

Wizards of Wright

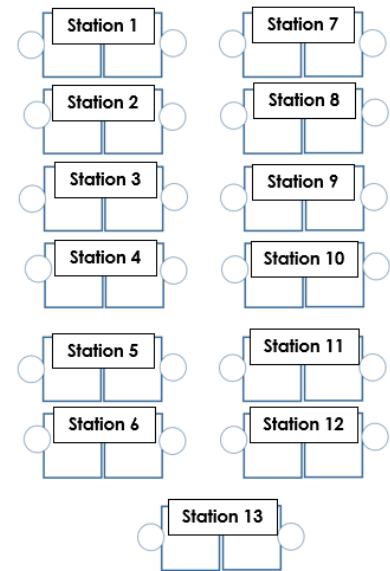
Tips for Manufacturing demo

Getting Ready:

If the teacher hasn't already arranged the desks, set up the space for an assembly line. Here are some options – choose the arrangement based on available space in the room.

Pre Assembly Line Questions – Things to think about:

1. Do they think it will be faster or slower to do a continuous line of work?
2. What might happen if we work too fast? (broken pieces, not paying attention)
3. What might happen if we work too slowly? (cost per glider increases)
4. Will everyone be working at the same time?
5. What should you do if you are waiting for the parts to arrive so you can do your job? What should you do when you finish your job?
6. What will happen if you leave your work station to talk with others?



Station 1	Station 2	Station 3	Station 4
Station 1	Station 2	Station 3	Station 4

Station 5	Station 6	Station 7	Station 8	Station 9
Station 5	Station 6	Station 7	Station 8	Station 9

Station 10	Station 11	Station 12	Station 13
Station 10	Station 11	Station 12	Station 13

Station 1	Station 1
Station 2	Station 2
Station 3	Station 3
Station 4	Station 4
Station 5	Station 5
Station 6	Station 6
Station 7	Station 7
Station 8	Station 8
Station 9	Station 9
Station 10	Station 10
Station 11	Station 11
Station 12	Station 12
Station 13	Station 13

Assembly Line:

Wizard Roll – Plant Supervisor

Students: (2 students at each position)

Job Descriptions (in a nutshell)

1. Production Prep Associate – cut open the bags
2. Material Prep Technician – snap pieces apart
3. Sorting Technician – sort like parts into piles
4. Parts Delivery Person – move parts to appropriate stations
 - a. Move rudders to Station 5
 - b. Move stabilizers to Station 6
 - c. Move Wings to Station 7
 - d. Move any broken pieces to the Accounting Manager
5. Rudder Assembly Specialist – connect rudder to the fuselage
6. Stabilizer Assembly Specialist – connect stabilizer to the fuselage
7. Wing Assembly Specialist – connect the wings to the fuselage
8. Quality Assurance Controller – check that pieces are accurate
 - a. Check that pieces are in the correct spot
 - b. Check that pieces are secure
 - c. Measure wing length so that it is equal on both sides of the fuselage
9. Shipping and Receiving Specialist – transport finished product to test pilot (Station 10)
- can deliver to Station 11 after testing if needed
10. Flight Test Pilot – complete 1 test flight per glider
11. Product Assessor – put a sticker on all gliders that pass the flight test
 - a. Pass = actually flew without falling apart
 - b. Fail = return glider to Station 8, or to the station that can fix the individual piece
12. Route Delivery Driver – deliver completed gliders to teacher specified area
13. Accounting Manager – complete worksheet so report can be given, make calculations of price per unit, labor efficiency, and production time

Wrapping Up:

1. What went well?
2. What could we do to improve our process next time?
3. How did you handle it when you didn't have a job to do?
4. How could a work schedule be handled at the factory so everyone is busy when they are at work?
5. Use the Accounting Sheet to talk about production prices, successes, and areas of improvement.