

Lego Structures

Time is of the essence as a project manager leads the team to create a recognizable building out of whatever's in the bag!

Time: 15–30 minutes

Materials: Ziploc bag of Legos (K'nex also work well.) Provide enough for each group to build a structure. It is best if some bags have great pieces for building while others do not.

INSTRUCTIONS:

1. Place teams in groups of three or four.
2. Explain the challenge: You will have 12 minutes to create a realistic structure. You must use all of the materials given to you. Clarify that "realistic" means that someone from outside of your group would be able to identify the structure.
3. Choose one person from each team to be the Project Manager. Hand that person the bag of Legos, but don't let that person open it. Explain that he or she is responsible for:
 - Making sure that everyone is involved in some way
 - Making sure that there is a plan in place before his or her team begins
 - Ensuring that all team members understand the goal of the project
 - Making sure that the deliverable is completed within the specified time
4. Once teams have developed an initial plan for their structures, allow them to begin building.
5. After 1 or 2 minutes have passed, rotate among each group and grab a handful of Legos from their supply. Point out that when you are involved in a project, sometimes resources change and you must adjust.
6. After another minute has passed, point out that you have just been notified that teams must now complete the challenge in 10 minutes instead of 12. They will have to adjust their timing as needed.
7. You may choose to incorporate some or all of the following adjustments:
 - While teams are working, add non-standard Lego pieces to their supply. Groups will still be required to use all of the pieces.
 - Pull a team member from one group and have that person work in another group.
 - Assign a new Project Manager.
8. When there is 1 minute left, tell teams that they should be finishing their structure.
9. Have teams share their structure with the group.
10. Debrief with some of the following questions:
 - Share your reactions to the project.
 - What were some of your group's initial assumptions?
 - What were some of the resources and constraints of the project?
 - How did you apply the project management cycle to this activity?
 - How did it feel to be assigned the role of Project Manager?
 - How did your Project Manager ensure that everyone was involved?
 - Did you need to adjust your initial plan? What kinds of adjustments did you have to make along the way?
 - Did your group work well together? Explain why or why not.



EXTENSION: PLAN THE SUPER BOWL

To help students understand the many steps involved in project management, ask them to imagine that they are in charge of planning the Super Bowl. What would they have to do to make this event happen? Have them brainstorm ideas for each stage of the project management cycle (Define, Plan, Do, and Review).