Wild Blueberries!

Description
Students will learn about the nutrients found in blueberries and prepare blueberry smoothies.

Guiding Question
Where does our food come from?

Big Idea
The food we eat gives our body the nutrients it needs to stay healthy.

Learning Objectives:
→ Students will be able to list two nutrients found in blueberries and what part of the body the nutrient helps.
→ Students will be able to identify blueberries as a food native to Maine.
→ Students will begin to understand that food takes energy to get to our plate

Vocabulary:
Fiber – Keeps you full and helps food move through the digestive tract (rub stomach)
Antioxidants - help the body clean out free radicals and prevent cancer (light saber motion)
Potassium – helps balance fluids in the body (arms out for balance)
Vitamin A – Strong vision and eyes (sunglasses with hands)
Local – It grows, is sold, and is consumed nearby. We can grow it in Maine and our region.
Wild – No one needs to plant it, it grows by itself in its native environment

Materials:
☐ Blender
☐ Blueberries
☐ Bananas
☐ Yogurt
☐ Honey
☐ Spinach
☐ Small cups for sampling
☐ Spoons
☐ Measuring spoons and cups
☐ Maps
**Introduction to Food Miles** (10 mins)
Today we are making blueberry smoothies! Who likes blueberries? I do, too. I get especially excited about eating blueberries because they are grown in Maine. Some blueberries from Maine are even wild. This means they grow without the help of a farmer. **Food Miles Background Appendix A**

Ask where students get their food (grocery store). Ask where the food comes from before then (farms). Explain that food travels from the field it was grown in, to the grocery store, to your home. Some food comes from very far away, and some comes from nearby. This is because food grows in different climates.

**K-2nd grade:** Show students where on the map each food item comes from. Do jumping jacks as an illustration of the distance.

**3rd-5th grade:** Food takes energy to grow and get to us. We are going to think about the energy difference in food from far away vs. local food by measuring food miles.

For every 20 miles food traveled, we will do 1 jumping jack. I looked up where the ingredients we are using today in our smoothies come from. Using a map, show students where food traveled from and explain how many miles that is and how you calculated the number of jumping jacks. Then have the students do the jumping jacks. When you get to Guatemala, expect surprise and protest from the students to do that many jumping jacks. Engage in conversation about how much energy this takes.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Where it came from</th>
<th>Miles Traveled</th>
<th>Jumping Jacks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blueberries</td>
<td>Wynam, ME</td>
<td>180</td>
<td>9</td>
</tr>
<tr>
<td>Spinach</td>
<td>New Jersey</td>
<td>516</td>
<td>26</td>
</tr>
<tr>
<td>Bananas</td>
<td>Guatemala</td>
<td>3,635</td>
<td>182</td>
</tr>
</tbody>
</table>

Which takes the least energy? If the food comes directly from a farm or garden near you or somewhere else in Maine, it takes the least amount of jumping jacks (energy). What other foods do you know come from Maine? (Cranberries, maple syrup, lobster, etc.)

**Cooking Station (if possible, 3 stations of cooking same recipe):**

**Review ingredients (5 mins)**
Students will review the ingredients and their healthy components.
Blueberries have fiber, which keeps you full and helps food move through the digestive tract (rub stomach), and antioxidants, which help the body clean out free radicals and prevent cancer (lightsaber motion). Bananas have potassium, which helps balance fluids in the body (arms out for balance). Spinach has Vitamin A which helps you have strong vision and eyes (sunglasses with hands).

**Preparation (5 mins)**
Have students read recipe out loud (or read to them) and go over any vocabulary and measurement questions.

**Cook (5 mins)**
Have students take turns measuring all ingredients into blender. Blend and then divide into cups.

**Eat (5 mins)**
Enjoy!

**Read:** ME from Blueberries while they eat

**Common Core Standards**
- ELA K.RL.5 Actively engage in group reading activities with purpose and understanding
• ELA K/1.W.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question
• ELA K.L.5.c Identify real-life connections between words and their use
• ELA Literacy.W.4/5.3d Use concrete words and phrases and sensory details to convey experiences and events precisely
• Math K.CC.4 Understand the relationship between numbers and quantities; connect counting to cardinality
• Math K.MD.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object
• Math 3.MD.2 Measure and estimate liquid volumes and masses of objects using standard units of grams, kilograms, and liters. Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units by using drawings to represent the problem

Appendix A

Food Miles background info for teachers
Appendix B

Blueberry Smoothie Recipe

1 cup blueberries
1 banana
½ cup spinach
½ cup yogurt
½ cup of water
1 tbsp honey

Mix all ingredients in a blender and mix thoroughly. Add more liquid or yogurt to adjust consistency. Enjoy!
1 1/2 cups yogurt
1 1/2 cup of water
1 tbsp honey

Mix all ingredients in a blender and mix thoroughly.
Add more liquid or yogurt to adjust consistency. Enjoy!

Blueberry Smoothie Recipe

Appendix B

Blueberry Smoothie Recipe

1 cup blueberries
1 banana
1/2 cup spinach
1/2 cup yogurt
1/2 cup of water
1 tbsp honey

Mix all ingredients in a blender and mix thoroughly.
Add more liquid or yogurt to adjust consistency. Enjoy!
1. Mix all ingredients in a blender and mix thoroughly.

2. Add more liquid or yogurt to adjust consistency.

3. Enjoy!