

TOPIC

Microbes, Soil

SDGS



LEARNING OUTCOMES

- 5.3.1 I can understand that microbes or microorganisms are living things that can be seen with a microscope, most of which are useful or beneficial, although some can cause illnesses and disease.
- 5.3.2 I can provide different examples of how microbes can be useful.
- 5.3.3 I can explain how some microbes/germs cause disease and relate to everyday life including washing hands before touching food, taking necessary precautions when sneezing, coughing
- 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.

MATERIALS NEEDED

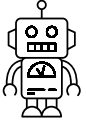
<https://www.csm.edu.mt/stemmersion/>

- Robotic cards per group:
stemmersion_y5_s3_robotics_soil_layers_name_cards.pptx
- Robotic cards per group:
stemmersion_y5_s3_robotics_soil_layers_images.pptx
- Merge cube or Merge Cube paper version template / group:
stemmersion_y5_s3_paper_merge_cube_template.pdf
- PowerPoint: stemmersion_y5_s3_slides_squarish_template.pptx
- Teacher's guide: stemmersion_y3_s3_Creating an animated slogan_Teacher's guide.pdf
- Robot (e.g. Cody Rocky) + tablet for coding / group
- Robot map (depending on robot used)
- Laptop/group with PowerPoint/ Google Slides
- Tablet with CoSpaces Edu mobile app / group
- A CoSpaces Pro login

KEY WORDS

microbes, bacteria, viruses, useful/beneficial, illness/disease, germs hygiene, spread, soil, soil components

SESSION ACTIVITIES



Robotics activity:

- Students are provided with tiles showing the names of the layers of soil as well as other tiles with the description of the soil layer.
- Students need to match the soil layer names to their respective descriptions and
- Then the students had to put the layers of soil and place them in the correct order, and then code the robot to travel through the soil layers in correct sequence from top to bottom.



Merge Cube activity:

- Students use the information they uploaded on the padlet in session 5.1.
- Students create a PowerPoint or Google Slides on a provided template (found online - slides need a squarish layout). The slide will contain information about the good and bad practices in relation to microbes spreading. This method can also be used for other types of research or student can generate questions for the other students to answer etc.
- The slides are saved in .jpg format and the teacher helps students with uploading the work on co-spaces. More details on the process in the Teacher's Guide.
- The merge cube is used to see these slides in Augmented Reality. If one doesn't have a merge cube, a paper version template exists and this can be build together with the students. This is also found online.



Quizizz game

- <https://quizizz.com/join/quiz/65ab81c9041e067dc779fb17/start?studentShare=true>