




October 11, 2016

- Entry task: What do you think a leavening agent is?
- Target:
 - To describe what a leavening agent is
 - explain the function of leavening agents in baking.



This week:

- **Today** – Leavening agent PowerPoint with guided notes
 - **Wednesday**–Leavening agent measure
 - **Thursday** – Leavening agent bake
- 



Quiz

- You will have a quiz on leavening agents on
- **Tuesday October 18th!**

Listen up! Study hard and ask questions.



BAKING & CHEMICAL LEAVENING AGENTS

Cell Phone poll time!

- Grab your cell phone only for the purpose of this quiz!
- Keep answers appropriate, no funny stuff!
- Remember, this is our first time so it might take some time, just be patient!



What is a Leavening Agent?

- **Leavening Agent** – a substance which when combined with a trigger, (moisture, heat, acidity) causes a chemical reaction, releasing gas and causing an expansion of dough/batter.
- **Simple terms:** An ingredient used in baking which causes dough/batter to rise!

Leavening Agents

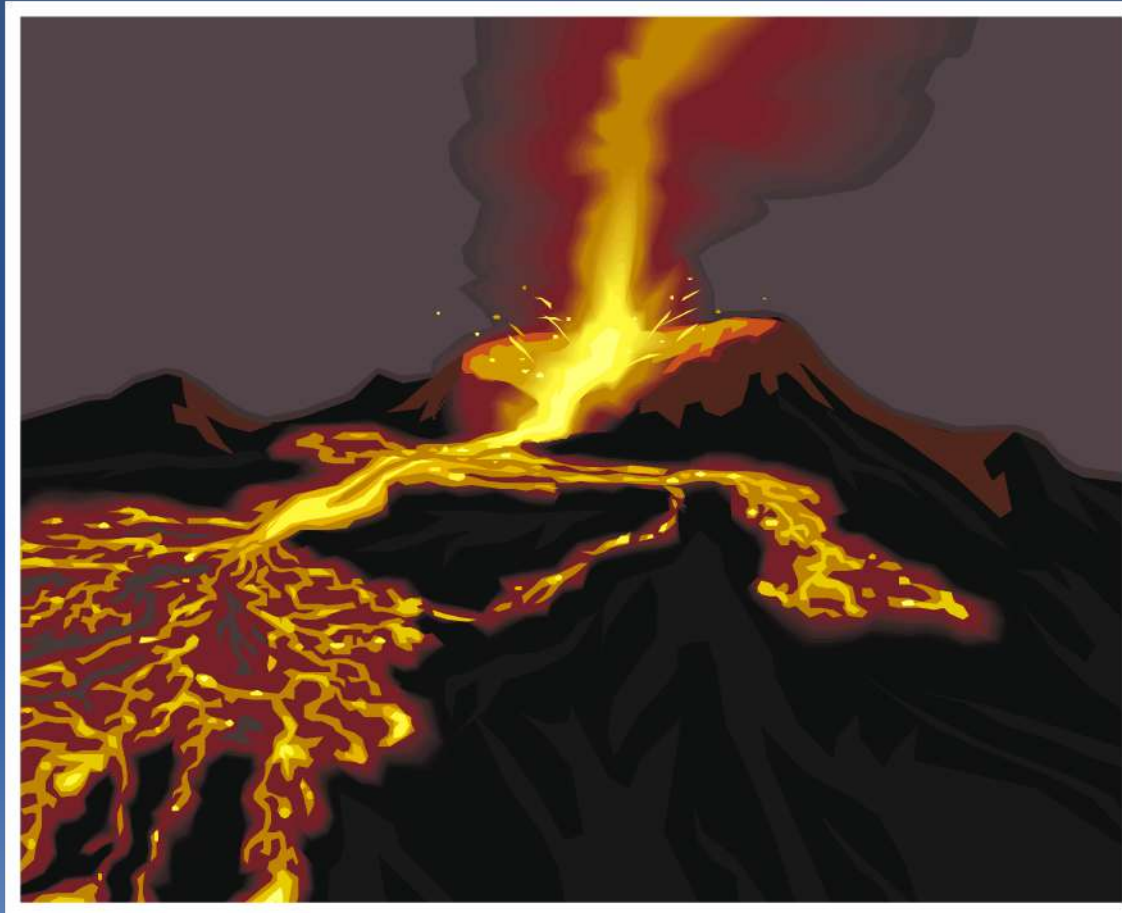
- There are two main types of Leavening Agents used in baking: 1.Yeast 2.Chemicals.
- Yeast is a microorganism that feeds on sugars, creates gas, and pushes out on the surrounding dough to make it rise.
- Chemical leavening agents do the same thing as a chemical reaction. The basic reaction is:



How do Leavening Agents work?

1. When combined with a trigger (moisture, heat, acid) gas is released
 2. gas becomes trapped in the dough/batter, creates bubbles
 3. Bubbles trapped inside makes the dough expand, or rise!
- What does it mean to “rise” in baking?

How the reaction works:



Examples of Acids & Bases

Acids

Vinegar

Buttermilk

Cream of Tartar

(not tarter sauce)

Brown Sugar

Molasses

Bases

Baking Soda

Baking Powder = Baking Soda + Cream of Tartar

(includes Acid and Base!)

Single vs Double acting Baking Powder:

Single Acting


- Used for FAST reactions!
- Only react ONCE
- The gas can release at room temperature

Double Acting

- Used when slower reactions are needed
- React TWICE!
- A small amount of gas released when substances mixed, and again when heat is added

Cell Phone Poll Time






How do Leavening Agents effect Baking?

Let's Find Out!

The experiment we are going to do on **Wednesday** is designed to show you how various leavening agents work in the baking process.



Follow the directions on the lab, using the appropriate leavening agent and measurements assigned to your kitchen group.



Predictions

- Make predictions on the turnout of the cupcakes depending on their leavening agent or lack of.
- You will receive points for doing so.

Example:



Save this part for
THURSDAY!!!

Kitchen	Leavening Agent	Predictions	Observations
1	None	I predict...	

Cell Phone Poll Time!





Flash Cards

- In order for you to do well on your final, you will make flashcards in class to study.
- You will have several foods quizzes that count for points throughout the semester
- Study in chunks. DON'T LEAVE UNTIL THE LAST MINUTE!!!