

Fishable and Swimmable in 7 Years

Lesson 1 - Engage

Overview

Each student group has a mound of flour with a penny on the top. Students take turns using a plastic knife to cut away at the mound of flour, trying their best not to make the penny fall. If the penny falls, the group is asked who was responsible for doing so. Initially students will blame the last person to make a cut, but through a class discussion, students realize that everyone who participated is responsible for knocking the penny over.

Goal

Students shift their thinking from blame to responsibility.

Essential Question

How can we encourage others to care?

Enduring Understanding

It can be difficult to pinpoint the sole cause of a problem.

Materials

Overall	Per group (3 to 4 students)
<ul style="list-style-type: none">● Plastic cups (9 oz) - package● Flour, 5 lb bag● Pennies - 10● Plastic knives - package● Paper plates, large - package	<ul style="list-style-type: none">● 1 plastic cup● Flour, enough to fill the cup● 1 penny● 1 plastic knife● 1 paper plate

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Lesson Time = 45 minutes

Setup / Introduction (15 minutes)

1. Assign students to groups of 3 to 4.
2. For each group:
 - a. Place a paper plate in front of the group.
 - b. Fill one 9oz cup with flour. Pack some of it down, but not so much that the flour can't come out.
 - c. Turn over the cup of flour onto the paper plate.
 - d. Gently lift the cup so that the flour slides out, and remains as a mound on the paper plate.
 - e. Place a penny on top of the mound.
 - f. Place a plastic knife next to the plate.
 - g. Tell the students to wait for instructions.

Insight: Have each group watch you set up the initial flour mound. This ensures that each group is properly set up, and allows students to know how to reset the activity once the flour falls over.

3. Introduction - Go over the premise of the activity:
 - a. The object of the game is to reduce the flour mound to a pillar with the same diameter as the penny on top of it.
 - b. Students will take turns making complete **vertical** cuts, which need to go through the top of the flour, and down to the plate.
 - c. The cut flour then needs to be pushed aside with the knife.
 - d. The vertical cuts can be large or small, but only one cut can be made per turn.

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- e. Tell the students that if the flour mound collapses, and the penny falls, that they need to figure out who was responsible for doing so.

Activity - Cutting the Flour (15 minutes)

1. Begin the game.

Insight: Remind students that the vertical cut should go all the way through the flour and down to the plate. Sometimes students tend to want to shave off the flour with tiny cuts that don't go all the way through.

2. If the flour mound collapses, you can allow the students to re-setup the game and try again.
3. Once the students have had a chance to play the game a few times, you can end this part of the lesson, and have the students clean up.

Class Discussion (10 minutes)

Insight: You know your students best, so you decide how you want to run the reflection. Some students enjoy the banter of being called out for causing the flour to collapse. This often leads to the blamed student criticizing the cuts that their partners made, which leads to a good discussion. However, you may have students that are sensitive to that approach, so follow the alternative instead.

1. You can ask the class to share aloud, or write down, who they felt was responsible for causing the flour to collapse.
2. As mentioned above, some students start defending themselves by criticizing their friends' cuts, which starts a good discussion.

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3. If a discussion does not start, or if the answers were written down, you can ask, "How many of you wrote down a specific person's name?" and then follow up with "How do you know that the person that went before didn't significantly weaken the flour first?"
4. You decide how deep you want the conversation to go, but ideally you want the students to realize that everyone who participated in cutting the flour is responsible for it falling over (unless students say that person blatantly knocked it over).

Reflection (5 minutes)

1. Create an exit pass, like a Google Form, and ask the following:
 - a. What did you learn about yourself from this activity?
 - b. What did you learn about others from this activity?
 - c. In your own words, what is the difference between blame and responsibility?

Insight: You may not get answers you are looking for, but this can be used as a formative assessment to get an idea of your students' thought processes. You may get answers about their skill (like "I cut pretty precisely.") instead of character traits (like "I'm competitive.").