



## MATH

**TITLE:** Popcorn Averages

**SUBJECT:** Math (Science)

**GRADE LEVEL:** 4-8

**MATERIAL(S):** Popcorn on the cob

**OBJECTIVE(S):** Primary exercises encourage students to use basic math skills, including predicting, estimating and averages. This math lesson can be expanded to include a field trip to a farm—preferably one that grows popcorn—for a real life agricultural experience which will help students learn about the origins of the foods they eat and understand the math involved in food production. If this is not possible, have images of crops in the field available or draw a sample of what an acre of popcorn might look like

### **OVERVIEW:**

1. Have students visually estimate how many kernels are on an ear of popcorn.
2. Have students count how many kernels in a row and multiply by number of rows to obtain the average approximate number of kernels on a popcorn cob.
3. Create math problems based on the statistics below.

### Popcorn yield assumptions:

An ear of popcorn yields 400 kernels

Approx. 1,300 kernels per lb

65 lbs per bushel

44 bushels per acre

2,860 lbs per acre

### **SAMPLE QUESTIONS:**

1. What is the average number of popcorn kernels on one ear? Determine the average number of kernels per popcorn cob in your class by adding the approximate numbers of each class member's popcorn cob and dividing by number of cobs. How close is your class to the industry average of 400 kernels per ear?
2. Using 400 kernels per ear, if it takes 1,300 kernels of popcorn to make a pound, how many ears of popcorn would you need?
3. If there are 65 pounds of popcorn in a bushel, how many kernels are in a bushel?
4. If there are 44 bushels of popcorn in an acre, how many pounds of popcorn are in an acre?