

## Manufacturing & Distribution Activity

**Setup:** Desks should be arranged in 4 groups prior to your arrival. Depending on the class size, there will be 4-6 desks per group. In addition to your bin, you should also have a set of gameboards.

**Goal:** Students will explore the many steps involved in the manufacturing and distribution of products by focusing on the Starbucks York Roasting Plant. Videos are used to show how the beans arrive to the York Roasting Plant, travel to the York Distribution Center and then on to their customers. Through the video and board game, students will explore both processes and learn fun facts about Starbucks along the way.

**Introduce yourself and briefly share your career/education background.**

### Opening Comments:

Ask the students, when I say the word manufacturing, what does that mean? (*The making of items*) Raise your hand if you have gone to a Starbucks café or have seen Starbucks coffee in a store. Have you ever thought about how that coffee was made or how it got to the café, or store? Coffee beans come from all over the world to be roasted and made into coffee for millions of people to enjoy across the country. Starbucks has a roasting plant and distribution center located right in our backyard in York, PA. You may even know someone that works for Starbucks. Today's activities involve learning about manufacturing and distribution, specifically focusing on Starbucks coffee beans. However, keep in mind, although we are focusing on Starbucks, these manufacturing and distribution processes are similar to many products that surround us every day.

Why are we focusing on manufacturing and distribution today? Here in South Central Pennsylvania, there are over 3,800 manufacturing and distribution establishments employing over 153,000 workers! Combined, there are more jobs in manufacturing and distribution (with distribution technically known as transportation and warehousing) than in any other single sector including retail, health care, and education.

### Activity 1: Manufacturing

In our first activity, students will watch part 1 of the Starbucks Video- the York Roasting Plant. Let the students know that they are going to watch a video created by Starbucks. The first part of the video takes place in their York Roasting Plant and will explain the manufacturing process of the coffee beans. They should pay close attention to the video and the steps as they are mentioned because they will be using still shots of these steps in the manufacturing process activity.

- 1. The teacher should have a link to the video already downloaded onto a computer. If not, insert the flash drive in your bin into the computer.**
- 2. Play the video- Pause the video when instructed to do so on the screen.**

### Activity Directions: (3-5 minutes)

- Hand out the Starbucks coffee bags, with the Manufacturing cards inside of them, to each desk group.

- When you instruct the students to start, they will work as a team to remove the Manufacturing cards from the Starbucks coffee bags and place the cards on their desk, in the manufacturing process order that they saw on the video. The first item of the process should be at the top (or far left) and the last item of the process on the bottom (or far right).
- There are a total of 10 cards.

**Review:** After all the groups have completed the activity, use the volunteer answer key, and review the manufacturing process order with them.

- Go around the room and have the groups take turns answering the processes order. Have them correct any cards that they may have gotten wrong.
- After reviewing the order, have each group place the cards back in the Starbucks coffee bags and return the bags to you.

**Comments (Key Learning):** Processes performed in their proper sequence are critical to the manufacturing process to ensure a consistent, quality product. Engineers design the machines and robotics used in these processes and those who control the processes utilize mathematics, statistics and other analytical skills.

### **Activity 2: Distribution**

Again, let the students know that they are going to watch the second part of the video. This is the Distribution part of the coffee beans. Ask the students what does distribution mean? (*The action of sharing something out among a number of recipients*) In the video, we are focusing on the distribution of coffee beans. However, distribution involves all the products that surround us. Whether we purchase an item online through Amazon and have it delivered to our doorsteps, or purchase an item in a store, it must be distributed to us through distribution centers.

**STEPS: Play the 2<sup>nd</sup> part of the video.**

**Activity Directions:** (3-5 minutes)

- Show and compare the difference between the Green Coffee Beans (used in the game) and the Roasted Coffee Beans sold in stores that are in the baggie.
- Hand out the Starbucks game board, team game bags, cup, bag of green coffee beans, and game instructions to each group.
- Explain to the groups they will be working together as a team.
- Read over the Starbucks Game Instructions with the students.
- Each team will simultaneously begin the game and play until they complete one full rotation around the board. The team that collects the most coffee beans in their cup is the winner.
- Once all teams have completed the game, collect all Team Game Bags from the Shift Supervisor. Please make sure all items are returned in the bags (**especially the game pieces**).
- Review by reading the Starbucks Game Question and Answer Sheet, if time permits.

**Comments (Key Learning):** While many manufacturing and distribution processes utilize robotics and other automation, people are still needed to design, operate, and maintain these processes. Even in a highly automated environment, manufacturing and distribution could not operate without people.

### **Wrap Up:**

What did you learn about Manufacturing and Distribution today? As you watched the video, did you see any jobs/careers that might interest you? What skills did you see people using in the video?

## **End of Day Clean-Up Checklist – Place the following back in the bin:**

- **Student Manufacturing Process Bags with Cards inside (4 bags with 10 cards each)**
- **Team Game Bags (4) each with the following:**
  - **Fun Fact Cards (15)**
  - **Warehouse & Distribution Cards (19)**
  - **Game Piece**
  - **Die**
- **Coffee Cups (4)**
- **Bags of Green Coffee Beans (4)**
- **Bag of Roasted Coffee Beans (1)**
- **Manufacturing Video Flash Drive (1)**
- **Volunteer Instructions Folder**
  - **Activity 1 Volunteer Manufacturing Answer Key (1)**
  - **Activity 2 Student Game Instructions (5)**
  - **Recap Question Card (1)**
  - **Finale Question Card (1)**
- **You should also have (4) game boards in black carry bag**
  
- **Thank the teacher for allowing JA in their classroom today.**
- **Return Bin and gameboards to JA staff in hospitality area.**

**Smile. You made a difference today!**