Lesson 1.1 – Control Group Experiments

Quarter 1 · Foundations: The Control-Group Experiment · Week 1

Name: _____ Partner(s): _____ Date: _____ Class: _____

Big Question: How can we tell whether a change we make actually causes a result?

Word Bank: experiment · control group · treatment group · independent variable · dependent variable · fair test · sample size · hypothesis

My Task

Read the scenario: a field gets composted manure and the lettuce averages 300 grams. Label the parts of a good experiment, then design your own vitamin C study.

Part of the experiment	Lettuce and manure example	Vitamin C study (your design)
Independent variable		
Dependent variable(s)		
Control group		
Kept the same (constants)		
Sample size		

Scaffolded support: Use the frame "If I change ___, I will measure ___, and my control group will be ___." Label one example from the lesson, then one of your own.	**Grades 9–12 Challenge:** Explain how a treatment is a human intervention in an agricultural ecosystem. Compare monoculture and diverse plantings: lower biodiversity can raise pest risk.

Think & Respond

1. Why can't we conclude the manure caused the 300-gram lettuce?

2. Write a memory tip for independent vs. dependent variable (for example, DRY-MIX).

EXIT TICKET

1. What is an experiment?

2. Why is a control group needed?

3. Design an experiment to see if vitamin C supplements reduce the number of times someone gets sick in the winter months. Name the independent variable, dependent variable, and control group.