

Sprouting Spuds

Standards of Learning

Science: K.1, K.7, 1.1, 1.4, 2.1, 2.4, 2.8, 3.1, 3.8, 4.1, 4.4

Objective

Students will:

- Observe and record the sprouting and root growth of a potato.

Materials

- How Groundhog's Garden Grew, by Lynne Cherry
- potatoes (older ones, which have sprouts on them), you may also use sweet potatoes
- clear, plastic cups
- toothpicks
- water

Background Knowledge

How Groundhog's Garden Grew is a beautifully illustrated book that details many aspects of gardening, from seed gathering to sprouting to harvesting. Follow up a reading of the book with a discussion of how Groundhog and Squirrel planted their garden. Point out how the planting of the potatoes was different than the planting of carrots. The potatoes were planted using the sprouts off of an old potato, while the carrots (and other vegetables) were planted from seeds. Students should also notice that the potatoes, onions, carrots, beets, parsnips, and radishes grew below ground, while the tomatoes, peppers, and leafy greens grew above ground.

Procedure

1. Read How Groundhog's Garden Grew to the students.
2. Pause when Squirrel and Groundhog plant the potatoes and discuss how this is different than the way that they plant the other vegetables. Also, pause on the following page and point out the difference between plants that grow below ground and those that grow above ground.
3. Tell students that they will now be observing the growth of their own potato plant.
4. Give groups of 4-5 students the following supplies: potato, plastic cup, 4 toothpicks.
5. Stick the toothpicks into the potato about two thirds away from the end that has the most sprouts. Space the toothpicks evenly around the width of the potato.
6. Fill the plastic cup with water, leaving about an inch at the top.
7. Place the potato in the cup with the sprouts in the water. The toothpicks should rest on the rim of the cup.
8. Have students record their initial observations of the potato into a scientific journal.
9. Place the cups where they will receive adequate light and maintain the water level so that the bottom of the potato is always in the water.
10. After a few weeks roots will grow out of the bottom of the potatoes and the shoot of a new potato plant will grow out of the top.
11. Have students record their observations of the potatoes' growth in their journals.

Extension

After the leaves have grown at the top of the potatoes, they may be replanted into a pot with soil. Keep watering them and after awhile a flower will grow. Next the plant will die, when this happens, it is time to dig up the potatoes.

References

<http://imnh.isu.edu/digitalatlas/teach/lsnplns/potaoelp.htm>

