Grade 6

Diversity of Living things

Students will learn about microscopic organisms across the five kingdoms and how they can affect human health. They will learn how scientists detect and ID germs.

Online BIOlab option: live virtual field trip via Teams, Meet or Zoom to see how scientists test for microscopic organisms that can cause disease using agar plates to compare colony characteristics and microscopes to view to see microbe shape and structure.

Time required
1.5h + 30 min results follow up

Grade 6 students learn about the diversity, classification, and needs of living things. We draw connection to organisms from all 5 kingdoms that can cause problems in human health. Students can satisfy their curiosity about some of the invisible germs around us as we sample the environment for microbes, grow them in the lab, and look at some of the techniques scientists use to classify microbes like bacteria and fungi.

Specific learning outcomes addressed: 6-1-04; 6-1-06; 6-1-07; 6-1-08

Time Required	Student Experience
Day 1	Swabbing
15 min	Introduction to the Research Centre and research interests, connect Research Centre labs to study of living microbes in the environment
15 min	Microscopic organisms in the environment that can affect health
15 min	Understanding the needs of living things and brainstorming locations in the lab where we might find microbes.
30 min	Swabbing locations based on student suggestions. Make predictions about amount or diversity of bacterial growth.
15min	Questions and wrap-up
Day 2	Results 2 or more days later – If live session isn't possible with scheduling we will send photos of the plates
15 min	Learn about diversity of colony characteristics used to differentiate bacteria and observe growth on plates
10 min	Observe some lab bacteria under the microscope, learn about size, shape, structural diversity in bacteria
5 min	Questions and wrap-up

times are approximate, and can be scaled to whatever time you have available!