

GROWING STRONG

EXPERIMENT SHEET



PLAN YOUR EXPERIMENT

We know that plants need water, sunlight, warmth, and nutrients to grow, and they grow in soil. For this experiment, you will plant seeds in three containers and compare how they grow in different environments.

In an experiment, the elements that can be changed are called **variables**. For each plant in your experiment, you will keep all of these variables the same **except for one**—the variable that you are testing.

1. WRITE YOUR EXPERIMENT QUESTION.

What do you want to test? What are you trying to figure out?

2. WHAT DO YOU THINK WILL HAPPEN?

Based on what you know so far, make a guess, or **hypothesis**, about what you think will happen. For example, if plants need sunlight to grow, then plants given more sunlight will grow taller than plants given less sunlight.

3. WHAT VARIABLE ARE YOU TESTING? Circle one:

Amount of water Amount of light Temperature Soil type Type of liquid Other: _____

HOW WILL THIS VARIABLE CHANGE FOR EACH PLANT?

For example, if you choose amount of sunlight as your changing variable, you could place Plant 1 in full sun throughout the day, Plant 2 in sun for part of the day, and Plant 3 in a dark area.

Plant 1: _____ Plant 2: _____ Plant 3: _____

4. WHAT IS YOUR PROCEDURE?

A procedure is the steps that you will follow to complete the experiment. Thinking about these questions before you begin will help your experiment run smoothly.

- **What materials do you need? Where will you put your plants?**
- **What information will you collect and how often will you observe your plants?**
- **How will you collect the data?** For example, your plant might bend or lean a little, so decide if you want to measure the height by gently pulling the plant straight, or by measuring the tallest point in its natural position.

POSSIBLE EXPERIMENT QUESTIONS

- Will a plant with a lot of light, some light, or no light grow taller?
- Will a plant given tap water, water with lemon juice, or water with baking powder have greener leaves?
- Will a plant given a lot of water, some water, or no water grow taller?
- Will a plant somewhere warm, somewhere room temperature, or somewhere cold grow taller?
- What type of soil will help a plant grow the tallest: garden soil, sand, or rocks?

CONDUCT YOUR EXPERIMENT

5. PLANT YOUR SEEDS.

Use the instructions in the Activity Guide. Over the next two weeks, take care of your plants and check them regularly.

6. RECORD YOUR OBSERVATIONS AND DATA (HEIGHT, COLOR, NUMBER OF LEAVES, ETC.)

Date:

Date:

Date:

Date:

Date:

Date:

Date:

WEEK ONE

PLANT 1							
PLANT 2							
PLANT 3							

Date:

Date:

Date:

Date:

Date:

Date:

Date:

WEEK TWO

PLANT 1							
PLANT 2							
PLANT 3							

7. EXAMINE YOUR RESULTS. WHAT DID YOU DISCOVER?

Compare your data and come to a **conclusion**, or explanation, about what happened. Did one plant grow taller than the others? Were there no differences? Was your hypothesis correct?