

# November: Sugar Beets

## Materials

Mature sugar beets, soda water, tiny paper cups, lemon juice/limes (or other natural flavors), nice, cutting board, a can of soda, a bottle of sports drink, a can of juice, sugar cubes, worksheet

## Preparation

Grow beets, gather supplies

## Activity – 45 minutes

### *Intro and Worksheet - 15 minutes*

This time of year, we are usually surrounded by sweet treats. Sugar becomes a way of life, so today we are going to talk about sugars - specifically added vs natural sugars. The class is going to try a naturally flavored sugar free soda and is going to go out to the garden to try some naturally sweet beets.

Before all of that though, we are going to have a nutrition discussion. Divide the class into three groups and give each group a drink. Tell them to look over the nutrition label on their drink and identify some key elements. Discussion: Does the class know what calories are? Calories are the way we measure how much energy is in our food. So, foods with more calories can give us more energy. Of course, not all calories are equal - sugary calories give us a quick hit of energy but it doesn't last, and will result in an energy 'crash'. Energy from proteins and whole grains will give us slower burning energy that won't make us spike or crash.

### *Make Natural Soda - 10 minutes*

In the small cups put a lime wedge and a dash of lemon juice. Top it with sparkling water and the students drink it up! Don't make very much for each student, as most students won't like it.

Ask them what they thought. If they didn't like it, that's OK, it might not even be their fault! Discuss: There is SO MUCH sugar in our diets (it is in everything from ketchup to peanut butter to crackers) that our taste buds become accustomed to an un-natural level of sweetness. When we encounter something that is naturally sweet they might not taste sweet because our taste buds are so desensitized. We are killing out taste buds. The same thing goes for sour things. Because we are so used to artificially sour flavors being masked with sugar (commercial lemonade, sour gummy candies, etc) things that are naturally sour (like limes) taste EXTRA sour to us. By eating things without added sugars we can get our taste buds back to normal. (Interestingly enough, younger students usually have an easier time with the natural soda. As a society, we are more careful about how much sugar we give to small children and infants, but stop being as diligent with older kids.)

After the class has finished the worksheet and their sodas, head out to the garden.

### *Tasting Beets - 10 minutes*

Out in the garden, point out that the beet tops are frozen, black, and dead. Explain that when the beet tops died, the plant transferred all the sugars and nutrients that were in the leaves down into the roots of the plant. The root of the beet is what we eat!

This means that beets in the winter are so full of natural sugars, you can eat them raw just like carrots!

Pick beets and cut them into thin disks. Quarter the disks and have students eat the quarters down to the skin (the skin isn't sweet, don't eat that part). Yum!

Name \_\_\_\_\_ Date \_\_\_\_\_

What are calories?

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How many servings were in the can of soda? \_\_\_\_\_ The bottle of sports drink? \_\_\_\_\_

How many calories were in each drink?

Soda	Sports Drink	Juice

Were there any vitamins in any of the drinks?

Soda	Sports Drink	Juice

How much sugar was in each drink?

Soda	Sports Drink	Juice

We will use natural flavoring instead of artificial sweetener in our natural soda. What part of the nutrition label do you think this will affect?

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What did you think of the beets? Describe them using complete sentences:

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