SOIL EXPERIMENT

WHAT'S THIS ALL ABOUT

The scientific method.

In order to find out which soil is best for growing seeds, we will do an experiment. In this experiment, we will try to grow a single type of flower in three different kinds of soils.

For one soil, we will use a “Seed Starting Mix.” The second soil is an “Organic Potting Mix.” The third is an “In-Ground Garden Soil.”

First, we will plant the seeds. Then we will watch how they grow and take notes. It’s almost like we are watching a flower race!

Along the way, we will ask ourself different questions. Are plants growing faster in one soil? Which one will be the biggest? Why do we think one soil will do better than another?

After we do the experiment, we will tell a story about what we did and what happened. We will tell the story by giving a presentation to others. This way they can learn from our experiment.

Happy planting!

SOIL EXPERIMENT

BEFORE WE BEGIN THE EXPERIMENT

Soil Observation

Describe each of the soils you have been provided. Think about things like color, how each one feels when you touch it, whether each one is wet or dry, other things in the soil that you can see, and so on.

Seed Observation

Describe the seeds you have been provided. Think about things like color, shape, weight, and whether or not some seeds are different from one another.

SOIL EXPERIMENT

HYPOTHESIS

Predicting what soil is best

Choose which soil you think will be best for growing seeds and explain WHY you made that choice. You can't be wrong with your hypothesis. The reason you write down what you think will happen BEFORE the experiment is to better understand why things happen. The better you explain why you chose your hypothesis, the more you might be able to learn from the outcome of the experiment.

SOIL EXPERIMENT

GETTING SET UP

Materials

Make sure you have each of the following materials. Let your teacher help you if you're missing anything.

- ❑ **Three containers to grow plants in**
- ❑ **Three different jars of soil**
- ❑ **Seeds**
- ❑ **Access to water**
- ❑ **A container that can hold and measure water**
- ❑ **A ruler that can measure in centimeters (cm)**
- ❑ **Access to sunlight**
- ❑ **A place to keep the containers**
- ❑ **Paper, pencil, notebook**

SOIL EXPERIMENT

GETTING SET UP

Planting seeds

Follow each step below in order. Let your teacher know if you need help with any steps.

1. **Add one type of dirt to a container until it is almost full, leaving about the width of two fingers between the top of the dirt and the top of the container.**
2. **Repeat Step 1 with the other containers.**
3. **Water each container until the top of the soil is damp, but not muddy. Use a spray bottle if you have one.**
4. **Place 3 seeds directly in the center of one container, on top of the soil. Take a pinch of dirt from the sides of the same container and sprinkle it over the 3 seeds until they are barely covered.**
5. **Repeat Step 4 with the other containers.**
6. **Gently place containers right next to each other near a source of light. Be sure to note where each container is located.**

SOIL EXPERIMENT

GROWING STAGE

Recording the results

Use the chart below to record measurements each week. Let your teacher know if you need help with any steps.

		Amount Watered	Height (cm)	Growth (cm) Height Last Week - Height this week = Growth	Description of what's happening
WEEK 1	Soil A				
	Soil B				
	Soil C				

		Amount Watered	Height (cm)	Growth (cm) Height Last Week - Height this week = Growth	Description of what's happening
WEEK 2	Soil A				
	Soil B				
	Soil C				

SOIL EXPERIMENT

Recording the results

Continued.

WEEK 3

	Amount Watered	Height (cm)	Growth (cm) Height Last Week - Height this week = Growth	Description of what's happening
Soil A				
Soil B				
Soil C				

WEEK 4

	Amount Watered	Height (cm)	Growth (cm) Height Last Week - Height this week = Growth	Description of what's happening
Soil A				
Soil B				
Soil C				

WEEK 5

	Amount Watered	Height (cm)	Growth (cm) Height Last Week - Height this week = Growth	Description of what's happening
Soil A				
Soil B				
Soil C				

SOIL EXPERIMENT

Recording the results

Continued.

		Amount Watered	Height (cm)	Growth (cm) Height Last Week - Height this week = Growth	Description of what's happening
WEEK 6	Soil A				
	Soil B				
	Soil C				

		Amount Watered	Height (cm)	Growth (cm) Height Last Week - Height this week = Growth	Description of what's happening
WEEK 7	Soil A				
	Soil B				
	Soil C				

		Amount Watered	Height (cm)	Growth (cm) Height Last Week - Height this week = Growth	Description of what's happening
WEEK 8	Soil A				
	Soil B				
	Soil C				