

## TP 2: Study of Embryophytes 🌿

### 1. Objective of the Practical

- To identify **Embryophytes (land plants)** and their main characteristics.
- To observe the **main plant organs: root – stem – leaves**.
- To understand the **adaptations of plants to terrestrial life**.

### 2. Theoretical Background

**Embryophytes** are plants that live mainly on land and are characterized by:

- 1 The presence of an **embryo** that develops inside the mother plant.
- 2 The presence of a **cuticle**, which reduces water loss.
- 3 The presence of **stomata** that allow gas exchange.
- 4 The presence of **vascular tissues** in vascular plants for the transport of water and nutrients.

### 3. Materials

- **Optical microscope** 🔍
- **Binocular loupe (stereomicroscope)**
- **Slides and cover slips**
- **Plant samples:**
  - **Embryophyte mosses**

### 4. Procedure

#### Part 1: Observation of Embryophyte Mosses

##### Steps

1. Observe the **embryophyte moss plant** with the naked eye.
2. Identify the following structures:
  - **stem-like structure**
  - **small leaves**
3. Observe the **spore capsule (sporophyte capsule)** using the magnifying glass.

##### Expected Results

- The plant is **small and lacks true roots**.
- The **dominant generation is the gametophyte (haploid generation / الطور المشيجي)**.

