Egg Parts

Let's learn about what to look for as we investigate the parts of the egg.
Use these descriptions below to fill in the blanks on Egg Structure Sheet 1.

Shell

The shell is **the hard covering that encases all the eggs contents**. It is made primarily of calcium carbonate. It can be a variety of different colors and shapes depending on the type of bird that laid it. (See Part 1 of this lesson.)
It is porous, which allows the embryo inside to breathe. The pores take in oxygen and other atmospheric gases, and let out wastes such as carbon dioxide and moisture. The large end has more pores than the small end. If you look at the eggshell under a magnifying glass you will notice the difference in texture, which is really the difference in pores.

Outer & Inner Membranes

Immediately after the shell are two membranes, the outer membrane and the inner membrane. These membranes guard the embryo from bacterial invasions and rapid moisture loss. Air cells form between these two membranes.
These membranes will look like one to the naked eye when an egg is cracked open. The inner membrane is the one closest to the yolk, and the outer membrane is the one closest to the shell.

Air Cell

At the large end of the egg there is a pocket of air. The air cell is formed because when an egg is first laid it is very warm, and as the egg cools the contents inside contract leaving this empty space or air pocket inside the shell. The air pocket gets larger as the egg ages.

Chalazae

The yolk is suspended in the center of the egg by white chords which are actually twisted strands of mucin fibers (a special form of protein). A very fresh egg will have white twisted chords that are easily visible.

Vitelline Yolk Membrane

This is what contains the yolk, when punctured the yolk will loose its round shape. It is clear and thin.

Yolk

The yellow inside portion of the egg that provides minerals, vitamins, fat, and protein to the growing embryo.

Albumen or White

A clear thin liquid that surrounds the vitelline membrane, it helps provide another layer of protection and protein for the growing embryo.

Germinal Disc

A small white spot on the yolk where the egg could have been fertilized and an embryo would have started to grow. If the germinal disc is fertilized it will then be called a blastoderm.
Before cracking open the egg.