Beyond Our Shells

This lesson will build on ideas regarding inclusiveness, identifying what makes us unique, not judging something by its outsides, and treating others fairly through kindness, caring, and sharing. There is a heavy science component to this lesson which could dovetail with other science lessons you are doing at this time. Merge the two where possible to extend the lesson beyond this isolated experience. Project #1 coordinates with this lesson as well, so it is a strong way to end the Inclusiveness Unit.

Inclusiveness Sub-Concept(s)
Fairness, Kindness

Lesson Timeframe
45 minutes

Required Materials
- ❑ Paper and pencils
- ❑ Two eggs: 1 white egg and 1 brown egg (for the first experiment)
- ❑ Bowl (for breaking the eggs)
- ❑ Egg(s) [number depends on how many you wish to do; at least two, but you may elect to use one egg for each child; plan ahead for whichever approach you take], bowl(s), vinegar, refrigeration

Standards Map
This lesson aligns with CASEL Competencies, National Health Education Standards, and Common Core State Standards. Please refer to the Standards Map for more information.

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Lesson Objective

Students will:

- Use chemistry to personify the idea of looking beyond someone's outsides and into what really matters on the inside.
- Build skills in comparison and contrast.
- Discuss what makes two things the same and what makes them different.

Teacher Connection/Self-Care

How does fairness affect us as teachers? You are required to break up disagreements numerous times a day and teach others how to exercise fairness in a variety of settings, yet the concept seems elusive to even adults at times. Although fairness has two meanings, for this unit we are focusing on the ability to include others without showing favor. However, this skill is often overlooked in adulthood. Favoritism cannot be ignored as most people have experienced both sides of this double-edged sword. How can you consciously choose fairness in your day to day interactions with others? What subconscious tendencies do you have that may cloud your judgment? It might be a certain type of personality, a clique that has formed with close friends, or even getting stuck in the same routine every day during lunch. In order to practice fairness within your own world, you must first break out of your comfort zone and seek beyond the "usual". Ask yourself this question each day this week: How can I treat people in a way that does not show favor for some and not others? Identify one action step you can take to move forward in your quest for fairness!

Tips for Diverse Learners

- While this shouldn't be a problem because students are not ingesting the eggs, if there is anyone with a severe egg allergy, you will want to be mindful of that.
- Using white and brown eggs might lead to conversations about race if you have Black and White students in your class; be prepared to address a complex topic in a way that relates to the lesson and is appropriate for your learners. This Teaching Tolerance guide is a good resource to prepare for these conversations.

Share

3-5 minutes

In our lessons about inclusiveness and fairness, we've talked about what makes us wonderful in our own unique ways. We have also read stories where kids are being excluded because of how they look. It is hard to tell what someone is like inside by looking at their outsides, though.

When we don't know someone, or when we don't take the time to care for someone and share with them, it's easy to forget to be fair with them. It's easy to forget that even if we each have unique things about us that make us different, we also have things that make us very much the same.

Let's look at our class. What are some of the wonderful things that make us unique and not like everyone else?

Invite student response.

Now, what are some things that make us the same?

Invite student response.

Inspire

5-7 minutes

Today we are going to investigate two eggs and do some comparing and contrasting. Take out a piece of paper and draw a T-chart on it. Demonstrate this on the board.

On the left, write SAME and on the right, write DIFFERENT.

Now, look at these two eggs. Hold up a brown egg and a white egg. *In the left-hand SAME column, I want you to write down what you think is the same about these two eggs. If you want, you can discuss your observations with your neighbor and share ideas.*

Give students time to work and write down their ideas.

Now, I want you to write down how these eggs are different.

Give students time to work and write down their ideas.

When the writing is finished, invite students to share their answers. Consider asking for just one answer and then allowing students to pick another student to share an answer. When the "SAME" column is exhausted, move on to the "DIFFERENT" column.

Now, let's crack these eggs open and see if our hypothesis about some of the similarities we talked about (sameness in yolk, egg white, etc.) is correct. Crack the two eggs open on an edged plate or bowl and walk around with the results.

Which one is the white egg and which one is the brown egg? Can you tell? Why not?

Invite student responses.

Empower

10-12 minutes

Remember that being different is not a bad thing. Being different is great! Why is being different and unique and a wonder a good thing?

Invite student response.

Sometimes kids and adults alike forget this, though. Sometimes we let our differences get in the way of including others, of being fair, and of being kind. But, when it comes to our insides and who we really are, much like the eggs, we have a lot of the same qualities inside.

To help us remember this, we are going to do a science experiment. We are going to find out what happens to eggs when we put them in vinegar for two days.

On your T-Charts, write down your hypothesis, or prediction based on information and evidence, to our research question which is: "What will happen to eggs if we put them in vinegar for two days?" Hang on to your predictions because we will check to see if you are right in two days!

Follow the instructions for making "naked eggs" here:
https://www.exploratorium.edu/cooking/eggs/activity-naked.html

What will happen is the vinegar will dissolve the outer shell, leaving a translucent, bouncy egg (which will bounce from an inch or two off the table but will break and create a mess if dropped from higher up!). You could do this with one brown egg and one white egg, or with two eggs or the same color, or with one egg for every kid. You could write each kids initials on an egg or initial one egg for every kid. The idea will be to demonstrate that, once the shells are gone, you can't tell a difference between/among the eggs. Bring the supplies to the classroom to do the experiment with the students.

The egg(s) will need to be stored in the refrigerator so plan ahead to use a refrigerator in the staff room or school kitchen.

Reflect

7-10 minutes

After two days (checking and, if able/willing, changing the vinegar after the first 24 hours), bring the eggs back to the classroom. Remove each egg from the vinegar and wipe it clean. Show students what happened to the egg. You could put students in small groups (at least two) and classroom helpers could monitor the egg examination.

Reiterate the idea that just because we see something on the outside, it is what is on the inside the matters. You can remind students how easy it is to take off that outer layer, like the masks or defenses we wear or put up, and

reveal the really cool, unique, and wonderful inside. Plus, once our outer layers are off, we are much the same inside!

Extension Ideas

- For a visual demonstration of how frail and sensitive our insides can be, you could drop one of the eggs from higher up (a foot or so) into a bowl. It will break. People are special and have insides that can be hurt if we don't handle them with care, fairness, and kindness.
- To make this a true science lesson, work through the scientific method and have students expand on their hypothesis. Students could research the composition of an egg shell and research the composition of vinegar. Because vinegar is acidic and the shell is mostly calcium carbonate (a base), the vinegar will slowly eat away the shell, but leave the egg membrane in place! Advanced students would be interested in looking more at this relationship and predicting what will happen based on the elements at play.
- For further science extensions regarding the "naked eggs" you created, see: https://www.exploratorium.edu/cooking/eggs/activity-nakedexperiment.html
- Encourage kids to show their parents/siblings/family how to do this at home and explain what they're learning about inclusiveness at school.

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The Collaborative for Academic, Social, and Emotional Learning (CASEL) has been reviewing evidence-based SEL programs since 2003. Kindness in the Classroom® meets CASEL's SELect Program and is included in the CASEL Guide to Effective Social and Emotional Learning Programs.

Kindness in the Classroom® met or exceeded all of CASEL's criteria for high-quality SEL programming. Kindness in the Classroom® received CASEL's highest designation for high-quality SEL programming.

https://casel.org/guide/kindness-in-the-classroom/

