**Review of polymer concepts (15 min)**

**Summary:** This is a pretty open-ended slot, we want an active activity to review polymer basics before jumping into manufacturing lectures.  Currently done by asking

**ILOs:**

1. Recall basic polymer knowledge covered earlier in the week
   1. Polymer and plastic vs wood, metal, etc.
   2. Rubber vs. Thermoset vs. thermoplastic vs… etc (different types of polymers)

**Equipment list:**

* Same type of polymers, different objects than those used earlier in the week (requires thinking about properties to identify the polymer, not just memorizing which material is which)
  + Wooden item (wooden spatula)
  + Ceramic item (ceramic dish)
  + Glass item (glass tupperware/packaging)
  + *Hard plastic item (something thermoformed earlier in the week)*
  + *Rubbery item (ex. Phone case, rubber band or eraser- use what wasn’t used for first activity)*
  + *Wrapper item (ex. Chip bag, plastic bag)*
  + *Fabric item (ex. shirt)*
  + *Paper item*
  + *Jello?*
  + Metal item (key, lock)

**Intro:**

Earlier in the week, we went over the properties of polymers. Before we begin our activity, let’s review a few properties! *Hold up the item for the property we are on, and allow students to move to the left or right of the room based on which property they think the items have.*

* Stiff or Flexible
* Dense or airy
* Stretchy or rigid
* Smooth or rough
* Clear or colored

For the following polymers/materials: wood, ceramic, glass, plastic in some form, metal, … (more depending on materials list)

**Procedure:** Quiz style

Now that we have an understanding of what the properties of materials are, let’s do an activity to understand the industrial applications of polymers. Use the slide show to go through what type of polymer each of the industrial examples is. This can be done by having people move to different areas of the room for more movement and engagement, show of hands, group competition, etc.

**Discussion questions/debrief:**

* Can you think of any more common applications of different polymers? Discuss with your groups then share it with the class.

**Lab handout needed?**

No, but there are accompanying slides