



## Science Fair Projects

6<sup>th</sup> Grade to 8<sup>th</sup> Grade

### Title: Consumer Science

"Pop! Pop-Pop! Pop!"

#### Stating the Problem - The Big Question

In your experiment, you will find out which brand of popcorn pops the most kernels. Write a question that asks what you want to find out from your experiment with popcorn.

#### Forming a Hypothesis - A Smart Guess

Before you begin your experiments with popcorn, make a guess about which popcorn you think will pop the most kernels. Your smart guess should answer the Big Question you asked.

#### Planning the Procedure

Popcorn is one of the oldest kinds of corn. The American Indians grew popcorn hundreds of years before Columbus came to North America. There are many books written about popcorn. Before you begin your project, read some of these books and articles to find more information about this "fun food." Why does popcorn pop? Can you pop other kinds of corn? Find the answers to these and other questions. In your experiment, you will be testing various brands of popcorn to find which one pops the most kernels. To make this a fair test, it is important to control the conditions. The only condition that will change, called the variable, is the brand of popcorn. All of the other conditions in the controlled variables must stay the same. What are some of the controlled variables that must remain the same?

Write a step-by-step description of your experiment. List the brands of popcorn that you will be testing. Make a detailed list of the materials that you will need for your experiment.

This project is from Daryl Vriesenga's book, *Science Fair Projects, Grades 4-6*, Michigan, Schaffer Publications, 1990. The Guide is available on line at: [SchooDoodle.com](http://SchooDoodle.com)

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"Pop! Pop-Pop! Pop!" (continued)

Make a chart or table to record the results of your experiment. Here is a sample of what you might use.

#### Chart

Brand of Popcorn	Number of Kernels at Start	Number of Kernels Not Popped	Number of Popped Kernels	Percentage of Popped Kernels	Cost per Ounce

#### Recording Results

Pop! Pop-Pop! Pop! It's time to start popping popcorn. Use the chart that you made to record your results.

The number of kernels popped can be written as a "Percentage of Popped Kernels." To find the percentage you will need to use the following steps:

- ❖ Divide the number of popped kernels by the number of kernels you had at the start.
- ❖ Multiply your answer by 100. Your new answer is the percent of popped kernels.

Make a bar graph that compares the "Percent of Popped Kernels" of different brands of popcorn.

#### Drawing a Conclusion

Before you began testing the popcorn, you made a prediction, or hypothesis. How accurate was your prediction? Did you choose the brand of popcorn that popped the most kernels? Did you choose the one that gives you the most for your money? Write a report explaining what you have learned about the different brands of popcorn. Your report should include your Big Question, your hypothesis, a description of your experiment, the tables and graphs that you used to record the results, and a conclusion explaining what you found out.

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""Pop! Pop-Pop! Pop!" (continued)

### Display

Make a display that will explain to your friends and parents what your project is about. Your display should include a title for your project, the Big Question, the hypothesis, a description of your procedure, the results and a conclusion. You may also show the equipment that you used. Make sure you provide plenty of samples for testing!

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