VICTORY GARDENS: SPROUTS

INTRODUCTION

Victory Gardens were an incredibly important part of the Home Front effort in World War II. Gardening was very important for morale, but it also eased concerns about nutritional consequences of rationing. Gardening is a great way to learn about and to apply lessons from botany. Observing seed germination can be magical for students of all ages.

MATERIALS

You'll need for each group of students:

+ Two pint-sized mason jars and paper towel or cheesecloth for the top
+ Two kinds of seeds for each group

You can use regular beans, brown rice, sprout seeds. Mung beans, if you can find them, will grow into the sprouts in Asian stir fries or Vietnamese pho.

The seeds need to be soaked overnight at first, then drained. Sprinkle with fresh water and drain once or twice a day.

Small mason jars can be purchased inexpensively. If you can't get these you could use zip-top storage bags partially closed, with damp paper towels inside.

Students also need to know about vegetative reproduction of plants. To do this, cut a sprouting potato up and plant each part separately in a small pot. Or, cut the ends of sweet potatoes and put them in a jar with the cut side in water and the side with skin exposed. The cut side will grow tiny rootlets, and sprouts will come out of the upper side. When the sprouts get big, carefully snap them from the sweet potato and put their base in water. Roots will sprout in a few days. New plants can be started from these.

STANDARDS

NGSS 4 LS1-1
Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

NGSS MS LS1-4
Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.

—

From elementary to middle school, students develop concepts of the parts and structures of plants, their functions in survival and reproduction, and their role in the carbon cycle. This activity provides them opportunities to identify those parts and their functions. If you use seeds for plants people eat, it connects to later lessons on food and nutrition and the carbon cycle. This engages students in the Crosscutting Concepts of Form and Function, and Energy and Matter, and the Science and Engineering Practices of Developing and Using Models, and Constructing Explanations.

NAME: DATE:

VICTORY GARDENS: SPROUTS

Where do plants start from? Do plants have babies?

Your teacher will give you a jar and some seeds. You will soak the seeds in water overnight; then you will pour off the water. Because the seeds need to stay damp but clean, rinse them once or twice a day in clean water.

Over time what do you see happening to the seeds?

Draw a diagram of what you see for at least three days.

What did you see first, the root or the leaves? Why?

If your teacher says it's okay, taste one of the sprouts. People make salads out of sprouts or put them on sandwiches or in soup.