

# Egg Decorating with Natural Dyes

Preparation Time: 3-4 hours

Start to Finish: 4-5 hours



## Introduction

This handout lists the materials and instructions you need to make your own natural dyes and dye eggs. Making your own natural dyes, instead of buying dyeing kits from the store, is more hands-on and it ensures that artificial or synthetic food dyes don't get into our watersheds. You will be using a variety of produce and spices to make your dyes. The amounts you use can be modified according to what you have available. You can also experiment with other fruits, vegetables, and spices to see what natural colors you can make. If you need to purchase materials for this activity, please only do so if it is safe and practical.

Dyeing the eggs is quite simple. The preparation of the eggs and natural dyes takes most of the work and time. You can make the natural dyes a day before you want to dye and decorate your eggs. You also have the option to soak your eggs overnight for deeper colors. You have total creative freedom, just make sure you wear clothing you don't mind getting dye on.

While you prepare your dyes or wait for your eggs to soak, you can read about the history of the Don Edwards National Wildlife Refuge. You can also learn about the many amazing birds that live and migrate to the Refuge. We hope you can enjoy the beauty of our Refuge and its wildlife when our facility reopens.

The San Francisco Bay Wildlife Society in partnership with the Don Edwards San Francisco National Wildlife Refuge thank you for participating in this program in the comfort of your home. During these times it is important that we have fun and creative quality time with our family and loved ones, and we hope this at-home activity provides you with such an opportunity.

## The Tradition of Dyeing Eggs

Decorating eggs and egg hunts are common traditions practiced for the Easter Holiday. However, the tradition of decorating hard-boiled eggs has changed over time with cultures painting eggs for different ceremonies and beliefs. Today, decorating eggs is a fun activity to celebrate Easter and the arrival of Spring.

Reference: [https://www.huffpost.com/entry/easter-eggs-history-origin-symbolism-tradition\\_n\\_1392054](https://www.huffpost.com/entry/easter-eggs-history-origin-symbolism-tradition_n_1392054)



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# Boiling the Eggs

## Materials

Medium-sized saucepan

Large eggs

Cold water

## Preparation: 25 mins

**1** Place eggs in a single layer in a saucepan (do not stack eggs). Add enough cold water to cover the eggs at least 1 inch. Bring to a rapid boil over high heat. Remove from heat, cover, and let stand for 15 minutes.

**2** Place eggs in a container until they are cool enough to handle

### A Helpful Tip!

The water you use to boil your eggs can be used to water your plants. The calcium from the egg shells can support plant growth and provide nutrition.

## Colored Eggs

There are more than 60 breeds of chickens recognized by the American Poultry Association and hundreds of other chicken breeds worldwide, many of whom lay eggs in a rainbow of hues ranging from white, green, pink, blue, and even chocolate brown.

Each chicken breed has specific genes that affect eggshell color. Popular breeds that lay colored eggs include Barred Rock, Rhode Island Red, Ameraucana and Welsummer chickens.

Do different colored chicken eggs taste different? No, all chicken eggs are the same on the inside. Egg taste depends by what a hen eats.



Photo by Purina Animal Nutrition

**1**

BOIL EGGS



**2**

PREPARE DYES



**3**

SOAK EGGS



**4**

DRY + DECORATE



# Making the Natural Dyes

## Materials

Medium-sized pot

Strainer

Container for dyes (e.g. mason jar)

Coloring agent (see next page for measurements)

## Preparation: 2-3 hrs

**1** Bring 2 cups of water to a roiling boil

**2** Add coloring agent (see next page)

**3** Reduce heat and simmer for 30 minutes or longer for a deeper color

**4** Strain liquid into a container, and allow to cool to room temperature, 1-2 hours



### Which came first? The Chicken or the Egg?

"Eggs are much older than chickens. Dinosaurs laid eggs, the fish that first crawled out of the sea laid eggs, and the weird articulated monsters that swam in the warm shallow seas of the Cambrian Period 500 million years ago also laid eggs. They weren't chicken's eggs, but they were still eggs.

So the egg definitely came first. Unless you restate the question as 'which came first, the chicken or the chicken's egg?' Then it very much depends on how you define a chicken's egg. Is it an egg laid by a chicken? Or is it an egg that a chicken hatches from? Chickens are the same species as the red jungle fowl of Southeast Asia, although they were probably hybridized with the grey jungle fowl when they were domesticated 10,000 years ago.

But it doesn't matter; at some point in evolutionary history when there were no chickens, two birds that were almost-but-not-quite chickens mated and laid an egg that hatched into the first chicken. If you are prepared to call that egg a chicken's egg, then the egg came first. Otherwise, the chicken came first and the first chicken's egg had to wait until the first chicken laid it."

**1**

**BOIL EGGS**



**2**

**PREPARE DYES**



**3**

**SOAK EGGS**



**4**

**DRY + DECORATE**



# Making the Natural Dyes

## Measurements for each Color

**Pink** = 1 1/2 cups shredded red beets



**Yellow** = 3 tablespoons ground turmeric or cumin



**Green** = 2 cups spinach



**Rust** = 4-5 yellow onion skins



### Natural Dyes

A full spectrum of colors can be obtained from plants, animals, and even fungi. Natural dyes are an age-old tradition that is practiced in numerous countries and cultures. The practice of making and utilizing natural dyes maintains the deep connection between humans and the environment.

# Making the Natural Dyes

## Measurements for each Color

**Sky Blue** = 1 1/2 cups shredded red cabbage



**Orange** = 3 tablespoons chili powder



**One Hour vs. Overnight**



**EXPERIMENT!** Create your own unique dyes



**A Helpful Tip!** Put your used veggies and spices in your green yard waste bin. It will be made into compost!



# Dyeing the Eggs

## Materials

2 tablespoons of white vinegar  
(for each color)  
Sealable jar or container

## Preparation: 30 - 45 mins

- 1 Stir in 2 tablespoons white vinegar
- 2 Add leaf design (optional)
- 3 Add eggs
- 4 Seal container and refrigerate until the egg is the desired color
- 5 After taking your eggs out of their dyes. Dispose of your natural dyes by dumping them in the sink to protect our *watersheds*. Water dumped in the sink, instead of in your yard or on the street, will be treated at a wastewater facility.

### Add a Leaf Design!!!

Want to add a special touch to your dyed egg? Find a small leaf of your liking, wash it, and gently place it on your egg. Wrap your egg and leaf with cheese cloth so that the leaf stays in place. This step is optional, you can always 'leaf' your eggs be.



### What is a Watershed?

A watershed is an area of land that drains all the streams and rainfall to a common outlet such as the outflow of a reservoir, mouth of a bay, or any point along a stream channel. Watersheds can be as small as a footprint or large enough to encompass all the land that drains water into rivers that drain into San Francisco Bay, where it enters the Pacific Ocean. Watersheds are necessary to support habitats for plants and animals, and they provide drinking water for people and wildlife.

For tips on keeping you local watersheds clean visit: <http://mywatershedwatch.org/>

1

BOIL EGGS



2

PREPARE DYES



3

SOAK EGGS



4

DRY + DECORATE



# Decorating the Eggs

## Materials

Crayons

Vegetable oil (optional)

## Preparation: 30 mins

- 1 Dry eggs with a cloth
- 2 Use Crayons to draw designs
- 3 Rub dried eggs with a dab of vegetable oil to give them a shine (optional)

## Share Your Egg-cellent Creations!!!

Email us pictures of your natural dyed eggs. We will post them on our Facebook page and give you a shout out! It'll be egg-tremely cool.

Email: [watershedwatchers@sfbws.com](mailto:watershedwatchers@sfbws.com)

Website:  
<http://sfbws.com/>

Facebook:  
<https://www.facebook.com/sanfranciscobaywildlifesociety/>



# History of Don Edwards San Francisco Bay National Wildlife Refuge

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## Don Edwards San Francisco Bay National Wildlife Refuge

### A Wildlife Oasis in an Urban Sea

Don Edwards San Francisco Bay National Wildlife Refuge, Don Edwards for short, was established in 1972 as the San Francisco Bay National Wildlife Refuge and was the first urban wildlife refuge in the nation. Don Edwards has a unique history because it was formed by a group of local citizens who rallied together to have this area designated as a refuge. With the help of California State Congressman, Don Edwards, they succeeded! The Refuge was named San Francisco Bay NWR, but “Don Edwards” was added in 1995 after the Congressman’s retirement.

The Refuge was established to protect the habitats of two endangered species, the Salt Marsh Harvest Mouse, and the California Ridgway’s Rail — both are only found in the San Francisco Bay Area. The refuge also provides habitat for migratory birds since we are along the Pacific Flyway, hosting over 280 species of birds each year.

Don Edwards encompasses over 30,000 acres of land in the south bay. Originally this area of Alviso was zoned for a housing development in early 1900. Luckily, no houses were built on the wetland, and the land was eventually transferred to the Refuge. The Refuge provides opportunities for wildlife-oriented recreation and it serves as a space to observe, learn, and appreciate nature within an urban landscape.





# Birds at the Refuge

## Barn Swallow

*Hirundo rustica*

The Barn Swallow is a familiar bird in rural areas and semi-open country. Swallows have adopted humans as neighbors by placing its nest along homes, garages, or under bridges. Is there a Swallow's nest near your house? They capture and eat most of their food in flight. When it is having a hard time finding food it will watch its neighbor and follow them to the food. Swallows migrate to Central and South American during the winter and will return to North America to breed from January to May.



## Canada Goose

*Branta canadensis*

Known as the “Honker, the Canadian Goose is one of the best-known waterfowl. Once considered a symbol of wilderness, this large bird has adapted well to civilization, nesting around park ponds, gold courses, or perhaps the park or school by your house. Geese are very loyal - they mate for life and are very protective of their partners and offspring. You've probably had one or two geese honk at you for getting too close. Historically, geese followed rigid migratory paths. Today many geese in urban areas become permanent residents.



## Black-necked Stilt

*Himantopus mexicanus*

This bird is a regular visitor of the Refuge and it looks like its wearing a tuxedo with its black and white feathers. Named after its thin stilt-legs it has the second-largest legs of all birds in relation to their body, second only to flamingos. This bird eats mostly insects and crustaceans. It locates food by sight and snaps it up with its needle-like bill, sometimes sticking its head completely underwater. The Stilt migrates west from inland areas in the winter, moving to coasts with some migrating well to the south.



## References

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“Lay the Rainbow: Chickens That Lay Colored Eggs” by Purina Animal Nutrition (<https://www.purinamills.com/chicken-feed/education/detail/lay-the-rainbow-chickens-that-lay-colored-eggs>)

“Natural Dyes, Our Global Heritage of Colors” by Dominique Cardon (<https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1011&context=tsaconf>)

“Watersheds and Drainage Basins” by USGS ([https://www.usgs.gov/special-topic/water-science-school/science/watersheds-and-drainage-basins?qt-science\\_center\\_objects=0#qt-science\\_center\\_objects](https://www.usgs.gov/special-topic/water-science-school/science/watersheds-and-drainage-basins?qt-science_center_objects=0#qt-science_center_objects))

“Why are Watersheds important” by Santa Clara Valley Urban Runoff Pollution Prevention Program (<http://www.mywatershedwatch.org/about-watersheds/why-are-watersheds-important/>)

“How to Make 9 All-Natural Easter egg Dyes” by Allrecepte Editors (<https://www.allrecipes.com/article/natural-easter-egg-dyes/>)

Information about Barn Swallows, Canadian Geese, and Black-necked Stilt: “Guide to North American Birds” by The Audubon Society (<https://www.audubon.org/>)

Photo of Barn Swallow - The Audubon Society

Photo of Canadian Geese and Black-necked Stilt - Hope Presley

Photos of Don Edwards and Natural Dyed Eggs - Rachel Caoili

