

Leaf Disk Lab

FORMING A QUESTION AND A HYPOTHESIS

Restate the question:

Hypothesis and Prediction:

Why do you believe your hypothesis is true?

- Scientific Concepts or Personal Experiences** (Think about what you know or think you know about photosynthesis, organic produce, etc.):

DESIGNING AN INVESTIGATION

- Identifying **Variables**
 - Independent variable:
 - Dependent variable:
- Describe what will be **observed** if photosynthesis occurs.
 - What gas does photosynthesis produce, and how will it visibly affect the leaf disks?
- For a **control**, we will test organic and non-organic leaf disks in the dark.
 - What do we expect to happen to these disks?
 - How will this show that our experiment is valid? Why is it important to show that the leaf disks do not float in the dark?
- Identifying **Constants** - What factors will stay the same? (at least 3)

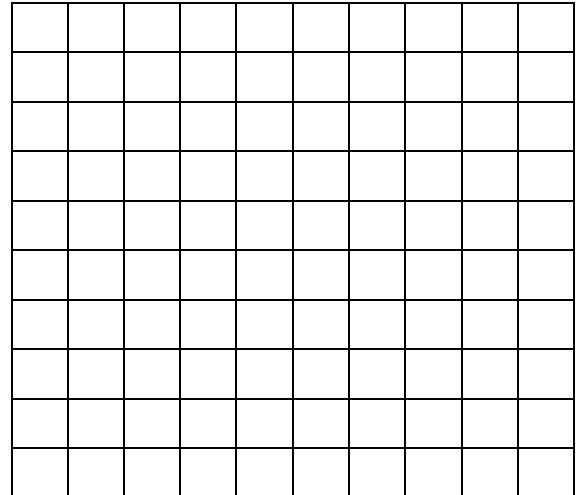
Spinach Lab

COLLECTING AND PRESENTING DATA

Data Table: Number of Leaf Disks Floating

| Time (Minutes) | Organic Disks Floating (Light) | Non-organic Disks Floating (Light) |
|----------------|--------------------------------|------------------------------------|
| 0 | | |
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |

In the area below create a double line graph to display the results of the experiment. Label the X and Y axis, and label each line appropriately or use a color key.



(After 10 minutes consider the experiment over and that no more disks will rise.)

ANALYZING AND INTERPRETING RESULTS

Conclusion – Claim, Evidence, and Reasoning

Claim (What is the answer to your original scientific question?)

Evidence (What *data* support your claim?)

Reasoning (*Why* does your data support your claim?)

Extension (Why do these results make sense, or why are they surprising?)