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Lesson Plan 3

Baking Home Made Snacks

Objectives:

Students will learn and understand the following:

Baking food from scratch creates food that tastes good, is better for you and teaches important life skills. Home made food also eliminates the need for single use plastics and or non-recyclable food packaging (for example granola bar wrappers).

Students will learn how to make cookies from scratch. They will learn the science of what happens when ingredients interact and why following the method exactly is critical in creating a successful end-product.

They will then draw conclusions with a taste test to determine which product tastes better:

Factory made cookies or homemade cookies

Procedure:

Information sharing in classroom Time 15 minutes

Questions for students:

Q. What makes up the majority of the classroom garbage?

A. Wrappers from store bought snacks.

Q. Are wrappers Biodegradable?

A. No

Q. What makes up the majority of the classroom recycling?

A. Single-use plastics (yoghurt, fruit cups etc.)

Q. What would eliminate this material entering the classroom?

A. Making a homemade snack carried in a reusable container

To make and bake snacks for school you will need to:

Select a recipe

Gather ingredients and necessary equipment

Read over the instructions once before you start

Check with an adult before you use an oven and equipment

Baking is a science!

Cakes, muffins, cookies all have the same basic ingredients that help to create a product that tastes amazing in your mouth.

Q. What are those ingredients?

A. Fat, Sweetener, Flour, Raising Agent

Q. What is a raising agent?

A. Baking soda and Baking powder

Q. What is baking soda?

A. It is made of sodium bicarbonate which REACTS when it comes into contact with an acid; vinegar, buttermilk, citrus, yogurt.

The reaction produces carbon dioxide in the form of bubbles.

Show this by pouring vinegar onto baking soda in a glass.

In baking, the bubbles of carbon-dioxide are trapped in the batter, causing the batter to rise.

But when baking soda comes in to contact with an acid it reacts immediately, and that is a problem. Why?

For many baking recipes you want an extended reaction, so that the rising doesn't take place all at once.

Baking powder addresses this problem because it is "double acting"- it has different ingredients that create carbon dioxide gas at different stages of the baking process.

Baking powder contains sodium bicarbonate (just like baking soda). But baking powder also contains two acids. One of the acids react as soon as it is added to a liquid causing the batter to rise. But the second acid doesn't react until it is added to a liquid and it is hot (i.e. after you have put the batter in the oven).

Q. What does all this mean?

A. That the batter rises for a longer period of time, creating a fluffier cake, muffin or whatever you are baking.

Activity

Multi-purpose room Time 35 minutes

Materials:

Students divided into pairs.

Each pair will have:

Two mixing bowls

Wooden spoon

Measuring spoons

Measuring cups

Cookie sheet

Ingredients

Recipe showing ingredients and method

Students will follow method with instructional guidance from teacher.

They will learn the following techniques:

Correct measuring of ingredients

Creaming the butter and sugar

How to combine the wet ingredients with the dry to keep all of the carbon dioxide bubbles trapped in the batter

How to know when something is “done” baking

The importance of clean up!

Conclusions

Students will taste test their cookie against a variety of factory made snacks.

Q. What was the difference in the texture between them?

A.

Q. What was the difference in the taste?

A.

Q. What ingredients can you taste in the homemade cookie?

A.

Q. What ingredients can you taste in the store-bought snacks?

A.

Q. Which did you prefer and why?

A.

Finish with short class discussion to share their conclusions.