



Lesson: How to Garden in a Drought

Time: 1hr

Common Core Standards:

Next Generation Science Standards

NGSS.3.ESS3.1

Make a claim about the merit of a design solution that reduces the impacts of weather-related hazard.

Objectives:

To learn about the harmful effects of the drought.

To learn about the different water needs of producing various plants and vegetables, and how it affects the drought.

To learn how to sustain a garden by reusing water, and by strategic planting.

Key Words: Drought; Drip Irrigation; Mulch; Reuse; Recycle

Resources:

- PowerPoint - 'How To Garden In A Drought'
- Seeds
- Soil
- Small pots/Containers to plant seeds
- Different reused water samples (enough to water plants until they grow)
(ex: swimming water, leftover cooking water, rinsed vegetable water, car wash water, dish water, etc.)

Discussion:

Q: What is a drought?

Q: How is it affecting the environment?

Q: How is it affecting jobs?

Q: How is it affecting you?

- *Show + Discuss Powerpoint "How to Garden in a Drought"*

Powerpoint will have answers to these questions, but you can also ask these questions before showing the slides to have students participate and brainstorm answers themselves.

Class Activity

Divide the class into groups. Each group will be planting the same type of seeds, but each group will be watering their plants with different types of reused water.



Give each group a container, fill with soil, and plant 2 - 3 seeds in each container. Assign each group a type of reused water to plant their seeds with.

Each group will then begin watering their plants with their assigned type of water.

Students will observe each others plants, and record their observations for each type of water a few times a week for a few months. As the plants start growing (or not growing), making note of the progress of the plants.

Once the plants have had a good amount of time to grow, discuss why some plants grew better than others. The results of this experiment will vary.

Conclusion:

Discuss whether or not you'd still eat certain foods knowing what type of water was used, and why.

- (ex: plants watered with car wash water might grow, but we wouldn't want to eat vegetables that were watered with it because we know that the water had all sorts of chemicals in it)

Discuss which types of water can be reused for growing food, and which can't.

- For the types of water that is not ideal for planting food, brainstorm what else the water can be reused for (watering other plants such as trees, lawns, bushes, flowers, etc)

How do the results of this activity help us combat the drought?