

Careers in Manufacturing: How to Make a Peanut Butter and Jelly Sandwich

Educational Objective:

Students will learn the importance of communicating thorough and accurate procedures. The ability to write and follow instructions is an important workplace skill.

In this activity, students will attempt to “program” the instructor to make a peanut butter and jelly sandwich. Begin by breaking the class into small groups and instructing the children to collaboratively write down instructions for making a peanut butter and jelly sandwich. A time limit of about 5 minutes is appropriate. When completed, in front of the students, interpret the instructions in the most frustratingly literal manner possible.

For example, you may receive instructions similar to the ones listed below.

- Take a slice of bread
- Put peanut butter on the slice
- Take a second slice of bread
- Put jelly on that slice
- Press the slices of bread together

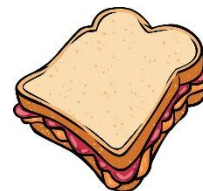
These instructions which would result in you taking a slice of bread, putting the jar of peanut butter on top of the slice, taking a second slice of bread, putting the jar of jelly on top of that slice, then picking up both slices of bread and pushing them together.

After this tell the students that their peanut butter and jelly sandwich doesn't seem quite right and ask for a new set of instructions.

Repeat this process until you receive a revised list similar to this one:

- Take a slice of bread
- Open the jar of peanut butter by twisting the lid counterclockwise
- Pick up a knife by the handle
- Insert the knife into the jar of peanut butter
- Withdraw the knife from the jar of peanut butter and run it across the slice of bread
- Take a second slice of bread
- Repeat steps 2-5 with the second slice of bread and the jar of jelly
- Press the two slices of bread together such that the peanut butter and jelly meet

This activity gives students the opportunity to understand the importance of clear communication, instructing with detail and procedural writing.



Adapted from: MIT Zero Robotics Program