



GRADE 5

Farm to School Lesson Plan

Topic: Native Wisconsin Plants—Apples (suggested month: **November**)

Monthly Essential Question: Which plants are native to Wisconsin?

Content Areas Addressed: Social Studies, Global Agricultural Systems, Technology/Information, Agriscience/Production, Ecology/Environment, Business Management/Marketing

Standards Addressed:

- Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text. (CCSS.ELA-LITERACY.RI.5.3)
- Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area. (CCSS.ELA-LITERACY.RI.5.4)
- Engage effectively in a range of collaborative discussion (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly. (CCSS.ELA-LITERACY.SL.5.1b, c, d)
- Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence. (CCSS.ELA-LITERACY.SL.5.3)
- Introduce a topic clearly, provide a general observation and focus, and group related information logically; include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension (CCSS.ELA-LITERACY.W.5.2.A)

Key Terms: Grafting

Materials Needed:

Native Plants PowerPoint

Apple Guides—one per group

Writing utensils

Blank paper

Sampling food supplies

Introduction: (5 min) *Introduce essential question—Which plants are native to Wisconsin? “We have many native plants living here in Wisconsin. When a plant is native to Wisconsin they can grow and live a happy and healthy life even with our cold winters and short summers. If our food comes from a plant or animal that is native to Wisconsin, then that food is also considered native to Wisconsin. Today we are going to talk about apples. Where do apples come from? (grocery stores, apple orchards, farmers market) How are new apple trees made? (trees, seeds) That is kind of a trick question. Let’s talk about this in more detail. There are many different types of apples. Can anyone name a specific apple variety off of the top of their head?” Ask a few students to share with the class. “Here are some popular apple varieties native to Wisconsin.” (Fuji, Red Delicious, Granny Smith, Macintosh) “Let’s pretend we are Gala apples. When we try to reproduce (make baby Gala apples), are the new apples going to be exactly the same as you or me? How about the same as each other?” Ask a few students to share their thoughts. “Think about your family. Besides identical twins, is anyone exactly the same? Are you exactly the same as your brothers and sisters? You may be similar, but you are still each unique. Apples are a lot like humans, when they try to reproduce naturally their babies are not the same as their parents or as one another. This is a problem because we like our apples to look and taste the same every time we eat them. After all, we don’t want Fuji apples to be crabapple size or Red Delicious apples to be yellow do we?”

Development: (20 min) Grafting is the process apple growers use to recreate apple varieties and create new varieties. The goal of apple grafting is to combine apple characteristics that we like so that people will continue to enjoy that variety. We’re going to start with a quick apple grafting video. Watch “Apple Tree Grafting” video. Ask a few students to share what they learned. Instruct students to take out blank paper and writing utensils and have them to draw a Venn Diagram. Put students into small groups and pass out Apple Guides. “These Apple Guides contain descriptions of different apple varieties. You will choose two different apple varieties from the Apple Guide that you think would produce a tasty variety if they were grafted. Then you will write the name of one variety above each circle. Pretend that you are grafting these two apple varieties by writing their differences in the outer circles and the similarities in the middle. Then come up with a name for your new apple variety. Once you have named your apple variety, turn your paper over and write a short paragraph to persuade a customer to purchase your new apple.” Come back together as a class, and ask a few groups to share their new apple variety.

Sampling & Closure: (5 min) Conduct local fruit or veggie tasting. Instruct each student to take a ‘polite bite’ (eat at least one bite and only say polite things). *Review essential question—Which plants are native to Wisconsin? “How many of you have been to an apple orchard? Wisconsin used to have hundreds and hundreds of different varieties of apples. Unfortunately, as we became more accustomed to the more well-known varieties, we started to lose the knowledge and skills for protecting our old varieties and creating new varieties. Many people in Wisconsin are committed to redeveloping the heirloom apple varieties native to our region. Do some research to find out where your apples come from.”



Apple Guide

BRAEBURN- light olive green apple overlaid with striped muted red, this apple is crisp, sweet, and has very good flavor. It is excellent stewed (applesauce), needing little or no sugar.

CORTLAND- Cortland is almost identical to McIntosh in all respects, but Cortland ripens a little later, is a bit larger, and has a brighter color. Big, red with dark stripes, perfumed, slightly acid, very good flavor. It is good for pies as it doesn't brown when it is sliced.

FIRESIDE – Large, yellow with deep red striping. Crisp and juicy, for eating and cooking.

FUJI- A large, sweet, crisp, fine textured, complex flavored apple. Excellent eating.

GALA- A medium, very sweet apple. Yellow skin with red stripes. Good for cooking and salads.

GOLDEN DELICIOUS- Medium, yellowish green. Yellow skin with white flesh, tender, juicy and sweet. Good for cooking and eating.

GRANNY SMITH-A very late maturing, late keeping large, green, slippery skinned, dual purpose cooking/eating apple. The flesh is hard, crisp, and juicy. The flavor is tart, becoming very sweet if tree ripened. One of those apples you either like very much or not at all. The fruit will store for several months after maturity without needing refrigeration

HONEYCRISP – Medium, reddish-orange with crisp, coarse texture. Excellent for eating and cooking.

IDARED- Large, red shiny skin. The flesh is white, firm, crisp and mildly acid. It is usually somewhat acid when it is picked, but mellows in storage. Best suited to cooking.

JERSEYMAC – Medium apple with red skin and fine, white tart flesh. Great eating apple.

JONATHAN- A small to medium sized apple with thin, bright red-blushed skin contrasting sharply with the crisp, juicy, yellowish white flesh. The flavor is archetypically 'appley' and aromatic and is one of the best in the crisp American class. The trees are vigorous growing but at maturity fairly small, and disease susceptible. US, UK, NZ, AU.

McINTOSH-A large, bright red apple, crisp, juicy, snowy white flesh.

RED DELICIOUS – Medium to large, tough skinned, juicy apple with yellowish flesh.

SPARTAN - Spartan is a medium sized apple with solid very dark red skin and pure white juicy, crisp flesh. It has an excellent aromatic flavor.

WINTER BANANA - large, pale yellow, with a rose blush. The flesh is crisp, juicy, coarse, aromatic. W.B. has a pleasant distinctive aroma-but not of bananas! These bruise very easily.