

## Lesson Title: Peanut Butter and Jelly

**Overview:** In this lesson, students will be introduced to the concept that computers do what they are told and nothing more.

<b>Duration estimate:</b> 53 minutes (1 class period)	<b>Target Grade Level:</b> Grade 7
<b>Materials Preparation:</b> Loaves of bread Knives Jar of Peanut Butter Jar of Jelly Paper Towel or Clorox Wipes	<b>Unit</b>
<b><u>Curriculum Goals:</u></b>	<b><u>Big Ideas</u></b> <b>Concept/Skill:</b> Literalism. Computers only do what they are told. Thoroughness when programming <b>Vocabulary:</b> Programming, Literalism, Inference
<b>Teacher Prep:</b> <ul style="list-style-type: none"><li>• <i>Be ready to get messy when following students steps for making a pb&amp;j sandwich</i></li><li>• <i>Be sure that you do not have any peanut allergies in your classes</i></li></ul>	
<b>Prior Knowledge:</b> <ul style="list-style-type: none"><li>•</li></ul>	
<b>Lesson Objectives:</b> <ul style="list-style-type: none"><li>• Students will be able to:<ul style="list-style-type: none"><li>○ understand what literalism is</li><li>○ understand that computers do what they are told and nothing more</li><li>○ understand the importance of being thorough when writing code</li></ul></li></ul>	

**Lesson Introduction:** Tell the class that you are a peanut butter and jelly sandwich making machine and that everyone needs to write down (either in teams or individually, on paper, or in a jamboard) instructions for making the sandwich so you know what to do. Give them about 5 minutes

**Day 1:**

1. **Activity:** Gather up all of the instructions and have a helper (or take turns) read you one set of instructions while you (the pb&j machine) follow their instructions. Make the sandwiches by interpreting the instructions as literally as possible. For example, if they say “put the peanut butter on the bread”, put the jar of pb right on top of the bagged loaf of bread. If they say “get two slices of bread” rip the bag open so that bread flies everywhere. “Open the jar of jelly” try to pry the lid off with the knife. “Put the bread together” put them next to each other touching on the edge. Students will probably start yelling out what you should be doing, and tell them to hang on a few minutes. After several “tries”, ask the students to write you a new set of instructions. Follow the instructions again. These will be much more thorough and should result in a perfect sandwich.
  - a. **Duration 40 minutes**
2. **Assessment** Ask students what was going on. They should be able to tell you that you could not infer from their instructions all of the details that they just assume you as a person knows. Discuss how because you are a computer, you cannot infer or “read between the lines” when they give you the instructions and how they needed to tell you every single little detail (like turn the jelly lid counter-clockwise and lift off)
  - a. **Duration 10 minutes**
3. **Wrap Up** Revisit the fact that being able to read between the lines and determine what was meant rather than what was said is a skill that computers lack and that when they begin writing their code, they need to remember this.

**Teacher Reflection:**