

Apple Lesson Plan

Summary

In this episode of Sketch and Coffee Live at 5:30am Texas time, Blade sketches an apple with slices and reflects on the challenges of perspective and shading. The discussion moves through the evolutionary history of apples as part of the rose family, the early collection of crabapples, their cultivation and Roman grafting practices, the linguistic roots of manzana, and apple stories from myth to folklore. The stream finishes with reflections on modern apple production, Johnny Appleseed, and the simple magic of apple pies.

Episode Link: https://www.youtube.com/live/MeirSF3aWPg?si=yLyyg8AbfFYX7_ZM

Lesson Plan: Apples

Objective

Students will learn about the evolutionary history, cultural significance, and modern industry of apples, connecting scientific, historical, and mythological perspectives.

Materials

- Whiteboard or chalkboard
- Student worksheets (provided at the end of this lesson)
- Images of apple varieties, blossoms, and orchards (optional for visual aid)
- Access to sources for deeper research (optional)

Introduction

Begin by asking students what fruit family apples belong to. Explain that apples are part of the rose family, which also includes pears, cherries, and strawberries. Highlight that today's lesson will cover how apples developed, their role in culture and language, and how they became one of the most cultivated fruits worldwide.

Main Content

- Evolutionary history of Rosaceae and the development of apples
- Early human use of crabapples
- Cultivation and Roman grafting
- Linguistic influence of Roman orchardist Mattianus on the Spanish word manzana
- Apples in myth and legend
- Apple production today

Activity

Divide students into small groups and assign each group one Fun Fact. Have them illustrate the concept on paper (for example, drawing the Rosaceae family tree, sketching Idun's apples, or charting modern apple production). Groups present their drawing and explanation to the class.

Assessment

- Oral questioning during discussion
- Student worksheets collected and reviewed
- Participation in group activity

Rubric

Criteria	4 – Excellent	3 – Good	2 – Fair	1 – Needs Improvement
Participation	Actively contributes and supports group	Contributes most of the time	Rarely contributes	Does not contribute
Understanding Content	Demonstrates strong grasp of apple history and facts	Understands most key points	Partial understanding	Little or no understanding
Group Activity	Provides detailed, accurate illustration and explanation	Provides adequate illustration and explanation	Minimal effort	No effort
Worksheet Completion	All answers correct and thoughtful	Most answers correct	Some answers attempted	Worksheet incomplete

Conclusion

Apples are more than just a fruit. They connect back tens of millions of years to the rose family, shaped human diets and culture for thousands of years, and remain a major agricultural crop today. From myth and folklore to modern orchards, apples are a story of evolution, cultivation, and meaning.

9 Fun Facts About Apples

1. Apples Belong to the Rose Family Apples are part of the Rosaceae family, which also includes pears, peaches, cherries, strawberries, and roses. Fossil and genetic evidence shows that this plant family first appeared 35–50 million years ago. So when you eat an apple, you are eating a cousin of the rose.

<https://www.frontiersin.org/journals/plant-science/articles/10.3389/fpls.2019.00617/full>

2. Fruit Types Split About 20 Million Years Ago Around 20 million years ago, the rose family began branching into the main fruit types we know today. These included pomes such as apples and pears, drupes such as cherries and peaches, and aggregate fruits such as strawberries and raspberries. This explains why apples have cores, peaches have pits, and strawberries form clusters of many small fruits.

<https://phys.org/news/2016-11-rose-family-fruit-diversity-geological.html>

3. Crabapple Ancestors Diverged 10 Million Years Ago The genus *Malus*, which includes apples and crabapples, separated from its rose-family relatives during the Miocene about 10 million years ago. One wild species, *Malus sieversii* in Central Asia, is recognized as the main ancestor of modern apples. Smaller crabapple species spread across Europe and Asia, carrying the apple lineage through changing climates.

<https://bmcbiol.biomedcentral.com/articles/10.1186/s12915-022-01383-3>

4. Humans Collected Crabapples 10,000 Years Ago Archaeologists have found charred crabapple seeds at Neolithic sites dating back at least 10,000 years. These fruits were tiny, sour, and often bitter, but people likely stewed or fermented them into drinks or used them in food. Their strong flavor may also have given them an early reputation for medicinal value.

<https://project-time.blog/2021/03/02/crab-apples-3500-bc-to-2000-bc/>

5. Cultivation for Sweetness Began 6,000 Years Ago Farmers in the Tian Shan mountains of Kazakhstan began tending wild *Malus sieversii* trees about 6,000 years ago. They selected apples that were naturally larger and sweeter, planting their seeds and slowly shaping what became the modern apple. These cultivated varieties traveled along the Silk Road, reaching both Europe and China.

<https://www.thoughtco.com/domestication-of-the-apple-central-asia-4121220>

6. Romans Perfected Grafting The Romans learned that apple trees grown from seed were unpredictable, often producing sour or misshapen fruit. To fix this, they perfected grafting, a technique where branches from a desirable tree are joined to a hardy rootstock. This allowed them to clone the best apples and spread consistent varieties across their empire. <https://www.northcoast.organic/the-history-of-the-apple-and-its-remarkable-variety/>

7. Mattian Apples Shaped Language A Roman orchardist named Appius Claudius Mattianus grew such sweet apples that his name became linked to them. In Latin these were called mala Mattiana, or 'Mattian apples.' As Latin evolved into Spanish, the word shifted through Old Spanish maçana into the modern manzana, which still means apple today. https://www.persee.fr/doc/onoma_0755-7752_2005_num_45_1_1471

8. Apples in Myth and Legend Apples have been symbols of power, youth, and temptation in cultures around the world. Greek myths tell of the golden apples of the Hesperides, which granted immortality, and of Atalanta, who was tricked with golden apples in a race. Norse myths describe Idun's apples of youth, and American folklore celebrates Johnny Appleseed spreading orchards on the frontier. <https://applesandpeople.org.uk/stories/>

9. Modern Apple Industry Apples are one of the most widely grown fruits today. The U.S. produces about 10.5 billion pounds a year, mainly from Washington state, but China dominates with more than half of the world's total production. Globally, apples reach about 97 million metric tons annually, and they remain a multi-billion dollar industry. <https://www.agmrc.org/commodities-products/fruits/apples>

Worksheet: Apples

Name: _____ Date: _____

Review Questions

1. What plant family do apples belong to?
2. About how many years ago did fruit types split into pomes, drupes, and aggregates?
3. What is the scientific name of the wild ancestor of cultivated apples?
4. How were crabapples likely used by humans 10,000 years ago?
5. Where did apple cultivation for sweetness begin about 6,000 years ago?

Discussion Questions

6. Why did the Romans use grafting instead of planting apple seeds?
7. How did the name manzana in Spanish connect back to Roman orchards?
8. Which apple myth or story do you find most interesting, and why?

Data Analysis

9. If the U.S. produces 10.5 billion pounds of apples and global production is 247 billion pounds, what percentage of the world's apples does the U.S. grow? Show your math.

Reflection

10. Apples are connected to science, language, history, and folklore. Which of these connections surprised you most?