



FACS Virtual Learning

10-12 Grade

Culinary Essentials

Chapter 26 Powerpoint w/Guided Notes

April 21, 2020



10-12/Culinary Essentials
Lesson: April 21, 2020

Objective:

I can identify the different categories of ingredients and their role(s) in the baking process.

Learning Target:

9.7.1: Explain the properties of elements, compounds, and mixtures in foods and food products.

Warm-Up Activity: The Science of Baking

1. Read the diagram on the following slide to learn about the science of baking and how different ingredients interact to create delicious baked goods!

The Science of Baking



Flour

Looking closely, we can see that flour is made up mostly of starch granules and proteins.
(Whole grain flour will also contain bits of the rest of the grain.)



Shortening

Fatty ingredients, such as butter, vegetable shortening and oils, are used to "shorten" the formation of gluten.



Fat coats the flour and, being hydrophobic, repels the water that would otherwise activate its proteins...

Eggs

Eggs have many important jobs in baking.

Solidify

Kind of the flour proteins, egg proteins also interact and react to make a solid out of a liquid, giving structure to the baked good.



Emulsify

Many recipes require fats and water-based liquids to come together in a solution, even though they don't mesh with other. This kind of solution is called an emulsion.

Egg yolk's contain lecithin, which is an emulsifier, meaning it can make fat and water-based liquid things.



Sugars

Sugar does more than just sweeten your confections.

Caramelization

This is what's responsible for the toasty, nutty aromas and caramel flavor of a toasted butter good.



Maillard Reaction

This reaction is similar to caramelization in that it's also responsible for browning.

However, it occurs when sugar's bond with amino acids, not when sugar breaks down.



There are many different combinations of sugar and amino acids that can be made, and they all create a unique taste and aroma.

Salt

Like sugar, salt does more than just round out the flavor.

Helps Control Yeast



Since yeast needs water to perform its functions, this hinders it, and slows the leavening.

Helps Strengthen Dough

Dough without salt tends to be a sticky glob.



Assignment Title:

Chapter 26 Powerpoint w/Guided Notes

1. Today you will work through a powerpoint that covers all information discussed in chapter 26. Here is a link to today's powerpoint:

<https://drive.google.com/open?id=1uIB5lKJi6BEG4FEDo0hPcNh8pJBuCqLgl9P32RFfZ8E>

2. While reading through the powerpoint, complete the guided notes found here:

<https://drive.google.com/open?id=1d7tJhXq0B9ki6TQtdWt2krROqKRqmEl3R3HC-cwGNfQ>

3. Make sure once you have the Google Doc pulled up, you click 'file' and 'make a copy' of the document BEFORE you start to edit the page
4. Save your completed guided notes to your Google Drive and share with your culinary teacher via email if you wish to receive feedback