNING OUTCOMES

- I can appreciate the importance of microorganisms and living things to soil
- I can observe the different layers of soil
- I can appreciate that different soils in Malta have different compositions

MATERIALS NEEDED

<https://www.csm.edu.mt/stemmersion/>

- PowerPoint: stemmersion_y5_s2.pptx
- VR expedition: Unveiling secrets of soil in Malta | STEMMERSION on ExpeditionsPro App
- Worksheet: stemmersion_y5_s2_soil layers & components worksheet.pdf
- Learning Apps Game
- VR Headsets
- Soil samples brought by students
- A soil sample brought by the teacher that contains a mixture of small stones and dry leaves too
- Pot base / group
- Empty water bottle / group
- Kitchen towels
- Water

KEY WORDS

soil, soil components, microbes

SESSION ACTIVITIES



PowerPoint about soil, soil components and characteristics of a healthy soil including microbes and other organisms



VR expedition: Unveiling secrets of soil in Malta | STEMMERSION on ExpeditionsPro which can be seen through a VR headset.



Soil component separation experiment

- Students make use of the soil sample they brought to school in a small water bottle. The soil sample should fill no more than half the bottle. It would be beneficial if the soil also contains a mixture of small stones and dry leaves for more visible results.
- Students add some water and close the bottle.
- Students shake the water bottle and leave the soil to settle for around 30 minutes.
- The soil will settle into different layers.
- Students can compare and contrast the different soils from different localities.
- Students may also fill in the soil worksheet.

CONCLUSION

Students play game on the different soil layers

- <https://learningapps.org/watch?v=p2b9z9ujn23>
- <https://learningapps.org/watch?v=p9nr9nb5k23>