

Grade 4 Science - Earth Systems

Activity #5 - LAB

Starting a Garden

Starting Our Garden

Activity #5 Lab

Investigation Question: What is the relationship between natural resources and plants?

In this activity we will be starting a classroom garden and observing the relationship between natural resources and plants.

Materials:

- 4L Pop bottles - *Small indoor garden*
- 5 Gallon Pails - *Medium indoor garden*
- Garden trugs - *Large outdoor garden*
- Water absorbent string
- Scissors
- Germinated seeds or seedling plant of your choice
- Water
- Rulers

Procedure: Small Garden

BUILD A POP BOTTLE PLANTER / Self Watering Herb and Flower Pots Cheap and Easy:

<https://www.youtube.com/watch?v=1AicEEcmTk> (Follow link for video instructions)

Before Planting:

1. Cut the label off the pop bottles.
2. Cut the pop bottle in half horizontally when standing straight up.
3. Cut a hole in the cap of the pop bottle.
4. Thread string through hole in the pop bottle.
5. Make sure there is 20 cm of string on both sides of the bottle cap.
6. Put the cap back on the pop bottle.
7. Place the top of the pop bottle upside down inside the bottom half of the pop bottle.
8. Make sure the string is coiled in both parts of the pop bottle.

When ready to Plant:

9. Fill the bottom half of the pop bottle with water.
10. Make sure the water absorbent sting is submerged in the water.
11. Fill top half of the pop bottle with soil (Can add a small amount of fertilizer if desired)



12. Dig a small hole in the soil.
13. Place germinated seed or seedling plant in the hole and cover with soil.
14. Add a small amount of water to the top to moisturize the soil.

After Planting:

15. Place planters near a window or under an artificial light source.
16. Monitor plant growth and water levels over the weeks that follow.
- 17. You can modify plant conditions to make observations between different plant groups.**

Procedure can be modified for medium buckets or large garden trugs:

Medium Bucket Procedure: [How to Build BETTER: Self Watering 5 Gallon Buckets \(DIY Wicking Planters\)](#)

Large Garden Trug Procedure: [Self-watering SIP Sub-irrigated Raised Bed Construction \(How to Build\)](#)

Hypothesis:

What natural resource is the most important for plant growth? Why? _____

Observations:

Students take observations of their plants every week:

Week 1:

How tall is your plant: _____

Make a sketch of your plant:

Week 2:

How tall is your plant: _____

Make a sketch of your plant:



Week 3:

How tall is your plant: _____

Make a sketch of your plant:

Week 4:

How tall is your plant: _____

Make a sketch of your plant:

Questions:

How big is your class garden? (Calculate the approximate area of all the garden pots)

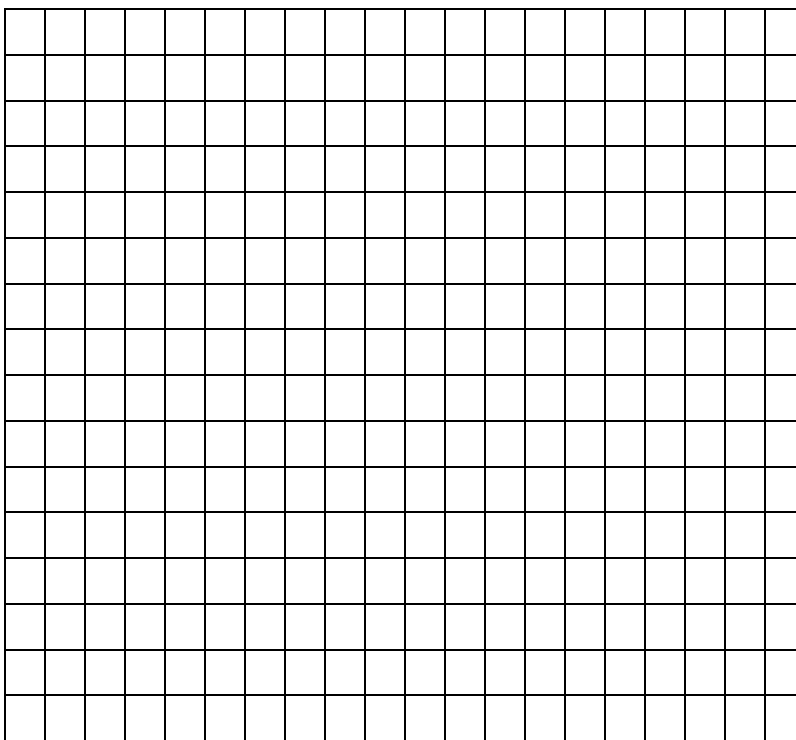
What will our plants need to grow?

For each of the answers above, explain their relationship with the plant.

What is the relationship plants have with other living things?



Create a graph to show the growth of your plant:



What is the impact that having a garden could have in the community?

