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WHY EGGS ARE EXCELLENT!

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These wood frog eggs stick together in a group called a “clutch”

Eggs are everything!

Every animal you’ve ever seen started as an egg!

We know that chickens and fish come from eggs, of course. But did you know that most dinosaurs came from eggs? Scientists have even found fossils of dinosaur eggs.

Eggs are truly amazing! For birds and some reptiles, eggs with hard shells protect the growing baby animals inside. Some eggs are more vulnerable. For example, shark eggs often have to camouflage and blend into their environment to stay safe, so they sometimes look like dark green pieces of kelp!

Mammals come from eggs too. Dogs, cats, hamsters and cows all come from very tiny eggs that grow inside their mothers. These little eggs contain some of the DNA, or genetic instructions, for growing the animal. Other mammals actually lay eggs! For example, the echidna is a mammal called a monotreme. It lays one egg at a time and carries it in a pouch!

In this issue of Jr. Animal Scientist magazine, we’ll learn about the huge variety of eggs found in the animal kingdom. We’ll also learn more about the eggs we use in the kitchen every day!



A small shark grows inside an egg



Geese like to lay their eggs on an elevated mound near water!

The many colors of eggs

Chicken eggs at the grocery store tend to be white or brown. This color difference comes from a process in a part of a hen's body called the shell gland. As a hen gets ready to lay an egg, her body may make a small amount of pigment to leave on the egg shell.

Egg color all comes down to different traits in different breeds of chickens. In the poultry industry, Leghorn chickens are known for making white eggs. This white color comes from a compound called calcium carbonate. Egg shells are made up of calcium carbonate, so they tend to be white!

For other breeds, that white shell is like a blank canvas!

Chicken breeds like Orphingtons or Plymouth Rocks deposit protoporphyrin pigment on that white shell, which gives their eggs a brownish color.

Most wild birds also make white or brown eggs, but there are some birds that make blue eggs! Robin eggs are blue thanks to a pigment called biliverdin. Some chickens can also lay blue eggs, so don't be surprised if you see a blue egg in the hen house!

Some chickens even lay greenish eggs! That hue happens when brown pigment is on top of blue pigment.



Robin's eggs

The problem with pink eggs

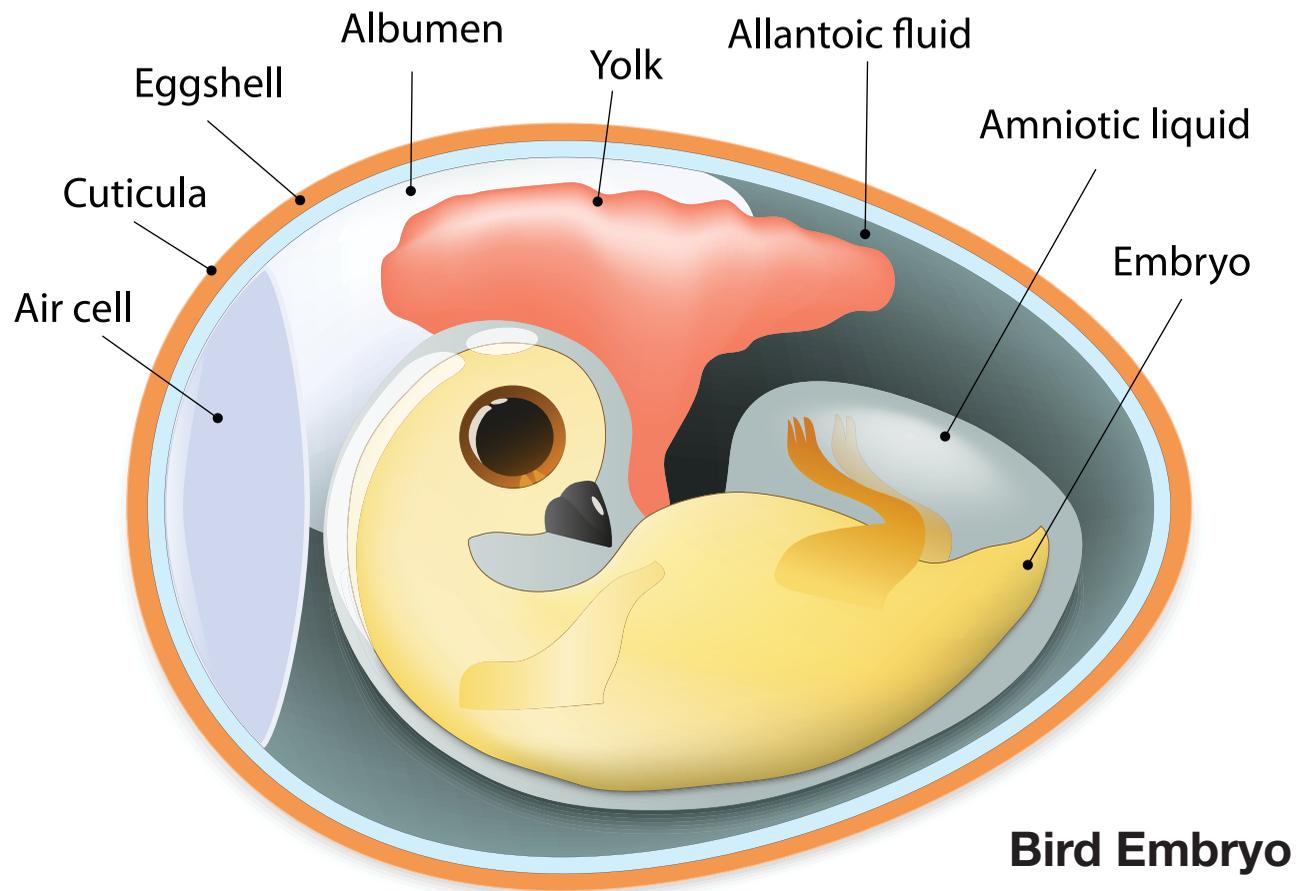
Apple snail eggs have an unusual pink color!

These large eggs usually sit in plain sight, which makes them vulnerable to predators. The pinkish color serves as a visual sign that predators should stay away! After all, these pink eggs contain a toxin that can make animals very sick.

The apple snail's clever defense mechanism has actually led to big problems in many parts of the United States. The snails are invasive, which means they are taking over many ponds and lakes where they don't normally live. Their toxic eggs mean that predators in those habitats just can't slow the spread of these snails.



Photo: flickr / Big Cypress NPS



The parts of an egg

The eggs we eat have not been fertilized. That means there is no chick growing inside. The egg is surrounded by an outer cuticle and shell to keep the egg safe. The white part of an egg is called the albumin. The yellow part is called the yolk.

When a bird's egg is fertilized, it will develop several important parts. The albumin will begin to develop into the new chick, or embryo. The amniotic fluid provides a cushion for the embryo and gives it space to float and grow. The allantoic fluid allows for air to reach the embryo and carries away waste. The yolk will serve as food for the growing embryo!

Many animals, such as reptiles, have eggs with these parts too. Even baby humans float in amniotic fluid and use allantoic fluid before they are born!



Fun fact: An egg shell looks pretty hard, but it is actually covered in very tiny holes called pores! These pores allow the developing embryo to get oxygen as it grows!

Why we eat eggs!

Eggs are packed with vitamins and nutrients. Every egg has protein, an important nutrient to help you grow muscles. Eggs also have vitamins to keep your blood and eyes healthy and fats to give you energy.

Eggs are also a great addition to recipes such as cakes, cookies and brownies! This is because the fats in the egg add to the recipe flavor, while the protein in the eggs helps baked goods have a strong structure! Thanks to eggs, a cookie will crumble in your mouth, not on the floor!



Three eggs: quail, chicken, and ostrich.

FUN FACT: Eggs big and small!

The biggest bird egg in the world comes from the ostrich, a flightless bird species that lives in Africa. Ostrich eggs are about six inches long and can weigh three pounds!

The smallest bird egg in the world comes from the bee hummingbird, which lives only in Cuba. A bee hummingbird egg is as small as a coffee bean.



Photo: iStock / rez-art

Egg art!

Want to decorate an egg and keep it all year long? With the art of egg blowing, you can turn eggs into ornaments. What you'll need:

- An egg (Unfertilized)
- A bowl
- A nail or thick needle
- Markers or paints

Please ask for a grown-up's help to get your egg ready!

- 1** Wash the egg with soap and water.
- 2** Have a grown up use the needle or thumbtack to pierce a hole on the top and bottom of the egg. The hole should be medium-large, or about half the size of your pinky finger nail.
- 3** Have a grown up drive the needle or nail through the hole and toward the center of the egg. The goal is to break the yolk inside. Remove the needle or nail.
- 4** Place the bowl under the bottom hole and blow through the top hole. You may have to blow very hard to get the egg whites and yolk to come out of the bottom.
- 5** Keep blowing until everything inside the egg is in your bowl! (And then use that egg for scrambled eggs later!)
- 6** Decorate your egg!

A blown egg can make a great decoration or gift. Many people decorate with blown eggs for holidays like Easter and Christmas!



Photo: iStock / maksmaria



Egg hunt!

There's a good chance you can spot insect or spider eggs in your yard or a nearby park! You just have to know where to look. Just be sure to have a grown-up's permission to go egg hunting, and don't touch the eggs!

Here are three common eggs and where to find them:



Butterfly eggs: Butterfly eggs are usually white or yellow. They are also found on the bottoms of leaves. Make sure to check plants with soft leaves. These leaves are easier for the caterpillars to eat once they hatch!



Ladybug eggs: These eggs are very small and yellow. They are usually found in groups on the bottom sides of leaves. It's best to look on plants where aphids also live, such as roses.

Spider eggs: Spiders tend to lay a bunch of eggs in a little sack made of white silk. These egg sacks can sometimes be found low down on wooden fences, planter boxes or under outdoor furniture.



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