



LESSON 7

Get Your Mind Poppin'

*Concepts of Science, Mathematics,
Reading Comprehension, and Business*

FOCUS

Student Objectives and Kentucky Performance Standards

- 2.6 Change over Time (heating and cooling causes changes in the properties of materials.)
- 2.10 Measurement
- 2.13 Probability and Statistics
- 2.18 Economic Systems (Producers create goods and services and consumers make choices about which ones to purchase.)

BACKGROUND

See *Get Your Mind Poppin'* Sheet

INTRODUCTION

Popcorn is a fun way to learn science, economics, and math. It's also economical, nutritious, and easy to make in class.

PREPARATION AND MATERIALS

- Copies of *Get Your Mind Poppin'* Sheet (per pair or individual)
- Copies of Popcorn Chart (per pair or individual)
- 2 different types of popcorn (enough for class)
- 2 measuring cups (best to have the 2 cups be exactly alike)
- Popcorn popper
- U.S. map

TEACH

Activities:

1. **Get Your Mind Poppin' Background Sheet.**
 - a. Before reading this sheet, let students take a "popcorn I.Q." quiz. Ask the following true/false questions:
 1. Early settlers ate popcorn as a breakfast cereal. (T)
 2. Popcorn has only been around for 50 years. (F)
 3. Popcorn comes in many colors such as black and red. (T)
 4. Florida and California are the leading producers of popcorn. (F)
 5. Popcorn is a healthy snack. (T)
 - b. As a reading activity, have students provide subtitles for each paragraph to show the main idea. (Examples: #1 How Popcorn Pops; #2 History of Popcorn; #3 Types of Popcorn; #4 Where Popcorn is Grown; #5 A Healthy Snack.)
 - c. As a Social Studies connection, use a piece of popcorn to label popcorn producing states on a U.S. Map. (See paragraph 4).
2. **Let's Pop!** (Remember to keep all variables the same!)
 - a. Choose two different varieties of popcorn. These can be yellow or black or simply two different brands (one less expensive than the other – perhaps one a lesser-known brand). Ask students to predict which brand they think will pop the best. Discuss "best" (number of popped vs. unpopped kernels; best taste, fluffiest, number of kernels per 1/3 cup. Use the Popcorn Chart to record data.
 - b. Measure 1/3 cup of each variety of popcorn. Students should estimate and record how many kernels equal 1/3 cup. Next count and record the actual number of kernels in 1/3 cup. Estimate and calculate weight in grams.
 - c. Estimate and record how much popped corn (volume) will be produced.
 - d. Pop the corn.
 - e. Measure how much popcorn 1/3 cup produced of each variety. Record on the chart. Weigh again in grams to compare popped with unpopped corn. Tip: A centimeter cube filled with water weighs one gram.
 - f. Repeat the experiment for validity.
3. **Consumer Testing**

Compare various popcorns: microwave, hot air, popcorn popped in oil, etc. Test for taste, texture, flavor, color, fluffiness, number of unpopped kernels, yield for amount popped, cost per serving, nutritional value, and added ingredients.

4. **Have a Ball with Popcorn**
Make popcorn balls to see what unusual shapes students can make. Use food coloring for interest.
5. **Popcorn's for the Birds!**
String popcorn to decorate trees and feed the birds.
6. For artistic fun, let students **draw, act out, or write about being a kernel of popcorn** and what happens as the kernel pops.
7. **Let's Go to the Movies!**
Have the students research popcorn at their local movie theaters. Find out where the popcorn comes from, how much the theater orders and the cost, how it's prepared, the average amount popped on various days of the week, what varieties are sold (plain, buttered, etc.). See if they can find out why movies sell popcorn (to make people thirsty so they'll buy soft drinks!) Movie theaters make most of their profit from concessions, not the movie ticket!
8. **Discuss the nutritional value of popcorn** as a healthy snack. It's high in fiber and low in fat. Pop some corn and add raisins and/or peanuts for an added treat!

ASSESSMENT

Have students calculate how much popcorn is needed to serve 1 cup of popped corn to the entire fourth grade, 100 students, etc.

LITERATURE CONNECTION

Adams, Phyllis. Popcorn Magic. 1991.*

Adler, David. Cam Jansen and the Mystery of the Stolen Corn Popper. Puffin, 1986. (Young Puffin Series).

Asch, Frank. Popcorn.*

DePaola, Tommie. The Popcorn Book.*

Kudlinski, Kathleen. Popcorn Plants. Lerner Publications, 1998.

Low, Alice. The Popcorn Shop. Scholastic, 1993. (Hello Reader Series).

Mamchur, Carolyn & Laurie McGaw. The Popcorn Tree. 1998.*

McCully Emily Arnold. Popcorn at the Palace. 1997*

Peifer, Jane Hooper. The Biggest Popcorn Party Ever in Center County. 1987.*

Thayer, Jane. The Popcorn Dragon. 1991.*

Woods, Dave. What Makes Popcorn Pop? Antheneum Publications, 1980.

* These books were listed on the following website with no further publication information.

<http://www.popcorn.org>

The Popcorn Board
401 N. Michigan Avenue
Chicago, IL 60611-4267
1-877-POP-ALOT

<http://www.jollypop.com>