SCHOOL OF ANTS

Recommended for ages: Any age.

Objectives: To study city-environment ants, particularly in backyards, workplace/school yards. Gathering information can help understand how urbanisation might affect climate and contribute to induce climate change, invasive species growth and modify animal biodiversity.

First lesson - 1 hour
Briefing - Preparatory lesson for the School Of Ants Project

What you will need:

a. Questionnaire
b. Test tubes
c. Signal Building (to stick in the ground)
    i. Long skewers
    ii. Coloured paper
    iii. Glue
d. Maps of interested area
e. Information sheets about ants / any informative material about ants
f. Data collection sheets

Step by step instructions:

a. Starting questionnaire fill-out (10') (see appendix A)

Do not explain much: students should fill it out without any information or clue about what will be going on.

b. Lesson about ants (15')
c. Explanation about the project material: how you will proceed, how to use test tubes, signals, data collection sheets, maps… (15')
d. Communication of student groups (each group will analyse different areas).
e. Sign posts building (15')

Second lesson - 2 hours
Field experience - Data Collection

What you will need:

a. Test tubes (4 per group)
b. Signals built by students (to stick in the ground)
c. Maps of interested area
d. Biscuits to crumble (to make ant food)
e. Data collection sheets
f. Regular freezer

Step by step instructions:

a. Each group prepares 4 test tubes (all of them numbered): 2 with a colour to set in vegetation and 2 with a different colour to set in a vegetation-less area; put approximately 5 grams of biscuit crumbs in each tube.
b. Set all the test tubes horizontally with no cap and place their signposts nearby. Write down their placements on the map.
c. Wait for one hour.
   Meanwhile, fill out the data collection sheets.
d. Close and collect the test tubes catching all the ants inside.
e. Close all the test tubes in a plastic bag and store them in a freezer for one night.

Third lesson - 1 hour
Data Analysis

What you will need:

a. Used test tubes, data collection sheets, maps (already filled out in lesson 2)
b. Microscopes (1 per group)
c. Questionnaire (same as in lesson 1)

Step by step instructions:

a. Each group analyses the test tubes following the dichotomous key (20')
b. Each group writes hypotheses about ant species (20')
c. Questionnaire (10')
d. Ship the test tubes and all the material used in observation to the University of Parma for analysis.

Fourth lesson - 1 hour
Results Comparison and Debriefing

What you will need:

a. Hypotheses about ant species made by student groups
b. Results from University

Step by step instructions:

a. Each group makes comparisons between their hypotheses and the Unbiversity's
b. Result sharing in the large group

Relevant tags/links

#schoolofants #ants #segnatrappole

Università degli Studi di Parma https://www.schoolofants.unipr.it/soa00/

MUSE - Science Museum
https://ilmuseperlascuola.muse.it/attivita-didattica/school-of-ants-a-scuola-con-le-formiche/