



Candy Assembly Line Activity

Objective: Students will demonstrate their understanding of what a plant and tooling manager does by simulating an assembly line.

Materials:

- Bulk small candies or beads
- Small paper cups or plastic baggies
- Plastic spoons, tweezers, small measuring scoops, and ice cream sticks
- A timer

Activity Instructions:

1. Divide class into teams.

2. Assign roles:

Plant Manager: Oversees the whole line, tracks total output, manages worker pacing, and monitors the budget/waste.

Tooling Manager: Selects which utensils to use, ensures the utensils aren't damaging the candy, and adjusts the setup if a tool fails or slows down production.

3-4 Assembly Operators: Use the tools to physically scoop and package the items based on strict instructions (e.g., exactly 5 red, 5 blue, and 5 yellow candies per cup).

3. Start a 3-minute timer.

4. Teams must produce as many perfect packages as possible.

5. Halfway through, announces a "Market Shift." The client now wants 8 red candies instead of 5, or a tool break.

- 6. Stop the timer. The Plant Manager counts the successful packages, calculates defective ones (spilled candy or wrong counts). The Tooling Manager must redesign or adjust the physical tools or station setup to solve any issues for the next run.**
- 7. Run the line again for 3 minutes to see if the changes made by the managers increased total production and reduced waste.**

Post Activity Discussion Questions:

What did you like most about this activity?

What did you like the least about this activity?

During our simulation, how did a problem with a physical tool directly impact the Plant Manager's production goals?

How must a Plant Manager and a Tooling Manager communicate to solve problems on a real factory floor?

Extension Activities:

Students will complete a short research project on how car factories changed during World War II, focusing on how managers reorganized the buildings and workers to mass-produce military equipment.

Utilizing the data collected during the "Candy Assembly Line" simulation, students will design a scaled 2D factory floor blueprint.