THE ASSEMBLY LINE

PART 1: ASSEMBLY LINE REFLECTION

1. What feelings did you experience during this activity (What did you like and dislike? What was hard? What was easy)?

2. What did you think was the most productive for your group the first ten minutes or the second ten minutes? Why?

3. What one word would sum up your experience?

PART 2: PROS CONS

Directions: Complete the following t-chart based on your group's experience with the assembly line.

PROS	CONS

1. How do you think American workers felt about the assembly line?

2. Why do you think business owners used this method of production?

3. If you owned a business, would you use this method of production? Why or why not?

4. What alternative methods of production might be better than the assembly line?

PART 3: THE ROLE OF HENRY FORD

Use the passage on the back of this page to answer the following questions.

1. Describe the Model-T Ford.

2. What was Ford's goal in creating a car of this type?

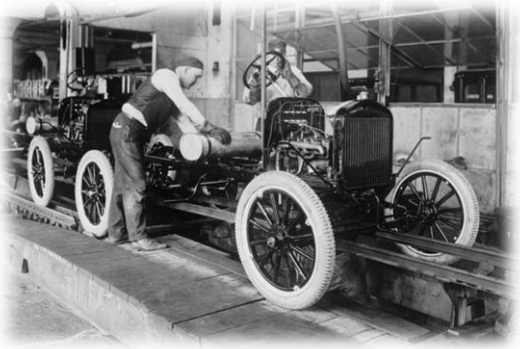
3. When Henry Ford introduced the moving assembly line, how many steps were involved?

4. What effect did the introduction of the assembly line have in Ford's Michigan plant?

Ford Installs First Moving Assembly Line (1913)

In 1907, Henry Ford announced his goal for the Ford Motor Company: to create "a motor car for the great multitude." At that time, automobiles were expensive, custom-made machines.

Ford's engineers took the first step towards this goal by designing the Model T, a simple, sturdy car, offering no factory options -- not even a choice of color. The Model T, first produced in 1908, kept the same design until the last one -- number 15,000,000 -- rolled off the line in 1927. From the start, the Model T was less expensive than most other cars, but it was still not attainable for the "multitude." Ford realized he'd need a more efficient way to produce the car in order to lower the price. He and his team looked at other industries and found four principles that would further their goal: interchangeable parts, continuous flow, division of labor, and reducing wasted effort.



Using interchangeable parts meant making the individual pieces of the car the same every time. That way any valve would fit any engine, any steering wheel would fit any chassis. This meant improving the machinery and cutting tools used to make the parts. But once the machines were adjusted, a low-skilled laborer could operate them, replacing the skilled craftsperson who formerly made the parts by hand. To improve the flow of the work, it needed to be arranged so that as one task was finished, another began, with minimum time spent in set-up. Ford was inspired by the meat-packing houses of Chicago and a grain mill conveyor belt he had seen. If he brought the work to the workers, they spent less time moving about. Then he divided the labor by breaking the assembly of the Model T into 84 distinct steps. Each worker was trained to do just one of these steps. Ford called in Frederick Taylor, the creator of "scientific management," to do time and motion studies to determine the exact speed at which the work should proceed and the exact motions workers should use to accomplish their tasks.

Ford put these principles into play gradually over five years, fine-tuning and testing as he went along. In 1913, they came together in the first moving assembly line ever used for large-scale manufacturing. Ford produced cars at a record-breaking rate. That meant he could lower the price and still make a good profit by selling more cars. Ford had another notion, rather original in its time: the workers were also potential consumers! In 1914, Ford workers' wages were raised to $5 a day -- an excellent wage -- and they soon proved him right by buying their own Model Ts. Ford was called "a traitor to his class" by other industrialists and professionals, but he held firm in believing that well-paid workers would put up with dull work, be loyal, and buy his cars.

Ford's manufacturing principles were adopted by countless other industries. Henry Ford went beyond his 1907 goal of making cars affordable for all; he changed the habits of a nation, and shaped its very character.

http://www.pbs.org/wgbh/aso/databank/entries/dt13as.html