

Apples Are A-peeling

Summary: Students discover many apple facts, the life cycle of the apple, and the impact of Johnny Appleseed.

Objectives:

The students will:

- List at least three facts about apples.
- Describe the life cycle of an apple.
- Name at least two apple products.
- Tell at least three facts about Johnny Appleseed.

Materials:

Activity #1:

- teaching materials to introduce apple facts to class (will vary for each teacher)
- varying materials that students choose to use for making a game

Activity #2:

- string (one length per student)
- 6 squares of paper per student (fold one piece of paper into six sections and cut)
- crayons/markers
- Scotch tape

Activity #3:

- **Fact Or Fiction:** reading materials about Johnny Appleseed, dry erase board or poster board and markers
- **Map It Out:** U.S. map, markers or place markers that can be taped onto map
- **Western PA Connection:** Folks Call Me Appleseed John by Andrew Glass, U.S. map, Pennsylvania map
- **Character Study:** paper and pencils

Getting Started:

Activity #1:

- Ahead of time, decide which apple facts you will introduce to your class, as well as how many you want them to learn. The content and quantity will depend on your students' grade and skill levels.

Activity #2:

- Cut the lengths of string for each student ahead of time. Make sure that they are long enough to hold 6 of the paper squares.
- Cut 6 paper squares per student (or have them cut). Fold a piece of paper into six sections and use the folds as guides to cut.
- You may want to find illustrations or make an example ahead of time of the different steps in the sequence (seed, tree, blossom, receptacle, apple, apple product).



Grade Level: K-6

Topic: Apples and Apple products

PA Environment & Ecology Standards Addressed:

Agriculture and Society:

4.4.4.B. Identify the role of the sciences in Pennsylvania agriculture.

- Identify common plants found on Pennsylvania farms.

4.4.4.C: Know that food and fiber originate from plants and animals.

- Identify agricultural products that are local and regional.
- Identify an agricultural product based on its origin.

Teaching Methods:

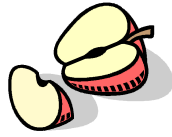
- Lecture/Discussion
- Hands-on activities
- Research/Investigation
- Peer Teaching

Multiple Intelligences Utilized:

- Naturalistic
- Interpersonal
- Intrapersonal
- Verbal/Linguistic
- Visual/Spatial
- Bodily/Kinesthetic

Activity #3:

- Sorting through the many accounts of Appleseed's life and choosing what activities to do in the classroom will be the most difficult part of this lesson. There are endless possibilities.



Background:

Apples have been around for a long time. The Greeks learned how to graft apple trees to create different varieties as well as grow larger amounts of the fruit in ancient times. The Romans planted apple trees in the lands that they conquered, as far as present day England. The apple later traveled to North America with European settlers. Apple trees now grow on every continent except Antarctica.

Some apple trees can grow to be over forty feet high and live more than one hundred years. The tiny seed that starts the whole process is only one fourth of an inch long and weighs less than one one-hundredth of an ounce.

The life cycle of an apple starts with a seed. Once that seed has matured, over time, into an apple tree that is ready to bear fruit, tiny buds begin to form on the branches in the summer. That autumn, buds form and grow a fuzzy covering, which protects them from ice and snow. The buds are then dormant during the winter months. When spring comes, leaves sprout from the buds and grow. Next, small flower buds start to form. By May the flower buds have blossomed into beautiful pink flowers. Honeybees go to work and pollinate the flowers. Then the petals fall off. The receptacle, which can be found at the base of the flower, begins to bulge and eventually takes the shape of an apple. Near the end of summer the apple begins to change color and is nearly ready for harvest. Late summer to early autumn is prime apple harvesting time. October has been designated National Apple Month. Most apples are still picked by hand with care so as not to bruise the apples and to prevent damage to the trees. The apples are then taken to market where they are cleaned and sorted by type, size, and color. The best apples are sold fresh and the smaller or bruised apples are used to make applesauce or juice.

Apples are used in more products than any other fruit because of their year-round availability, nutritional qualities, and their great taste. How many different recipes or products can you think of that include apples? Pies, cakes, turnovers, breads, apple butter, caramel apples, applesauce, apple cider vinegar, in salads, juices and ciders are just some of the foods that include apples. There are nearly one hundred varieties of apples grown in thirty-six of the United States. The top six apple-producing states are Washington, New York, Michigan, Pennsylvania, California, and Virginia. The United States is the world's second-largest apple producer, behind China. About one fourth of the apples produced in the United States are exported, many to countries such as Mexico, Taiwan, Canada, and Hong Kong.

Activity #1:

Apple Facts Create-A-Game

- Choose a number of apple facts from the background information, or add others. The amount of information you choose will depend on the grade level(s) and levels of functioning.
- Present the material to the students in the style of your choosing.
- Challenge students to create a game that, when played, would help them review/relearn the material. This could be a board game, card game, memory game, dice game, etc. It could be modeled after a familiar game or completely made up. (If class is large, split class into groups and ask each group to create a different game.)
- Be sure that they include rules and step-by-step instructions. (How many players? Age group? What is the name? Materials needed?)
- Test it for glitches.
- Practice playing the game and testing their knowledge about apples.
- Quiz them on their knowledge about apples after they have played the game several times.
- Ask the students if this was a helpful teaching tool.
- Test their knowledge by asking the students to teach another class (or group within your class) some basics about apples. Give the new class the game to play. Ask your students to help you create a quiz for the other group. Did the game help them review the apple facts?



Activity #2:

Life Cycle Of An Apple

- Read The Seasons of Arnold's Apple Tree by Gail Gibbons
- Review the background information about the life cycle of an apple with the class. Talk about the process from seed to tree to blossom to receptacle to apple to apple product. How many students eat apples? Besides raw apples, what other foods are made from apples? What are their favorite types of apples?
- Make mobiles that will illustrate the steps in the sequence of the apple's life cycle. Ask students to illustrate the steps in the life cycle of an apple on the six squares of paper. These steps should include the seed, tree, blossom, receptacle, apple, and an apple product. Lay the squares out vertically on top of the string in sequence (starting with the seed on top) and attach each square with tape.
- Can students tell the story of the life cycle in their own words using the mobile as a guide?

Activity #3: Taking A Bite Out Of History— Johnny Appleseed

John Chapman, also known as Johnny Appleseed, had a large impact on the early settlers of North America and the apple. Have fun learning about him and his adventures through these activities.

- **Fact Or Fiction?** Johnny Appleseed was known to tell a few tall tales in his day and the stories about him have been exaggerated or changed over the many years that they have been told. Read several different stories or accounts about Johnny Appleseed to the class, such as Johnny Appleseed: A Poem by Reeve Lindbergh and Folks Call Me Appleseed John by Andrew Glass. You can also find numerous sources on the web. Ask students to help you list important points from the stories. Talk about the difference between fact and fiction. What are some of the accounts that are probably not true? You could also compare and contrast conflicting information that you find in your research and then try to find the facts.
- **Map It Out:** Start in Leominster, Massachusetts, where Chapman was born and track his travels on a U.S. map.
- **Western Pennsylvania Connection:** The story Folks Call Me Appleseed John by Andrew Glass is based on a tale that Johnny Appleseed loved to tell about the time his half brother, Nathaniel, came to live with him on French Creek in northwestern Pennsylvania. Though some of the details of the story may have been exaggerated by him, it has been documented that he actually lived in and owned land in this area and traveled down the river to Fort Duquesne (now Pittsburgh) to get supplies. Can you find any more information about his travels through our neck of the woods?
- **Character Study:** Help students to learn how to develop their own characters when they write by analyzing this most interesting one. Ask students to help you describe him in different categories such as facts about his life, appearance, personality/character, beliefs, and historical impact. How do these elements come together to create the character? Challenge students to create and write another tall tale or adventure for Johnny Appleseed using some of the characteristics. Can they develop any new characteristics for him?

Fun Facts!

Horticulturists have cataloged around 7,500 different varieties of apples around the world! What types are available at your local grocery store or market?



Extensions/Variations:

- **Math:** Bring in a variety of apples for the students to taste. Ask students to rate their favorites, poll the class, and create a "favorite apple" graph.
- **Science:** Ask students to predict the number of seeds per apple. Cut them open, count, and record the number of seeds.
- **Recipes:** How many recipes can you find that involve apples? Ask students to bring them in and/or search the web. Choose some to make together. Eat them and enjoy!
- **The Five Senses:** Ask students to describe how an apple tastes, feels, looks, smells, and sounds when you bite into it. They could document their results and compare the different varieties.



Evaluation:

Rubric: Apples Are A-peeling

3	2	1	0	The student can list at least three facts about apples.
3	2	1	0	The student can describe the life cycle of an apple.
3	2	1	0	The student can name at least two apple products.
3	2	1	0	The student can tell at least three facts about Johnny Appleseed.
12	8	4	0	Total Score: /12



Resources:

- Gibbons, G. (1984). The seasons of arnold's apple tree. Harcourt Brace & Company: NY.
- Glass, A. (1995). Folks call me appleseed john. Bantam Doubleday Dell Publishing Group, Inc.: NY.
- Landau, E. (1999). Apples. Children's Press: NY.
- Lindbergh, R. (1990). Johnny appleseed: A poem. Little, Brown and Company: NY.
- Micucci, C. (1992). The life and times of the apple. Scholastic, Inc.: NY.