Purpose

This lesson focuses on opposing viewpoints in regards to agricultural issues surrounding apple crops. Students will be able to practice differentiating between opinions and facts while learning about the purpose of local and federal regulations. Students will also conduct their own research to begin forming their own points of view about the issues surrounding apples.

Academic Content Standards

**MN K-12 Academic Standards and Benchmarks**

**Social Studies**

6.1.1.1.3 Address a state or local policy issue by identifying key opposing positions, determining conflicting values and beliefs, defending and justifying a position with evidence, and developing strategies to persuade others to adopt this position.

6.2.4.8.1 Explain why federal and state governments regulate economic activity to promote public well-being.

**Common Core Connections**

**Reading**

CCSS.ELA-Literacy.RL.6.1

Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

CCSS.ELA-Literacy.RI.6.6

Determine an author’s point of view or purpose in a text and explain how it is conveyed in the text.

CCSS.ELA-Literacy.RI.6.8

Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.
Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.

National Agricultural Literacy Outcomes

Agriculture and the Environment

- Discover how natural resources are used and conserved in agriculture (e.g., soil conservation, water conservation) (T1.6-8 c)
- Discuss (from multiple perspectives) land and water use by various groups (i.e., ranchers, farmers, hunters, miners, recreational users, government, etc.), and how each use carries a specific set of benefits and consequences that affect people and the environment. (T1.6-8 d)
- Recognize the factors of an agricultural system which determine its sustainability (T1.6-8 h)

Plants and Animals for Food, Fiber & Energy

- Explain the role of ethics in the production and management of food, fiber (fabric or clothing), and energy sources (T2.6-8 b)
- Identify farm practices for plant protection (e.g., using a pesticide, integrated pest management, cultural practices) and the harvest of safe products for consumers (T2.6-8 c)

Food, Health, and Lifestyle Outcomes

- Explain how factors, such as culture, convenience, access, and marketing affect food choices locally, regionally, and globally (T3.6-8 d)
- Explain the role of ethics in the production and management of food, fiber (fabric or clothing), and energy sources (T3.6-8 f)

Materials

Needed Daily:

- Hyperdoc - accessible at https://minnesota.agclassroom.org/educator/sclb.cfm. The teacher can make a copy and then share it with their students. The hyperdoc can be posted to Schoology or Google Classroom so each individual student has their own copy.
- Headphones or earbuds
- Mobile device for classroom use (ipad, Chromebook, laptop, etc.)
- Pencils
- Highlighters
- Notebook Paper

Day 1:

- Organic and conventional apples, multiple varieties if possible, to wash and cut up for taste test (optional)
- Printed copy of Twin Cities Daily Planet GMO Apple article for each student. This article is accessible through the Hyperdoc at https://minnesota.agclassroom.org/educator/sclb.cfm

Day 2:

- Copies of articles that students have selected from Hyperdoc page 4
- Reading guide on page 5 of the Hyperdoc

Day 3:

- Printed copies of the worksheets below, one for each student.
  - Evaluate Strength of Evidence
  - Evaluate the Strength of Evidence that Supports a Claim

Day 4:

- Printed copy of Think Clearly: Analyze Support a Position worksheet, one for each student.
Background—
Agricultural Connections

Apples are a popular Minnesota crop that students enjoy eating and learning about. 6th grade students are beginning to learn how to differentiate facts from opinion in literature, as well as identifying point of view and supporting details. In Social Studies, 6th graders are learning about opposing views in political issues, and gaining a better understanding of the purpose of local and federal regulations.

Apples offer an authentic learning connection into agricultural issues such as pesticide uses, organic and conventional growing, and genetically modified crops. Students will research and read various print and digital resources in order to better understand both sides to these issues, and to begin developing their own point of view that is supported by evidence. Teachers may pair this activity with an apple orchard field trip or simply assign students apple-tasting or shopping enrichment activities at their local supermarket.

Interest Approach - Engagement

Launch Question:
Who likes apples? What’s your favorite kind? Do you buy organic or conventional? Why?

Fun Fact: Did you know that since 1888, the U of MN has bred over 30 varieties of apples?

- Students can view the varieties listed in the Hyperdoc.
- Show Minnesota Apple Harvest from 2014 at Aamodt’s Apple Farm. Video link is included on page one of the Hyperdoc.

Introduce Issue #1: Organic and Conventional

- Optional: Display images or actual apples - one apple is grown organically and one apple is grown conventionally. Organic and

Vocabulary

Blight – the rapid and extensive discoloration, wilting and death of plant tissues

Carcinogen – cancer causing agent

Certified Organic – inspected by the United States Department of Agriculture (USDA) to ensure compliance to organic growing / harvest procedures

Food Labeling – requirements for certain nutrients, ingredients and chemicals to be listed on packing materials

Hardy – able to withstand the cold of winter in open air

Harvest – the season when ripe crops are gathered

Hybrid – a cross breed of two different kinds of plants, often by human interference in pollination

Insecticide – a substance or preparation used for killing insects

Neonicotinoids – a specific type of insecticide that targets the central nervous system of insects resulting in paralysis or death

Pest – an insect or other small animal that harms or destroys garden or farm plants, trees or produce

Toxic – acting or having the effect of poison
conventional apple identification test: Can you tell by color, size, texture or smell? (no eating yet!)

- Organic apple taste test – (optional): How does it compare to other apples you have eaten?
- Show parts of Good Mythical Morning – Conventional vs. Organic Taste Test. Video link is included in page one of the Hyperdoc.

**Introduce Issue #2: Genetically Modified Organisms (GMO’s)**

- Show Arctic Apples video -link available on page 2 on the Hyperdoc. How does this make you feel? Intrigued? Wary?
- Provide each student with a paper copy of the Twin Cities Daily Planet GMO Apple article. Use the questions on page two of the Hyperdoc to assist students in reading this article. Instruct students to use a pencil and highlighter to identify important information. Instruct students to share their thoughts on the Hyperdoc. Discuss the point of view of the author, supporting details, and convincing quotes.

**Procedures:**

**Day 1**

**Introduction to apples, topic and article selection**

**Activities 1 and 2** are completed in the Interest Approach (see above). Students will follow the instructions included in the Hyperdoc. These two activities can be completed as a class.

**Activity 3:** Topic selection – Organic and Conventional foods or GMOs and non-GMO crops. Page 3 on Hyperdoc

**Activity 4:** Article selection – practice skimming & scanning to select two articles with opposing views. Links to articles are included on page 4 of the Hyperdoc.

- Students can work independently on reviewing the articles or you may want students to pair up and select the same topic and articles

**Day 2**

**Reading and evaluating print-based resources**

**Activity 5:** Initial read of each article – students can use page 5 of the Hyperdoc as a reading guide.

- Students should highlight the point of view and star main ideas on the article
- Students should practice reading, marking up, and verbally summarizing articles
- Students may want to underline direct quotes and practice paraphrasing
- Teacher may want to reconvene as a class to discuss examples and answer questions
Researching, reading/viewing and evaluating digital resources

Activity 6: Student research – can you find, read & evaluate another digital article for your topic?

Activity 7: Each student must use the article he/she found to complete the “Evaluate Strength of Evidence” worksheet. Additional information is on page 6 of the Hyperdoc.

Activity 8: Student research – can you find, watch & evaluate a video related to your topic?

Activity 9: Each student must use the video he/she found to complete the “Evaluate the Strength of Evidence that Supports a Claim” worksheet. Additional Information is on page 7 of the Hyperdoc.

Communicating a personal point of view, synthesizing evidence and citing sources

Activity 10: Putting it all together- what’s your position? Each student must complete the “Think Clearly: Analyze Support a Position” worksheet. Additional Information is on page 8 of the Hyperdoc.

Activity 11: Create an annotated bibliography using EasyBib in Google Docs. Information for this is found on page 8 of the Hyperdoc.

Work Day if needed: Wrap up above activities, allow enrichment time for those who are done

Sources/Credits

Links for these items can be found at https://minnesota.agclassroom.org/educator/sclb.cfm

- “Evaluating Perspectives about GMOs” Minnesota Agriculture in the Classroom Lesson. National Agricultural Literacy Curriculum Matrix. Topic adapted for a younger audience.


Evaluate the Strength of Evidence

1. What is the main idea of the first paragraph?

_________________________________________________________________________________

List two facts that support it most strongly. Paraphrase them in your own words.

_________________________________________________________________________________
_________________________________________________________________________________

2. Outline the passage—list the parts that the writer included. You may find them identified with boldface sub-headings. You may have to figure out what those are without that help.

_________________________________________________________________________________

3. What is a claim that the writer makes about the topic?

_________________________________________________________________________________
_________________________________________________________________________________

4. What is the strongest evidence the writer gives to support that claim? List two examples or facts that the writer includes that support the claim most strongly. Paraphrase them—write them in your own words.

_________________________________________________________________________________

Worksheet concept ©2015 Foundation Center for Urban Education, Barbara Radner, Ph.D., teacher@depaul.edu
Evaluate the Strength of Evidence that Supports a Claim

Find a video resource that explains an aspect of the apple topic you selected.

Video name and website:
_________________________________________________________________________________

What is a claim the video creator(s) makes?
_________________________________________________________________________________
_________________________________________________________________________________

List evidence the video uses to support the claim.
Then decide which evidence is strongest.

<table>
<thead>
<tr>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
</tr>
</tbody>
</table>

Which evidence is strongest? (circle one) 1 2 3

Why do you think it is the strongest?
_________________________________________________________________________________
_________________________________________________________________________________
_________________________________________________________________________________
Think Clearly: Analyze Support a Position

Issue: ____________________________________________

<table>
<thead>
<tr>
<th>One Position</th>
<th>Another Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supporting Reasons and Facts:</td>
<td>Supporting Reasons and Facts:</td>
</tr>
</tbody>
</table>

Which position is stronger? Explain your decision:

Worksheet concept ©2015 Foundation Center for Urban Education, Barbara Radner, Ph.D., teacher@depaul.edu
The Honeycrisp Apple is Minnesota’s official state fruit.