

# Eggs Introduction

## Summary

A comprehensive six day unit on the study of eggs, their structure, sizes, grades, nutritional value, functions in recipes, preparation techniques, and storage guidelines.

## Main Core Tie

Food And Nutrition

[Strand 4 Standard 1](#)

## Additional Core Ties

Food And Nutrition

[Strand 4 Standard 2](#)

## Time Frame

1 class periods of 90 minutes each

## Group Size

Small Groups

## Materials

Handouts:

Egg Home Assignment Sheet

Egg Study Sheet

Lab Planning Sheet

Lab Sheet for Coffee Cake, Eggs n' Bacon Ring, and Hot Cocoa

Suggested video:

All About Eggs (Or similar video on Eggs)

The Incredible Classroom Eggsperience - 17 minutes

Egg Cookery - Teacher's Video Company

Visual Aids:

Poster on the Diagram of an egg

Samples of the different sizes of eggs (Can sometimes get them from an egg farm in your area)

Samples of the various grades of eggs (Can sometimes get them from an egg farm in your area or make your own chart identifying the difference between the yolk, albumen and the shell between the grades)

## Background for Teachers

The teacher needs to have a good understanding and knowledge of eggs, how to use and prepare them, their function in recipes, and their importance in the diet.

## Student Prior Knowledge

How to purchase eggs, use and prepare them in recipes, understanding their importance in the diet and their nutritional value.

## Intended Learning Outcomes

The student will identify protein foods, their sources and functions in the body and identify why they

belong to the Meat, fish, poultry, beans, egg food group within the Food Guide Pyramid. Eggs fall under this grouping because they are an excellent protein source. The student will have a good understanding about eggs, their functions, preparation techniques, qualities of fresh and old eggs, and how to purchase and store eggs for best quality.

### Instructional Procedures

Hand out and assign the students their Egg Home Assignment to prepare an egg or a food with egg as the main ingredient. The home assignment is given the first day of the unit and is due the day of the test.

Hand out the Egg Study Sheet to be filled in during lectures and discussion.

Preassessment: Orally, go through the true or false quiz - What Do You Know About Eggs? Have them write their answers on a piece of scratch paper. Then reread the question and give the answers with the explanation. Because most of the students will miss at least one or more answers, tell them we are going to learn about eggs.

Show a video on eggs. I like "All About Eggs". It is a good review before you lecture.

Using the study sheet as a format, lecture to the students about eggs.

Show a chart or diagram of an egg and have the students identify the parts you want them to know - Shell, yolk, air cell, chalaza, thick and thin albumen. Explain each and talk about them.

Ask, What would you look for if you were going to purchase a carton of eggs at the store?

You can talk about the six sizes of eggs and show some actual eggs for comparison if you have them available

Grades of eggs by using a visual of the difference between the shell, yolk and albumen by picture or obtaining some graded eggs from an egg farm and show the students the shell, and then crack it to see the yolk and albumen.

You can talk about how eggs are candled and what is identified on the egg carton. Discuss the care and storage of eggs.

Explain the nutrients one gets from eating eggs - protein, fat, vitamin A, vitamin D, iron, phosphorus, riboflavin, and cholesterol.

The functions and uses of eggs in recipes - Binder, add nutrients, improves color, flavor, texture, thickens liquids, coats foods, acts as a leavening agent and as an emulsifying agent.

Ways to prepare an egg in the shell - hard-cooked and soft cooked. Why the dark green ring on hard-cooked eggs because it is a chemical reaction between the iron and sulfur of the egg, immediately after cooking, run under cold water to stop the reaction from taking place. Out of the shell - fried, poached, baked or shirred, scrambled, omelets, etc.

Hand out the Lab Planning Sheet and the Lab Sheet. Next class we are preparing a complete meal and combining the quick bread, egg and dairy groups into one meal. Make sure the students rotate the job responsibility for the lab.

Read and explain the entire lab. For the Eggs Baked in Bacon Rings - make sure the bacon is cooked, not raw. Place it meat side down in a circle in a greased three-inch custard cup. You could use a muffin tin, but they do not clean up as easily. Break an egg into the bacon ring or scramble if first in a bowl and pour into the bacon ring. Dot with butter, salt and pepper. If the student prefers their eggs more hard-cooked, they will take at least 20 minutes to cook.

For the Coffee Cake - Explain what a coffee cake is (Non-sweet Breakfast Cake to be eaten during a morning break with a hot beverage or for breakfast. Does not contain coffee in it for those who question it) A full recipe make a 9X9x2-inch pan. If they can't eat it all, have them half it and put it in a bread pan. The spicy topping goes on the cake before it goes in the oven.

The coffee cake and the eggs cook at two different temperatures. Two units can work together and put their eggs in one oven and the cakes in the other.

For the Hot Cocoa - Everyone prepares a 1/2 recipe. Make sure they put the correct amounts to the

left of the ingredients for the proper measurement. This is a little bitter and not as sweet as they are use too. Nice to know how to make it should they not have the Chocolate Mix available. I explain to use the rotary beater just before serving and I generally pass out miniature marshmallow to those who like them.

Allow enough time for the students to plan their lab so they can turn in their Lab Planning Sheet with the recipe before they leave class.

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