

Popping Fresh

Type

Consumer Science, Chemistry

Grade

2nd – 4th grades

Difficulty of Project

Moderate

Cost

Less than \$20.00

Safety Issues

Adult supervision is strongly recommended with any cooking activity.

Material Availability

Easily purchased from a grocery store

Approximate Time Required to Complete the Project

About an hour to conduct the experiment; one day to prepare the science fair display

Objective

To determine which brand of microwave popcorn leaves the fewest unpopped kernels

Materials and Equipment

- 5 different brands of microwave popcorn
- Microwave

Background Information

Inside a kernel of corn is starch and a little bit of water. When the water inside a kernel of corn is heated, it becomes a gas. The gas grows and causes the starch to break out of its outside covering forming a piece of soft, white popcorn.

In this investigation, different brands of microwave popcorn are tested and compared.

Terms, Concepts, and Questions to Start Background Research

Terms

kernel: the whole seed of corn

Concept

When the water inside a kernel of corn heats up, it becomes a gas and expands bursting out of its outer covering creating popcorn.

Research Questions

- What causes microwave popcorn to pop?
- Are some brands of microwave popcorn better than others?
- Is there anyway to reduce the number of unpopped kernels?

Experimental Procedure

1. Gather the necessary materials.
2. Follow the directions on the bag to prepare the microwave popcorn.
3. When the popcorn is finished popping, place the popped kernels in a bowl. Count the unpopped kernels and record.
4. Repeat Steps 2 – 3 for each of the different types of microwave popcorn. Record the results.



Bibliography

Articles

“Why Popcorn Pops and Other Grains Don’t” at Moment of Science at <http://indianapublicmedia.org/amomentofscience>

“Steam Explosions – the science of popcorn” at Kitchen Science Experiments at the www.thenakedscientists.com

Websites:

<http://www.popcorn.org>

<http://www.jollytime.com>

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