

Challenge the Process¹ Practicum (Facilitator Instructions)

Purpose: To provide students with a tangible opportunity to find innovative solutions by thinking critically and creatively.

Time: 30-40 minutes

Materials Needed: 15 pipe cleaner straws per group, 14 inches of tape per group, 1 large paper clip per group. Class set of 100 washers to be distributed as needed.

Process:

1. Divide the students into groups of 4-5.
2. Show the [instructions slide](#) to the group and read the instructions below:



The Challenge: To build a bridge that will be able to hold the most washers suspended between the desks.

The Constraints: Washers must not be over the surface of the table in any way. All other materials can be used however you see fit. You will have 12 minutes to build and the desks must be 12 inches apart.

The Materials:

- 15 pipe cleaners
- 14 inches of tape
- 1 large paper clip
- Washers as needed

Today you will be building bridges out of pipe cleaners, tape, and a paperclip. The goal is to suspend as many washers from your bridge as possible. Washers must be suspended in the air by the bridge using the materials given: they cannot be on or above the table. The bridge will be built between two tables that are 12 inches apart. You will have 12 minutes to construct your bridge. At the end of the timer, you will be allowed to add washers until your bridge collapses. The group whose bridge holds the most washers will win the challenge. Your group should discuss a plan while I am passing out the materials, but you may not begin building until I say begin.

3. Pass out all the materials.
4. Start a 12 minute timer and allow the students to work.
5. At the end of the timer have the students stop building and share how many washers they were able to suspend so far. Encourage the students to observe the bridges that have been made by their peers. Allow students to continue to add washers until their bridge collapses. The one that holds the most washers before collapsing is the winner.
6. Clean up the materials.
7. Move on to the reflection

¹ Kouzes, J., & Posner, B. (2018). *The Student Leadership Challenge: Five Practices for Becoming an Exemplary Leader*. Wiley.

Reflection questions

1. What were the parameters of this activity?
2. What did your team discuss in the planning time?
3. How did your team adapt your plan as you built?
4. In what ways did your team Challenge the Process?
5. In what ways did you see other teams Challenge the Process?
6. Were there limits that could not be challenged in this activity? How does that relate to Challenging the Process in a school setting?
7. If you were going to try this activity again, what would you do differently?
8. How can you extend what you learned about Challenging the Process through this activity into your daily life?

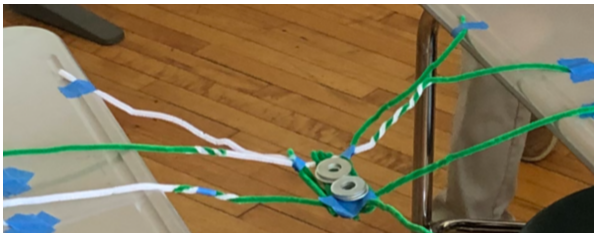
Teacher Notes

If you do not see groups testing innovative ideas during the first 5 minutes of the building phase, then you may need to plant some seeds of innovation yourself by asking questions such as “how do you plan to use the paper clip?” or “Is there is a way you could support the washers with materials you have not used.”

4. Example 4 in the images below is an excellent example of Challenging the Process.

5. You want to make sure to highlight ways that every group thought creatively even the ones that did not win. Some things to be on the lookout for are: creative use of pipe cleaners (Ex 1 and Ex 2), creative use of the paper clip, and creative use of the tape (Ex 3 and Ex 4).

Example 1.



Example 2.



Example 3.



Example 4.

