

# [WHEN PEOPLE PLAY]

## Block Suspension Bridge



**Block Suspension Bridge:** Discovered this when working with some engineers. Using building blocks I wanted to challenge them on finding new and creative ways to innovate.

**Activity Objective:** The idea is for the team to create and suspend the longest bridge using [children's building blocks](#).

**Facilitated Objective:** Comparing and sharing ideas, designating roles, communicating and breaking down roles and responsibilities

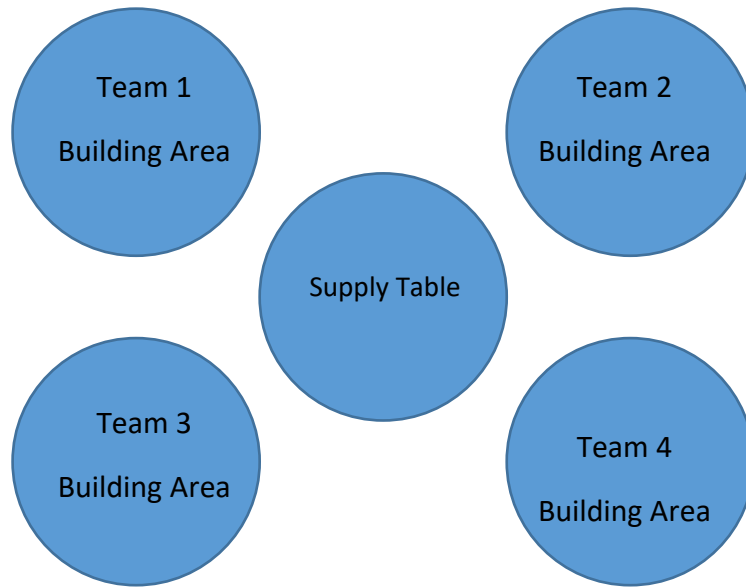
**Needs & Numbers:** You will need 15 to 30 blocks for a team of five to eight people per sub-group or team. This activity works well with 6 - 25 participants.

**Time:** 15 – 20 minutes

**Setup:** First start by setting up the play area for this activity by providing places to build for every subgroup or team. I like to set up tables for participants to work off of with a station in the middle to place the blocks. The building area can consist of a table, a small roped or coned area.

**See figure A.**

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Depending on the size of the group, break them into subgroups or teams with about 5 to eight participants on each team. Invite someone to come up and demonstrate how to suspend a bridge using the blocks.

## **Rules of Play:**

The goal is to see how many blocks can be suspended in the air “between” each member of the team. Give the participants 6 to 8 minutes to complete this activity. Give them the following instructions.

1. Each will start at the building site.
2. Each team can plan as long as they need.
3. Time starts when someone even from another team touches a block.
4. Only one finger can support a block once a block is connected to the bridge.
5. Each block can only be carried to the building area one at a time.
6. Two blocks can start between two people.  
The team can decide to either build in a line or a complete circle as shown in Figure B on the next page.
7. Once a block is connected to the bridge, only one finger can support that block.
8. You can only add to the bridge while the bridge is being supported in the air.
9. If for any reason the bridge collapses, you can rebuild it on the table or building site from its last completed block connection.
10. The team is responsible to report how many blocks were used to build at the end of time.

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Figure B:



**Safety:** The one safety precaution I would advise is the buckling of the blocks. Too much pressure will cause them to push out the side and shoot out. This is one reason we use one finger to push or hold up a block.

**Facilitation:** For facilitation purposes, I do have the blocks in the middle versus each sub-group to have their own. This helps to encourage that these are resources for all to use and share. This will make for great talking points at the end. See questions below. When inviting someone up to help you show how to suspend the bridge please make sure that this is a volunteer and you did not drag them to the front. This could lose trust in the group especially if you happen to pick that one person who is timid or has stage fright.

**Observations/Questions:** Comparing and sharing ideas, communication, being innovative, sharing resources, designating roles, and breaking down roles and responsibilities

- What did it look and sound like to share ideas?
- Were all ideas excepted? Why or Why not?
- What was the communication like? Did you find yourself doing more telling or listening?
- Why do you believe that was the case?
- Did you challenge the rules or perception of them to try to be more innovative?
- Did you see other groups being more innovative than your team?
- Did you ever try to share or communicate your ideas with the other teams?
- Did you perceive the supplies in the middle as limited to you or shared by all?

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- What roles were given if any at the beginning or planning time?
- Did those roles change as time went on?
- If so what caused the changes?

## Variations:

- 1st Variation: As mentioned in the video. Have the teams spell out characteristic traits of a leader or the values of their team. Do this for the first 5 minutes of round one. Then, for round two, have the teams use the words they spelled to create the block bridge as shown and described above.



- 2nd Variation: Gather the blocks and place them in the center or all the teams. This will be the main supply of blocks for all the teams. The main goal of the exercise is to have "The" longest suspension bridge. Unlike the above, this bridge will be one bridge for the whole team. Not individual bridges between people.

Each person is allowed to grab only one block at a time from the center pile and take it back to their building area. The team is allowed to start building at any time. What they need to be aware of is that once a block is connected to the bridge, then that block can only be supported by one finger. It doesn't matter who supports the block but again the block can only be supported by one finger. Notice below in the picture that the bridge can be supported by many fingers at different spots on the bridge.

When building the structure, you can only add to the bridge while suspended in the air. They will not be allowed to build on the surface of the building area and then lift. All blocks must be added to the air.

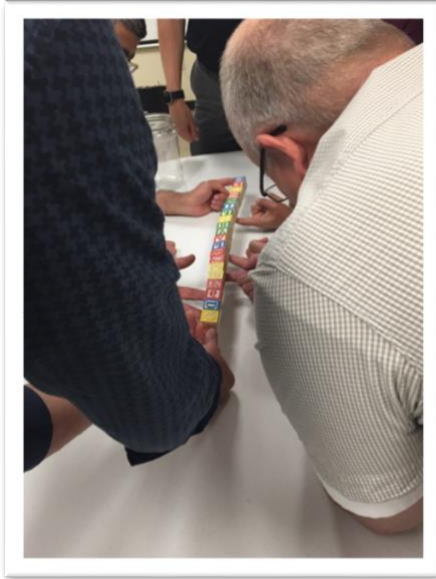
If at any time the structure falls, the team can recreate the bridge from the last successful attachment and then continue from there. Be sure to keep track of how many you use to

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construct the bridge, after ten minutes, you will be asked how many blocks the team had used in their construction.



- 3rd Variation: To make it easier for your group if needed, you can allow them to build from the table and lift the bridge. If you use this method the bridge has to last for 20 seconds. Or have a contest to see who can last the longest.
- 4th Variation: The above instructions are for collaborative work between all the teams or subgroups. If you wish to make this a competition, then have enough block supplies for each team to have their own set. Instead of the longest bridge, you can say the first team to have 20 blocks connected. You can even do it in rounds. The first round would be 10 blocks. The second 15 blocks and the last and third-round 20 blocks. Each team can keep time for scores.

**Video Link:** [When People Play Channel – Team building with blocks](#)

**Instructions:** Below are a set of instructions you can copy and cut out to hand to participants to help clarify your instructions. I find these helpful if working with large groups and to keep me from forgetting something when giving out the instructions verbally.

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## **Block Suspension Bridge Instructions:**

1. Each will start at the building site.
2. Each team can plan as long as they need.
3. Time starts when someone even from another team touches a block.
4. Once time starts you have 10 minutes to build the longest Suspension Bridge using the Blocks.
5. Each block can only be carried to the building area one at a time.
6. Two blocks can start between two people.
7. Once a block is connected to the bridge, only one finger can support that block.
8. You can only add to the bridge while the bridge is being supported in the air.
9. If for any reason the bridge collapses, you can rebuild on the table or building site from its last completed block connection.
10. The team is responsible to report how many blocks was used to build at the end of time.