

## Investigating Your Health: Extraordinary Eggs

Name: \_\_\_\_\_

**Objective:** Investigate eggs by researching the nutrient amounts in each part of an egg.

Eggs are one of the highest quality proteins you can buy. They are also very inexpensive. There are many different ways to eat eggs including scrambled, hard-boiled, over easy, and sunny side up! Eggs are also an ingredient in many recipes including cakes, cookies, breads, pudding, mayonnaise, etc.

High quality proteins can help you build muscle and become stronger. The protein in one egg is about the same as one ounce of meat, fish, or poultry. You can buy whole eggs or egg whites in the grocery store, or you can separate an egg at home using an egg separator. A little over half the protein in an egg is in the white, and the rest is in the yolk. The **yolk** is the yellow part of the egg and is the major source for the vitamins and minerals in an egg. The eggshell color varies



depending on the breed of hen that laid the egg; however, the nutritional quality is the same (i.e. brown vs. white eggs). Egg yolk color changes depending on the diet of the hen.

Eggs also provide a lot of vitamins, minerals, and other nutrients for a small amount of calories. Some of the vitamins and minerals that are in an egg are vitamins B<sub>12</sub>, A, D, and E, folate, and riboflavin. Use the *Try This at Home* recipe to make a “fluffy” breakfast with eggs!



## PART A: Egg Colors

1. Compare the nutrition information of brown eggs and white eggs. Use the handout provided by your teacher or access the nutrient database on USDA's website: <http://ndb.nal.usda.gov/ndb/search/list>. Complete the table below.

	White Egg	Brown Egg
Serving Size	1 egg	1 egg
Calories	70	70
Total Fat	4.5g	4.5g
Saturated Fat	1.5g	1.7g
Cholesterol	215mg	238mg
Sodium	65mg	79mg
Protein	6g	6.8g
Calcium	2%	2%
Vitamin A	6%	5%
Iron	4%	7%

2. Describe how the eggs differ in appearance.

The only difference in appearance is color.

3. Is there a significant difference in nutrition between white eggs and brown eggs? If yes, explain the better option.

Nutritionally, they may differ slightly in saturated fat, cholesterol, sodium, protein, Vitamin A, and iron content. Either one would be a good option.

## PART B: Egg White or Egg Yolk

1. Research the nutrients in the egg white and the egg yolk in one large egg and complete the table below.

	Egg White	Egg Yolk
Calories	17 kcal	54 kcal
Total Fat	0g	4.5g
Saturated Fat	0g	1.5g
Cholesterol	0 mg	210 mg
Sodium	55 mg	8 mg
Protein	4g	3g
Folate	1.30 mcg	25 mcg
Vitamin D	0 IU	18 IU
Vitamin A	0 IU	245 IU
Phosphorus	5 mg	66.3 mg
Iron	0 mg	0.5 mg
Calcium	2 mg	22 mg
Potassium	54 mg	18 mg
Magnesium	4 mg	1 mg

**TEACHER'S NOTE:** Students can find the nutritional composition of eggs by using USDA's nutrient database (<http://ndb.nal.usda.gov/ndb/search/list>), or the labels provided.

2. What nutrients does the egg white have more of when compared to the egg yolk?

The egg white has more sodium, protein, potassium, and magnesium.

3. What nutrients does the egg yolk have more of when compared to the egg white?

The egg yolk has more calories, fat, and cholesterol, but also has more vitamins and minerals including folate, Vitamin D, Vitamin A, phosphorus, iron, and calcium

4. Why would a person choose egg whites instead whole eggs?

A person would choose egg whites because they are lower in calories, fat, and cholesterol without comprising the protein content.

**TEACHER'S NOTE:** In general, students should find that there is little nutritional difference between eggs of different colors, however there are significant nutritional differences between egg whites and egg yolks. The egg white contains most of the protein and little fat. The egg yolk contains protein, albeit less than the white, and is the major source of fat, vitamins and minerals.