

Name \_\_\_\_\_ Teacher \_\_\_\_\_ Date \_\_\_\_\_

## Pre-Lesson Activity 0.2PT: Plant Growth Investigation Setup Worksheet

You will need (for each group):

- Small (e.g. 7X10 cm) aluminum container
- 20 radish seeds
- 15 cm of cotton yarn
- Brown paper towel (roll or 2-3 sheets ea.)
- Markers/masking tape to label your container
- A balance to measure masses

The class will need:

- Large trays with at least 5 cm sides to put the containers in and hold water.
- Grow lights (recommended)
- 1 L of water (for starting seeds)
- 1 L of water with dilute nutrients. (E.g. Ionic Grow, Miracle Grow, etc.) for use once seeds have sprouted.

Follow the procedures below to set up your investigation.

### A. Planting the seeds: *Check the box as you complete each step.*

- Count your radish seeds. Record how many seeds you will plant in the table below.
- Measure the mass of your radish seeds and record in the table.
- Label your aluminum container with your names and class period.
- Poke a hole (with a pencil or carefully with scissors) through the bottom of your aluminum container.
- Run the yarn through the hole so that half the yarn falls outside the container and half is inside.
- Crunch up 2-3 chunks of brown paper towel and place in the bottom of the container.
- Cut out a piece of brown paper towel big enough to cover the bottom of the container and a bit up the sides. You'll place your seeds on this piece of paper towel, so let the edges curl up so the seeds don't fall out. **Optional:** Mass all the brown paper towel in your container and record in the table.
- Carefully place all of your radish seeds on top of the paper towel. Spread them out a bit to give them room to grow.
- Carefully transfer your planted container to the class tray.
- As a class, gently pour some of the plain water in to the class tray with just enough to soak the paper but not put the seeds under water.
- Place the trays in a sunny, warm windowsill or under grow lights.
- Use the rest of the water only as needed throughout the growing period. You can start using the nutrient solution once the cotyledons turn green. Caution: If your plants get too wet, they'll mold!

<b><i>Number of seeds massed and planted</i></b>	<b><i>Total mass of the seeds</i></b>	<b><i>(Optional) Mass of the paper towel</i></b>
	grams	grams

## B. Ongoing Observations and Data Collection

As your radish plants germinate and grow, make regular observations in this table.

Ideas of what to record: germination date, percent of seeds that germinate, how often you add water to the trays, appearance of growing plants, how fast the plants are growing, and more!

<i>Date</i>	<i>Observations</i>