

# Exciting Eggs!



## Description:

Learners make observations and generate questions about two eggs—a plain egg and one that has been soaked overnight in vinegar.

## Suggested Grade Levels: K~2

## Lesson Overview

Content Standard A: Science as Inquiry

K-4: Ask questions about objects, organisms, and events in the environment.

## Time Needed

This lesson takes several class periods. Sample schedule:

Day One: Complete the **Engage** and **Explore** portion of the lesson  
Day Two: Complete the **Explain** portion of lesson  
Day Three: Complete the **Elaborate** and **Evaluate** portion of the lesson

## Materials:

- Eggs (3 per group of students)
- Vinegar (about 2 cups per group of students)
- Kayro Syrup (about 2 cups per group of students)

Advanced preparation:

- 1 day before completing this activity, soak enough raw eggs in vinegar (the egg shell will dissolve).

# Content Background

Egg shells contain something called "calcium carbonate". This is what makes them hard. Vinegar is an acid known as acetic acid. When calcium carbonate (the egg) and acetic acid (the vinegar) combine, a **chemical reaction** takes place and carbon dioxide (a gas) is released. This is what the bubbles are made of. The chemical reaction keeps happening until all of the carbon in the egg is used up -- it takes about a day. When you take the egg out of the vinegar it's soft because all of the carbon floated out of the egg in those little bubbles.

## Engage:

1. Ask students if they have eaten eggs before? Tell students to use thumbs up if yes, thumbs down if no and hide your thumb if you are not sure. Do you like eggs? Have you eaten scrambled eggs? How many of you have had cake? Did you know there are eggs inside? How many of you have touched an egg? (for those that have touched an egg, have them share their thoughts about the egg)
2. Show students an egg. Discuss what they know about that egg. (do not write down student ideas) (egg will crack if dropped, eggs are white...)

## Explore

3. Tell students they will be exploring an egg today. The egg they are going to look at today is the same as this egg they just observed, but something has been done to the egg to make it change. In order to discuss their egg, tell them that they will be using words and you are going to write down the words they use to describe their egg. **(Shared Writing)**
4. Before they begin, say to the students they need to learn how to smell properly. **Teach students how to waft.**
5. Give each group an egg that has been soaked in vinegar. To manage the groups, place the egg in a container that will contain the yoke if it breaks. Use the investigation cards provided to

Note: Safety!!

Teach students how to waft. Scientists waft when they smell by using their hand to push the air towards their nose. This way they reduce the chance of burning their nose by directly smelling.

have the students make observations about their egg.

6. Record student observations for what they smell, see, and feel about their egg.
7. Clean up and tell students that tomorrow they will discuss their egg.

## Explain:

1. Ask a student to share with you what they did yesterday. Post the words that were collected from their egg observations. Tell the students that yesterday they made a list of words that described their egg. Point out to students the big idea-explorers use words to describe objects in the world and that today they are going to write a sentence about their egg.

*Use the following sentences as a guide for the interactive writing.*

1. Ask the students, what do we want to say about our egg? (allow students to generate ideas.) As you are listening, once you hear similar ideas, say “I am hearing all of you say the egg was big. This will be the idea we are going to write about.” Write the sentence on the board.
2. Let’s say the sentence again. Say it to your friend sitting on your right.
3. Let’s count the words in our sentence with our fingers.
4. What is the first word we will write?
5. Who knows how to write the letter \_\_\_\_\_?
6. What word do we need to write next?

Once you are finished with this, have the children read the sentence out loud. Compliment the students that you like the way they wrote about their egg. Go back to the big idea. Ask the students-boys and girls, did we use our words to talk about our egg? (yes)

Say to the students, we saw some really cool things about our egg. We saw that an egg can change. Now we are going to make some more changes about our egg. But I am not going to tell you how our egg will change. We are going to put the egg in corn syrup. This is sweet stuff that we put in soda. Sometimes we put it in pie. It is not magical stuff; it is just something used in

the kitchen to cook. (Select a student to take one of the swollen eggs that have been in vinegar and place it in the corn syrup). Explain that this change is going to take time. We are going to check the clock at this time tomorrow to look at the egg. Tell the students that sometimes change happens really fast and sometimes it happens really slowly. I bet by tomorrow you will see that something has happened. (this will build curiosity in the students)

## Elaborate

### Day One:

When it is the same time as the day before, tell student it is time to look at our new egg which has been soaking in corn syrup.

Get the egg out. Have students look to see how the egg has changed. (students share orally)

Ask the students the following questions:

What is one main idea we can share about our new egg.

Let's read our sentence.

### Day Two:

Use the digital pictures provided of the eggs to model for students how to use the observation questions.

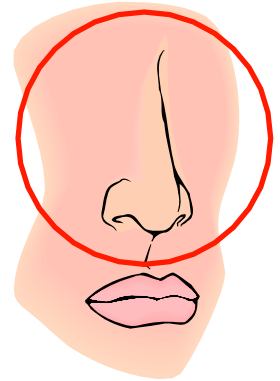
Let's think about what scientists do and the ways they can explore their world. Use the pocket chart and the words to have the students identify if their egg was smooth or rough; hard or soft. Then do size (big or little). Last do color. After each choice, move the student choice to the board. Have the students read the words together. Ask the students - do these words describe our egg?

## Evaluate

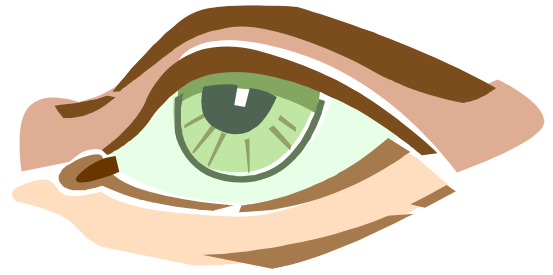
Work with the students to write a sentence about how their egg changed over the last few days. Have students use words like changed fast or slow.

# Investigate:

1. Smell by wafting and using your nose. What do you smell?



The Nose



2. Use your eyes?  
What does the egg  
look like?



3. Use your hands.  
What does the egg  
feel like?

# Comparing Eggs

## Directions

We will use our eyes, nose, and hands along with these questions to help make a list of how the eggs we have observed are the same and how they are different.

What are we trying to compare?

Observe the two eggs. What words can we use to describe them?

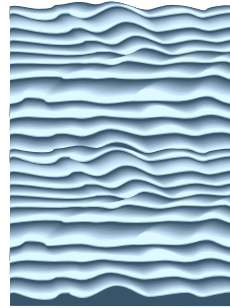
How are they the same?

How are they different?

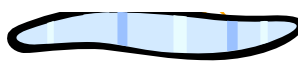
# Texture

Is it...

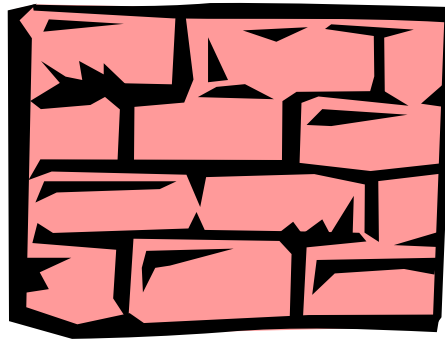
Rough



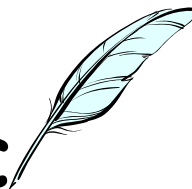
Smooth

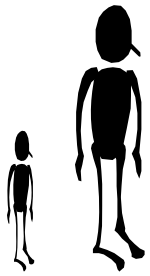


Hard



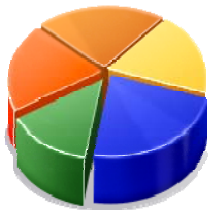
Soft





# Size

Is it big or small?



# Color

What color is it?

Red Blue Green Yellow  
Orange Black

