



Science: Growing plants using Hydroponics (2-Part Activity)

Description: The children will learn some vegetables only need water to grow and this process is called hydroponics.

Time: 15-20 minutes

Materials

- Medium salad bowl
- 4 small clear plastic containers
- Water
- 4 romaine lettuce
- 4 plastic knives
- Ruler
- Pencil
- Growing chart

Vocabulary

- **Harvest** to gather up or pick crops.
- **Hydroponics** method of growing plants without soil and only water.
- **Nutrients** anything that nourishes food that promotes growth.
- **Soil** surface layer of earth that supports plant life.

Pre-requisites

Have the children draw a romaine lettuce and on the bottom write their name and two lines label with the following: measurement/date; this will be their growing chart. This is where the children will record the growth of the lettuce.



Science: Growing plants using Hydroponics (Part 1)

Activity

1. Let the children know today they will be learning about growing plants and vegetables.
2. Explain to the children that many plants and vegetables are harvested to eat and to decorate our homes. Explain to the children the word harvested; which simply means to gather the plants that have grown and are ready to be picked.
3. Ask the children if they know some plants don't need soil to grow only water. Explain to the children that we can use water to grow certain vegetables like romaine lettuce.
4. Pass out the romaine lettuce and the plastic knives. Have the children cut the lettuce saving about two inches from the bottom. (The rest of the lettuce can be saved to make a salad later).
5. Have the children place the lettuce in a container standing up, so the base of the lettuce is sitting in the clear plastic container.
6. Have the children add about 1 inch of water to the container.
7. Explain to the children now we need to wait to see how much our lettuce will grow.
8. Using the ruler, have the children measure how tall their lettuce is and recorded on the growing chart.
9. Explain to the children this method we are using to grow plants without soil is has a name and it's called hydroponics.
10. Explain to the children hydroponics is not a new idea. Let the children know the hanging gardens of Babylon, one of the Seven Wonders of the Ancient World, were thought to be a hydroponic system. The Aztec people in Mexico grew all of their vegetables in a hydroponic system because the area in which they lived was swamp-like and unable to support field agriculture. They scraped the soil from the bottom of the swamp, placed it on top of floating wooden rafts and planted seeds in it. The soil is the upper layer of earth that has all kinds of good things in it for plants to grow. This Aztec planting method allowed the roots to push through the bottom of the raft into the water below and then the edible plants would grow just on top of the rafts.
11. Have the children place their lettuce in an area where there is plenty of light and let them know sunshine is very important to plants as well.
12. Let the children know we will check in three days to measure our lettuce.



Science: Growing plants using Hydroponics (Part 2)

Activity

1. Remind the children the process of hydroponics.
2. Let the children know we will be measuring the lettuce to see how much it has grown.
3. Have the children measure the lettuce and record the data on the growing chart.
4. Have the children engage in a brief discussion about their observations.

Tip: You can use this concept to grow carrots, onions, and celery!!