“Fresh, Good and Local” Anticipation Guide

Created by Emily Holden of Oregon State University

Description
“Fresh, Good and Local” demonstrates how science impacts our daily lives. OSU vegetable breeders have created plants that grow faster, taste better, are easier to harvest and are more nutritious. Many of these breeds can be found in gardens and grocery stores in Oregon and around the world.

The anticipation guide will increase students’ literacy and comprehension skills. Completing the activity guide will activate prior knowledge, give students a direction for their reading and raise curiosity. The anticipation guide encourages students to reach a higher level of Bloom’s Taxonomy of Cognitive Thinking and allows teachers to recognize and address student misconceptions about vegetable breeding.

This is a series of questions or statements about the article that students use to indicate agreement or disagreement. After reading the article, they may change or maintain their position, citing evidence from the text.

Time Estimate
One 45- to 50-minute Class period

Student Outcomes and Objectives
• Students will examine the process of artificial pollination.
• Students will explore vegetable breeding.
• Students will investigate vegetable breeds created at Oregon State University.

Standards
Science
H.2E.4: Evaluate human impacts on environmental quality and sustainability.
H.4D.5: Describe how new technologies that lead to scientific inquiry are responsible for changes in the ways people live and work.
H.4D.6: Evaluate how ethics, public opinion and government policy influence engineers and scientists and how their results impact human society and environment.

Language Arts
EL.HS.RE.01: Read at an independent and instructional reading level appropriate to grade level.
EL.HS.RE.02: Read and understand a wide variety of informational text.
EL.HS.RE.05: Match reading to purpose.
EL.HS.RE.06: Understand and use a variety of comprehension strategies as needed such as summarizing, class and group discussions and making predictions.
EL.HS.RE.08: Understand, learn and use new vocabulary that is taught through informational text.
EL.HS.RE.15: Read magazines and news stories.
Language Arts Continued
EL.HS.RE.19: Identify and summarize sequence of events, main ideas, facts, supporting details and opinions.

Career-Related Learning Standards
CS.PM.02: Plan, organize and complete assigned tasks on time, meeting standards of quality.
CS.HS.01: Locate, process and convey information using traditional tools.

Materials
- Copies of “Fresh, Good and Local” from the 2009 issue of Oregon’s Agricultural Progress magazine, a special issue on Food in Oregon
- Copies of the “Fresh, Good and Local” anticipation guide.

Vocabulary
Cornucopia: symbolizes an abundance of food.

Self-pollinate: the transfer of pollen from the anther to the stigma.

Pollen: yellow, powder-like substance in flowers that fertilizes the stigma of a flower.

Pole bean: any type of bean whose vines grow up a trellis, pole or cage.
“Fresh, Good and Local” Anticipation Guide Procedure

1) Hand out the anticipation guide to students.
2) Have students complete the left side of the guide before reading.
3) Hand out the copies of the “Fresh, Good and Local” article.
4) Instruct students to read the article and take additional notes as they go.
5) Conduct a discussion where you compare before and after results.
   a. Try to focus your discussion on evidence provided in the text.
## “Fresh, Good and Local” Anticipation Guide

<table>
<thead>
<tr>
<th>Before Reading: Agree or Disagree</th>
<th>Statement</th>
<th>After Reading: Agree or Disagree</th>
<th>Evidence and Support</th>
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<tbody>
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Adapted from Dr. Travis Park of Cornell University
### “Fresh, Good and Local” Anticipation Guide Example

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|                                   | OSU plant breeders spend years developing vegetables that will grow in Oregon. Why? | agree                            | Not all crops grow equally well in all climates.  
|                                   |                                                                            |                                  | There are varied climates across the state of Oregon that require different crop varieties.                                                                                                                      |
|                                   | Genetically modified plants are accepted globally. Why?                    | disagree                         | Many European nations do not allow genetically modified plants.                                                                                                                                                     |
|                                   | OSU researchers developed the Blue Lake green bean to be used in canning. Why? | agree                            | It was developed to maintain its color and flavor through the canning and freezing processes.                                                                                                                      |
|                                   | The Legend tomato was bred to be grown in the arid climate of eastern Oregon. Why? | disagree                         | The Legend tomato was bred to be grown in climates similar to the Willamette Valley with more spring precipitation and less summer heat.                                                                             |
|                                   | Selective breeding is being used to develop new varieties that grow well in organic systems. Why? | agree                            | OSU researchers are working with organic broccoli growers. Their work is helping plants grow fast enough to outpace pests and be broad enough to shade out weeds and sturdy enough to resist disease. |

*Adapted from Dr. Travis Park of Cornell University*