

How Does Your Production Line Rate? Activity—Directions

You are going to create a product that can be manufactured in an assembly line. You may be asked to give the original you have created and the bags of supplies to another group to see how quickly and correctly they can build the product. *Please follow all the instructions.*

Materials

These are the materials.

- Paper clips
- Sticky notes (same color and size)
- Stickers
- Popsicle sticks
- Straws
- Pipe cleaners
- Cotton balls
- Craft foam shapes
- Index cards
- Rocks
- Pieces of pasta
- Uniform small pieces of paper
- Googly eyes
- Beads
- Binder clips
- Buttons
- Uniform small squares of aluminum foil
- Toothpicks
- One roll of tape per group (optional)

Directions

These are the directions.

1. Form a group of four factory workers. You will get eight plastic bags of supplies.
2. Open each bag and remove one item from each to use in your product. Then close all the bags.
3. Make a fun creation with your eight parts. **Stop here!**
4. Before you start the production run, create a flowchart for your production line. Map out or list the steps on a separate piece of paper or on notecards at each station.
 - Everyone in the group should be able to see an assembled product; this product is also for quality control later.
5. Remove one item from each bag. **Do not take apart your first product.**
6. (Optional) Your group switches places with another group if your teacher instructs you to do so.
7. **Don't build anything until I say "Start."**
8. Go as fast as you can, but try not to make mistakes.
9. When I say "Stop," count the total number of products that you finished building. On the How Does Your Production Line Rate? Activity Form, write the total number of completed products on the Total Number Produced line. If you run out of materials before time is up, write the time that you stopped building.

If groups switched lines, two students from the original group are the inspectors. They use the original as a guide to see if the groups made any mistakes.

Two group members stay with the assembly line to serve as production supervisors and answer any questions. (If students did not switch groups, they invite someone from another group to monitor their quality inspection.)

10. On the form, record the number of items that have mistakes, or defects. Write that on the Total Number of Defective Products line.
11. The production supervisors subtract the number of defective products from the total to get a Net Production number. Fill in the information in the form.

