

3-5 Lesson

FARM
Food, Agriculture & Resources in Motion
Science Lab



Pioneering Sweetness!

Grade Level: 3-5

Topic: Sugar beets

Estimated Time: 50 minutes

Brief Lesson Description: Let's not sugar coat it! Who knew our main resource for sugar is all-natural and comes from a root vegetable grown in our state?

Students will explore the parts of this root vegetable and how each part plays a key role in its growth and ability to produce sugar! They will also learn about how environmental traits impact the sugar beets ability to produce a certain percentage of sugar, and how that can vary year-to-year. Finally, students will take a closer look at different sugars and their structures vary and how they 'grow.'

NGSS or Common Core Standards:

- 3-LS3-2 Use evidence to support the explanation that traits can be influenced by the environment.
- 4-LS1-1 Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.
- 5-LS1-1 Support an argument that plants get the materials they need for growth chiefly from air and water.

National Agricultural Literacy Outcomes:

- T1.3-5 b. Explain how the interaction of the sun, soil, water, and weather in plant and animal growth impacts agricultural production.
- T2.3-5 c. Explain how the availability of soil nutrients affects plant growth and development.
- T3.3-5 b. Diagram the path of production for a processed product, from farm to table

Specific Learning Outcomes:

1. Students will identify the parts of a sugar beet and their function.
2. Students will recall the function of the plant parts and how it supports growth and sugar development.
3. Students will observe different forms of sugar and make observations.