

Required Lab Practicals

The following is a list of the IB required practicals. You must know and understand these investigations as they play a major component on the External Assessment, Paper 3, Part A.

Topic 1: Cell Biology

Section 1.1: Introduction to Cells

1. Use of a light microscope to investigate the structure of cells and tissues, with drawing of cells. Calculation of the magnification of drawings and the actual size of structures and ultrastructures shown in drawings or micrographs.

- [Virtual Lab](#)
- [Explanatory Video](#)

Section: 1.4: Membrane Transport

2. Estimation of osmolarity in tissues by bathing samples in hypotonic and hypertonic solutions.

- Virtual Lab
- [Explanatory Video](#)

Topic 2: Molecular Biology

Section 2.5: Enzymes

3. Experimental investigation of a factor affecting enzyme activity.

- [Virtual Lab](#)
- [Explanatory Video](#)

Section 2.9: Photosynthesis

4. Separation of photosynthetic pigments by chromatography.

- [Virtual Lab](#)
- [Explanatory Video](#)

Topic 4: Ecology

Section 4.1: Species, Communities and Ecosystems

5. Setting up sealed mesocosms to try to establish sustainability.

- [Virtual Lab](#)
- Explanatory Video

Topic 6: Human Physiology

Section 6.4: Gas Exchange

6. Monitoring of ventilation in humans at rest and after mild and vigorous exercise.

- Virtual Lab
- [Explanatory Video](#)