



ENLIGHTIUM  
ACADEMY

## Biology Course Supply List

**Note:** There are additional digital projects and written assignments that will be assigned in the course; this list focuses on supplies that will need to be gathered for hands-on experiments. Common supplies such as pens, paper, water, etc. have been omitted from this list but are given within Ignitia. If any supplies are unobtainable or unaffordable, please inform the instructor.

### The following items will be needed throughout the course:

- A [compound microscope](#) or [a compound microscope with camera](#) (If you are unable to purchase this item, please inform your teacher.)
- A sharp knife or razor blade
- Access to research materials (internet, local library, etc.)
- A magnifying glass (hand lens)
- A stopwatch (smartphone app OK) or a clock with second hand

### The following items will be required for each of the assigned experiments:

#### Fruits

- Various types of fruits

#### Static Electricity

- Two inflated balloons
- A piece of material (nylon, wool, or fur)
- Thread
- A nylon stocking
- String
- A piece of white paper

#### Indicators

- Litmus paper (like [this](#))
- Vinegar
- Bicarbonate of soda (baking soda)
- Fruit juice
- Tomato juice
- Soup
- Various household liquids

## **Osmosis**

- 3 eggs
- 4 cups vinegar
- 2 cups tap water
- 2 cups corn syrup

## **Mitosis**

- [Prepared slides](#) of onion (*Allium*) root and whitefish blastula stained to show chromosomes

## **Sexual Reproduction and Tissue Structure**

### *Prepared slides of following:*

- Egg and sperm, ideally from the same species
- Muscle tissue
- Some internal organ such as the kidney, liver, or heart
- Erythrocytes, or leukocytes (from blood)

## **Probability**

- Two, two-sided coins
- A shoebox

## **Molecular Genetics**

- 60 radish seeds
- 2 petri dishes or flat covered containers
- Sand-peat mixture
- A medicine dropper
- A box to cover 1 petri dish

## **Fungus All Around (Part 1)**

- A slice of hard cheese
- A slice of bread
- 3 sealable plastic sandwich bags
- A microscope slide
- A flashlight or light source of some kind for observations

## **Protozoan Culture**

- 1 water collection container (quart jar)
- A "dirty" water source
- 6 grains of rice
- 1 tsp rich black soil (NOT potting soil)
- 4 small glass jars (baby food jars)
- A handful of hay or grass clippings
- A pinch of hard-boiled egg yolk

**Experiment: Seeds**

- Four different types of seeds (at least one grass such as corn and one bean such as a pinto bean)
- at least four seeds of each kind
- Four styrofoam cups
- Soil mixture: 2/3 potting soil and 1/3 sand