**ALGAE LAB ACTIVITY**

How to create algae in the classroom.

**ATTN:** This lab will use liquid fertilizer. It is important to have and to use lab safety rules at all times for this lesson. It is required for students to wear lab safety goggles and safety gloves until this process is complete.

**Description:** This lesson will cover the topic of how water temperature affects the growth rate of algae. Students will be divided into small groups and each group will be assigned a specific “environment” for their algae to live in over the next 1-2 weeks. Students will create algae in the classroom and then monitor how their environment’s temperature affected the growth rate of algae.

**Materials List:**

* Empty water bottles (16.9 oz any brand but remove the labels for better viewing)
* 1 Liter of lake/river/pond water that is not being treated with chemicals
* Liquid fertilizer
* Heat lamp
* Lab safety goggles and gloves

**Instructions on creating algae:**

1. Each group will be receiving an empty water bottle.
2. They are to fill each water bottle three-quarters of the way with tap water.
3. They will then add 5mL of liquid fertilizer.
4. The students will then add 10 mL of lake/river/pond water.
5. Place the lid on the bottle and slowly mix it.
6. Place the bottle into its specific environment.
	* There will be four specific environments for the teacher to assign.
		1. Classroom lighting - Room temperature on shelf away from windows
		2. No Light - Room temperature in a dark cabinet
		3. Heat lamp - With direct light for 4 hours a day. Students or teacher can set a timer to go off letting the teacher know when to turn the heat lamp off.
		4. Sun light - In the windowsill at all times
7. The students will write a hypothesis about what they expect to witness over the next 1-2 weeks with their water bottle.

**Follow up:** Each day the students will spend the first five minutes of class recording any changes they notice in their water bottles. This could include temperature, color, transparency etc. The students will record data each day until the activity is completed.