

IN TOUCH WITH APPLES

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Lesson Summary for Grades Two and Three

This lesson plan is for the second and third grade. The reading, science, and math activities could all be successfully used at this level. The book featured, *How To Make an Apple Pie and See the World*, is the story of a girl who traveled the world to find the ingredients to make her apple pie.

Science Activity: Sense Fooling Pies

Students review ideas about how they use their senses to understand the world.

Source: Sarquis, M., Ed., “Sense-Fooling Pies,” *Science Fare: Chemistry at the Table*; Terrific Science Press: Middletown, OH, 1999, pp 35–39.

Key Science Topics:

- senses
- volatile molecules

Key Process Skills:

- collecting data
- comparing/contrasting
- inferring
- observing

Ohio Proficiency Learning Outcomes for Science:

Fourth Grade

- I-1 Create and/or use categories to organize a set of objects, organisms, or phenomena.
- I-2 Select instruments to make observations and/or organize observations of an event, object, or organism.
- I-5 Analyze a series of events and/or simple daily or seasonal cycles and predict the next likely occurrence in the sequence.
- I-6 Evaluate a simple procedure to carry out an exploration.
- I-9 Demonstrate an understanding of safe use of materials and/or devices in scientific activities.
- IV-19 Analyze and/or evaluate various nutritional plans for humans.

National Science Standards:

Science as Inquiry Standards

- Abilities necessary to do scientific inquiry. Students make observations using their senses of sight, taste, touch, and smell to obtain information about various foods.

Procedure: Part 1

1. Show students a map of Ohio. Locate Jackson, Ohio, on the map. This is the home of the annual Apple Festival, held the third full week of September. Jackson is well known for its many apple orchards, many of which can be linked to a hero of history, John Chapman, better known as Johnny Appleseed.
2. Place an apple in a small brown paper bag. Have students select one of their five senses to determine what is in the bag. Which of their five senses made it easier to determine what is in the bag? (sight, taste, touch, smell?) Which of their five senses was unable to tell them what was in the bag? (possibly hearing?)
3. Read aloud the story, *How to Make an Apple Pie and See the World*, by Majorie Priceman. Pay close attention to the recipe at the back of the book for apple pie. Make a list of ingredients the class needs to make an apple pie. This story is featured in an episode of *Reading Rainbow*; it may be appropriate to view this program for this activity (*Reading Rainbow*, GPN Educational Media, Nebraska Educational Communications and the University of Nebraska-Lincoln, episode 118).

Procedure: Part 2

The second part of this lesson features a “no-apple” apple pie in which the flavor, color, and texture of an apple pie is duplicated using alternative ingredients (recipe 1 from “Sense-Fooling Pies”).

1. After reading the story *How to Make an Apple Pie and See the World*, ask the students “Would there be any way we could make an apple pie if we did not have apples?” Let the students discuss this question. Ask the students how they know when the pie they are eating is an apple pie. (They use their senses.)
2. Have students taste different foods and categorize them as salty, sweet, or sour. Foods may include potato chips, saltine crackers, grapes, raisins, lemons, and pickles.
3. Have students identify different foods using only the sense of smell. Possible items may include peanut butter, bananas, mint candy, lemons, and vanilla. Use a blindfold to prevent peaking during the experiment. Discuss how their senses help them identify objects and how sometimes senses can be fooled. (For example, perfume can be mistaken for flowers.)
4. If you make the pie in front of the class, tell them that all flavors are chemicals, and that the flavor of an apple pie involves our tongue’s response to the chemicals present in the pie. Let them know that we also form perceptions based on the texture of the pie, as well as our eyes’ response to the color of the food and the nose’s response to the spices and other aromas released from the pie. The brain can be fooled if we eat something that resembles apple pie in flavor and texture.
5. If you have already prepared the pie, simply cut up the pie and enjoy it with the class, then discuss how the pie was made. Consider concealing the true identity of the pie until the students have tasted it and commented about its flavor and texture.

Math Activity

Students conduct a survey and graph results, measure the dimensions and mass of apples, and estimate the number of seeds in apples.

Ohio Proficiency Learning Outcomes for Math:

Fourth Grade

- VI-17 Apply the use of tools to measure lengths, using centimeters and inches, including recognizing the positions of whole numbers and fractions on a number line.
- VIII-24 Use tables to record and sort information and identify, compare, and predict from picture and bar graphs.

Review what a pictograph and bar graph is with students. Ask the students, “What can be made from apples?” List their ideas on chart paper. Create a class graph on the chalkboard using the following products as categories: apple pie, candy apple, applesauce, and apple juice. Have students vote for their favorite by drawing their own picture of an apple in the corresponding space. Have them vote for their least favorite using a different color chalk. Using the graph on the board, students fill in a similar graph on paper. Students use this information to design a pictograph showing their preferences. (Remind them to make a key and give it a title.) Using the information, the students also design a bar graph (complete with key and title) to show the results of the survey. The graphs can be used to answer questions using information from the results. For homework, each student interviews 15 people. Each interviewed person chooses one of the four products as their favorite and one as least favorite. The results are tallied and plotted on a bar graph.

Review the concept of circumference, diameter, and radius with students. Measure the circumference of an apple using a tape measure or a string. Place an apple on a table and use a ruler to measure the diameter.

Using a pan balance, measure the weight of an apple using several different objects (counters, beans, crayons, etc.)

Estimate the number of seeds in an apple. Share with the students the magic star that can be found in an apple. Cut the apple in half so students can see the star and the seeds.

Reading Activity 1

Students retell a story putting events of the story into correct order.

Ohio Proficiency Learning Outcomes for Reading:

Fourth Grade

- I-1 Summarize the text.
- II-5 Analyze the text, examining, for example, actions or characters, problem/solution, plot, or point of view.
- II-7 Compare and contrast elements such as characters, settings, and events.
- II-10 Demonstrate an understanding of text by predicting outcomes and actions.

Retell the story of *How to Make an Apple Pie and See the World*. Have students record events in the story, which they then put into correct order. This can be done as a journal entry as a class project on chart paper.

Reading Activity 2

Students learn the use of adjectives.

Create a list of describing words (adjectives) for apple pie. Use words that would come from each of the five senses. List these on the chalkboard in five categories.

- Taste: yummy, sweet, delicious.
- Touch: hot, mushy, wet.
- Sight: yellow, brown, bumpy.
- Hearing: sizzling, bubbling.
- Smell: good, tasty, delectable.

Writing Activity

Students write a story about a trip of their own.

Ohio Proficiency Learning Outcomes for Writing:

The student conveys a clear message that meets requirements for this grade level.

Familiarize students with the five-step writing process (prewriting, drafting, revising, proofreading, and final copy). Have the students write a story about a trip or adventure of their own. (It can be real or make-believe.) What did you see? What did you hear? What did you smell? What did you taste? In addition, a journal entry can be assigned. Encourage students to tell of a personal experience where they had to rely on their senses to learn something new on their trip.

Citizenship Activity

Students learn the story of Johnny Appleseed.

Ohio Proficiency Learning Outcomes for Citizenship:

Fourth Grade

- I-1 Demonstrate knowledge of and ability to think about the relationship among events.
- III-7 Demonstrate map skills by identifying various major reference points.
- III-9 Identify or describe the location of Ohio in relation to other states and regions of the United States.

The little girl in the story *How to Make an Apple Pie and See the World* traveled the world to find the ingredients to make her apple pie. Link this story to the story of John Chapman, who traveled the United States to plant apple seeds. Read aloud the book *Johnny Appleseed* by Reeve Lindbergh. Give each student a map of the United States. Mark each state that Johnny Appleseed traveled through by using a small apple sticker. Have the students work in groups to create a time line using events from John Chapman's life. They organize the events in chronological order and glue them on paper. (Adding machine tape works very well.) They may add pictures to the graph.

Art Activity

Students make a book and illustrate their stories.

Have students collect pictures of different kinds of apples and bring them to class. Assemble these pictures into a book. Use red, yellow and apple halves to make apple prints. Have students illustrate their stories about the trip they took.

Culminating Activity

Students participate in an apple festival.

Invite the class to celebrate what they've learned after completing the assessment. Students can bring apples and apple-flavored snacks to class for a party. Serve apple juice, and bob for apples. Show the video *Johnny Appleseed*, starring Rob Reiner and Molly Ringwald (20th Century Fox, 1998).

References

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