

EGGS

Educator | VermontHarvestoftheMonth.org

Harvest of the Month provides resources for the cafeteria, classroom, and community to promote the use of local, seasonal foods.



Egg-cellent Facts

There are several reasons why we commonly eat chicken eggs instead of duck or turkey eggs. Chickens lay more eggs, they need less nesting space, and they don't have the strong mothering instincts of turkeys and ducks, which makes egg collection easier. (source)

When a chicken egg is developing, the eggshell and the egg form at the same time. Here we have another answer to that puzzling question of which came first, the chicken or the egg? (source)

Kiwis, a flightless bird native to New Zealand, have the largest egg-to-body size ratio, up to 20% of the female's body weight. In comparison, a chicken's egg is approximately 1% of its body weight. (source)

To tell the difference between a raw egg and a hard-cooked one, spin it. Hard-cooked eggs spin easily, while raw eggs wobble. (source)

Reading Corner

FICTION

Sonya's Chickens by Phoebe Wahl

The Chicken-Chasing Queen of Lamar County by Janice N. Harrington

Wild Eggs: A Story of Arctic Egg Collecting by Suzie Napayok-Short

NON-FICTION

Chickens Aren't the Only Ones by Ruth Heller

Chickens! Illustrated Chicken Breeds A to Z by Sarah Rosedah

Chicks & Chickens by Gail Gibbons

Egg History and Culture

What came first—the chicken or the egg? For biologists, the answer is simple: the egg! Around 350 million years ago, the first Tetrapods—the common ancestor of all mammals, reptiles, and birds—emerged from the ocean. When on land, their amphibian-like egg sacs would dry out, so they evolved a protective shell over the embryo, and Voilà!—the first egg. It took another 290 million years for the first wildfowl (the ancestor of all chickens and ducks) to arrive on the scene. Case closed! But when did we start eating eggs? Well, humans and other predatory animals have been eating eggs for millions of years. Then, about 5,000 years ago, people in Asia domesticated the first wildfowl. It was so successful that the idea spread worldwide. Later, the Egyptians developed a method to incubate eggs in heated caves, freeing up hens to lay more. In the 1940s, egg farming was industrialized, with larger flocks put in smaller cages. Today, 98% of US eggs come from factory farms, which are cheap for the consumer, but criticized for poor animal welfare, pollution, disease, contamination, unsafe working conditions, and sub-par nutrition. In response, the popularity of small-scale egg farms is increasing, and Vermonters, in particular, are at the forefront of putting better eggs back on the menu.



SOURCES:

<https://academic.oup.com/mbe/article/24/1/26/1070944?login=false>
<https://www.science.org.au/curious/earth-environment/which-came-first-chicken-or-egg>
<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0039171>
<https://www.poultryworld.net/poultry/egyptians-hatch-eggs-the-traditional-way/>
<https://unitedegg.com/about/evolution-of-u-s-egg-farming/>
<https://www.sentienceinstitute.org/us-factory-farming-estimates>
<https://www.humanesociety.org/sites/default/files/docs/undercover-investigation-egg-producer.pdf>
<https://www.justice.gov/opa/pr/major-egg-producer-reduce-water-pollution-discharges-mississippi-facility>
<https://haguewaterofmd.com/poultry-farm-pollution-and-its-effects-on-drinking-water/>
<https://academic.oup.com/femsre/article/43/6/608/5543894>
<https://www.humanesociety.org/sites/default/files/docs/report-food-safety-eggs.pdf>
<https://ffacoalition.org/articles/dangerous-conditions-factory-farms/>
<https://rucore.libraries.rutgers.edu/rutgers-lib/45132/PDF/1/play/>
<https://www.alliedmarketresearch.com/organic-eggs-market-A13633>
<https://vt.digger.org/2019/02/25/egg-producers-strive-keep-increased-demand/>

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Social Justice Connection

Source:

<https://regenerationinternational.org/2016/07/13/chickens-can-save-the-planet-too-an-interview-with-reginaldo-haslett-marroquin/>

As a child growing up in the rainforest of Guatemala, Reginaldo Haslett-Marroquin shares that his family did not have a lot of money but always had plenty of food. Many other farmers around his family were slashing and burning the forest to create fields to grow crops. Reginaldo's family tried this once on their land, and his father quickly saw that the soil was losing its vitality. His father knew they needed to take care of the soil and work with the land to have crops for years to come. His family used some farming techniques that cared for the land to create abundance. This inspired Reginaldo to follow a career in Regenerative Agriculture, a farming practice that focuses on caring for the topsoil, water cycles, and biodiversity. Today Reginaldo believes that "chickens can save the world" because they offer agricultural benefits such as providing natural pest control, consuming food and yard waste, naturally tilling the soil, and giving a constant protein-rich food source in the form of eggs or meat. Reginaldo is working in the United States, Mexico, and Guatemala to build a regenerative agriculture system at an international level that is socially, economically, and ecologically regenerative and built around chickens.

Videos For Students:

[Chickens Can Save the Planet, too: An Interview with Reginaldo Haslett-Marroquin](#)
[Poultry-Centered Regenerative Agriculture at Thunder Valley CDC](#)

Classroom Connections

Social Studies/Nutrition

Eggs On The Menu!

This four-part lesson plan offers a variety of approaches for students to learn more about eggs and how they are a part of our lives.

The lessons invite students to:

1. Explore eggs in our diet through creating a menu plan
2. Learn about the fascinating and unique characteristics of eggs and the role they have in cooking
3. Explore sustainable practices and forms of technology on egg farms
4. Share their own family culinary traditions that feature eggs

Source: <https://minnesota.agclassroom.org/matrix/lesson/607/>

Science

Learning Parts of the Egg

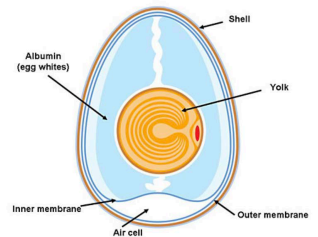
Materials Needed:

Hard-boiled eggs for students
(1 per student)

Cutting boards or paper plates

Knives for cutting eggs in half

Parts of an egg diagram



1. Have students wash their hands, then find a seat and pass out the cutting boards or paper plates. They will be dissecting their hard-boiled eggs on these. Once everyone has found a seat, pass out the eggs to each student. Remind them not to start opening them until they have been given instructions.
2. Let them peel their eggs on the plate and inspect the shell. What do they notice? Can anyone find the air cell in their egg? Some students might be able to separate the membrane from the shell as well. Separating the membrane can be a little tricky and tedious, so don't feel like everyone has to do this with their egg.
3. Once shelled, students can cut their eggs in half and notice the difference between the egg whites and egg yolk.
4. At this point, they are free to eat their egg if they so choose.

Lesson created by Green Mountain Farm to School, 2022.