

## SOIL SAMPLING INSTRUCTIONS FOR THE STUDENTS

### Choice of sampling points

At each sampling site, carefully consider the overall appearance of the area and choose suitable points for soil sample collection. Sampling points must be as representative as possible of the sampling site, i.e., resemble the area in its entirety, rather than particular microhabitats within it. For example, if the sampling site is a meadow with few scattered trees, do not collect your samples close to the trees, as the soil obtained would not be representative of meadow soil. Carry out one or two sampling sessions at each site, on the same day, at homogenous points located at a short distance from each other.

### Extraction of soil samples

Take soil samples as follows:

Remove leaf litter (plant and animal residues on the surface of woodland and forest soils, fresh and dry leaves, twigs, pieces of bark that have fallen on the ground, and other organic remains) or ground cover (the herbaceous surface layer) with a pair of scissors, before you collect the sample. Use a bulb-planting tool to extract the soil sample, making sure that the soil clods remain intact. If the soil is compacted, use a garden shovel to loosen it, before you take your sample. Getting the hole cut out might require a bit of manual pressure depending on the texture and structure of the soil. Store each extracted sample in a plastic bag, leaving some air inside. Make sure that each sample contains approximately the same amount of soil. Keep your samples in the shade, or in a thermal bag in case of very warm weather, to avoid deterioration, while further sampling is carried out.

### Field data recording

Record your observations, with the help of your science teacher, by filling the soil sample field data sheet provided with this teaching aid (TA-BSQ\_Field\_Data\_Sheet\_EN\_v1.0.pdf). On the sheet, write the collection date, the location of the sampling sites, the names of the students who extracted the samples, and your observations regarding the sites and the examined soils. These include land use type, e.g., cultivated land, grazing land, woodland, orchard, open land. Type of cultivation, e.g., monoculture, mixed farming, intensive farming, organic farming, type of crop, e.g., wheat, corn, sunflower, clover, woodland type, e.g., coniferous wood, mixed deciduous forest, maquis, scrubland, whether a field is ploughed or not ploughed, soil type, e.g., clay, sandy, silty, peaty, chalky soils, presence of rocks, pebbles, gravel, general characteristics of the topsoil, such as humidity and compactness, presence of leaf litter (plant and animal residues that have fallen on the ground typically found on the surface of woodland and forest soils, such as fresh and dry leaves, twigs, pieces of bark, and other organic remains). Record all observations, even if some information may at first seem banal.

**Label with a sticker the plastic bags where samples are stored, recording the following information on each sample:**

**Date** (day, month, year)

**Time** (hour and min, for example 10:33)

**Location**

**Type of environment** (woodland, cultivated field or other)

**Sample identification number** (sample 1, sample 2)

**Names of the students** (who collected the sample)

