



# High-Performance Manufacturing

## Production Technician



# Skills for Success

## Section 1.3

**Zero in on the training and education programs that will lead you to your goals.**

# MSSC

## Production Skill Standards

These standards cover the six concentrations within manufacturing.

Skill standards describe the knowledge, skills, and performance needed for success in the workplace

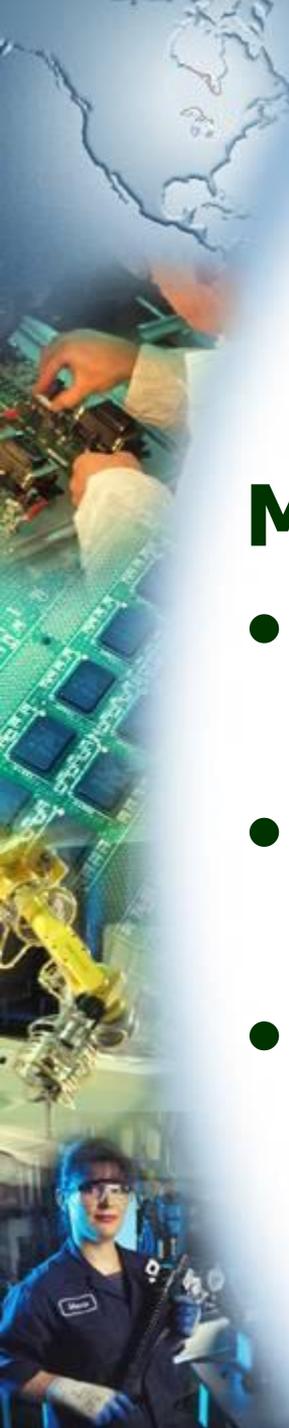


1. Health-Safety and Environmental Assurance
2. Quality Assurance
3. Production
4. Manufacturing Process Development
5. Maintenance-Installation And Repair
6. Logistics and Inventory Control



# MSSC CERTIFICATION

- **Certification is a process of demonstrating that you are qualified to work in a certain field, because you have fulfilled the requirements of that field.**



# **MSSC**

# **CERTIFICATION**

**MSSC Certification is designed to....**

- Prepare you for the real demands of the workplace.**
- Give you a portable skill credential.**
- Prepare you for the challenges of the high-performance manufacturing workplace.**



# Apply It!

## Pg. 41

- **Category: Math & Science**
  - **Calculating Environmental Impact**
- **Process:**
  - **Group 3-4**
- **Time: :05**
- **Task:**
  - **Read Math and Science**
  - **Assist each other and answer question.**



**make decisions**

**communicate**

**lead others**

**apply math and  
science skills**

*solve problems*

**work in teams**

**gather information**



# Education & Training

## Your responsibility

- **Investigate program and institution.**
- **Make sure the program is accredited (officially recognized)**
- **Make sure institution utilizes the latest technology.**
- **Understand employment rates and salary levels.**



# Opportunities

- **High School –**
  - **Solid foundation**
    - **Reading, writing, listening, and speaking; as well as math and science skills.**
- **Apprenticeship –**
  - **Training program that combines classroom and actual work under an experienced skilled worker.**
- **Career and Technical Schools**
  - **1-3 year programs, normally provide some sort of certification.**



# Opportunities

## Continued-

- **Community and Technical Colleges**
  - Programs that are normally 2 year or less.
  - Certificate programs and Associate degree programs
- **Colleges and Universities**
  - 2-4 year degree programs
  - Bachelor, Master and Doctorate Degrees
- **Armed Forces**
  - OJT, Classroom, Tuition assistance. Many other opportunities.



# Apply It!

## Pg. 44

- **Category: Problem Solving**
  - Analyzing and Solving Problems
- **Process:**
  - Group 3-5
- **Time: :05**
- **Task:**
  - Read PS pg. 44
  - Discuss as group “apply it”.
  - Classroom discussion

# Knowledge Check!

## Pg. 45

- **Category:**
  - Review
- **Process :**
  - Individual
- **Time: :08**



# Knowledge Check!

## Pg. 45



### Questions:

- How can MSSC certification help you succeed in your career?
- List three categories of occupational and technical skills needed?
- Identify two ways to prepare for a career in H-P Manufacturing?
- Describe three types of programs that provide education and training for a career in H-P Manufacturing?





**Review It!**

**Pg. 46**

- **Chapter:**
  - **1**
- **Sections:**
  - **1.1, 1.2, 1.3**
- **Individual:**
  - Time: :00**
- **Task:**
  - **Answer “Review Questions” and/or “Test Prep”**
  - **Classroom Discussion**

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- Economic Impact
- Technological Impact
- The Evolution of Manufacturing
- Rising Customer Expectations
- Expansion of the Global Economy
- Regulations & Standards



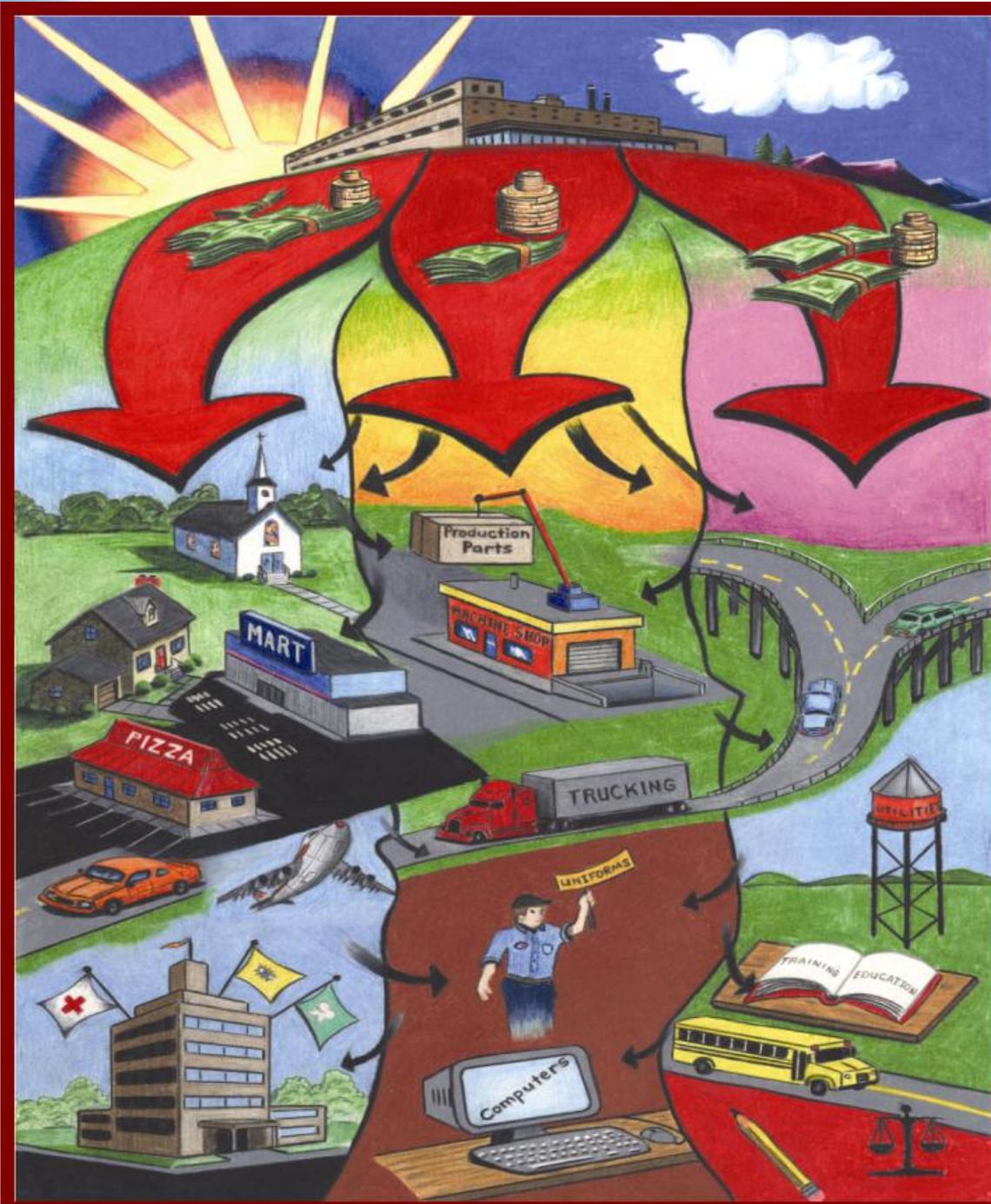
# The Impact of Manufacturing: Section 2.1

- **Manufacturing directly impacts the U.S. economy.**
- **14 million people work within mfg.**
- **25% of all goods and services produced within the United States are a result of mfg.**
- **Mfg. has the highest productivity rates in the country**
  - **Productivity** is the measure of how efficiently goods are produced

# Get Up!

- **Subject:**
  - **Community Impact**
- **Process:**
  - **Group of 3-5**
- **Time: :10**
- **Task:**
  - Study the PLAY.map and identify all the economic impact points by a typical business
  - Class Discussion





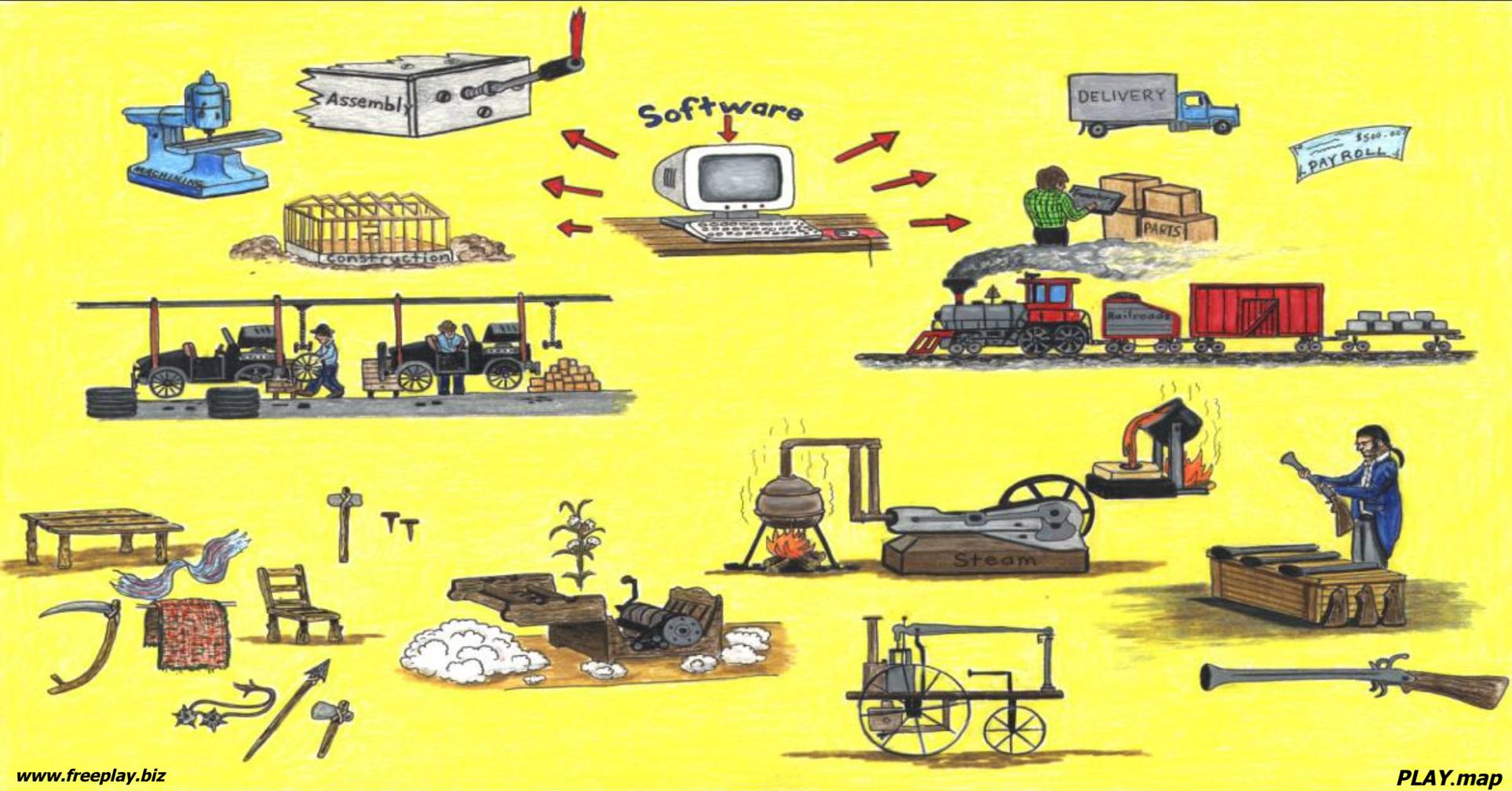
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# Get Up!

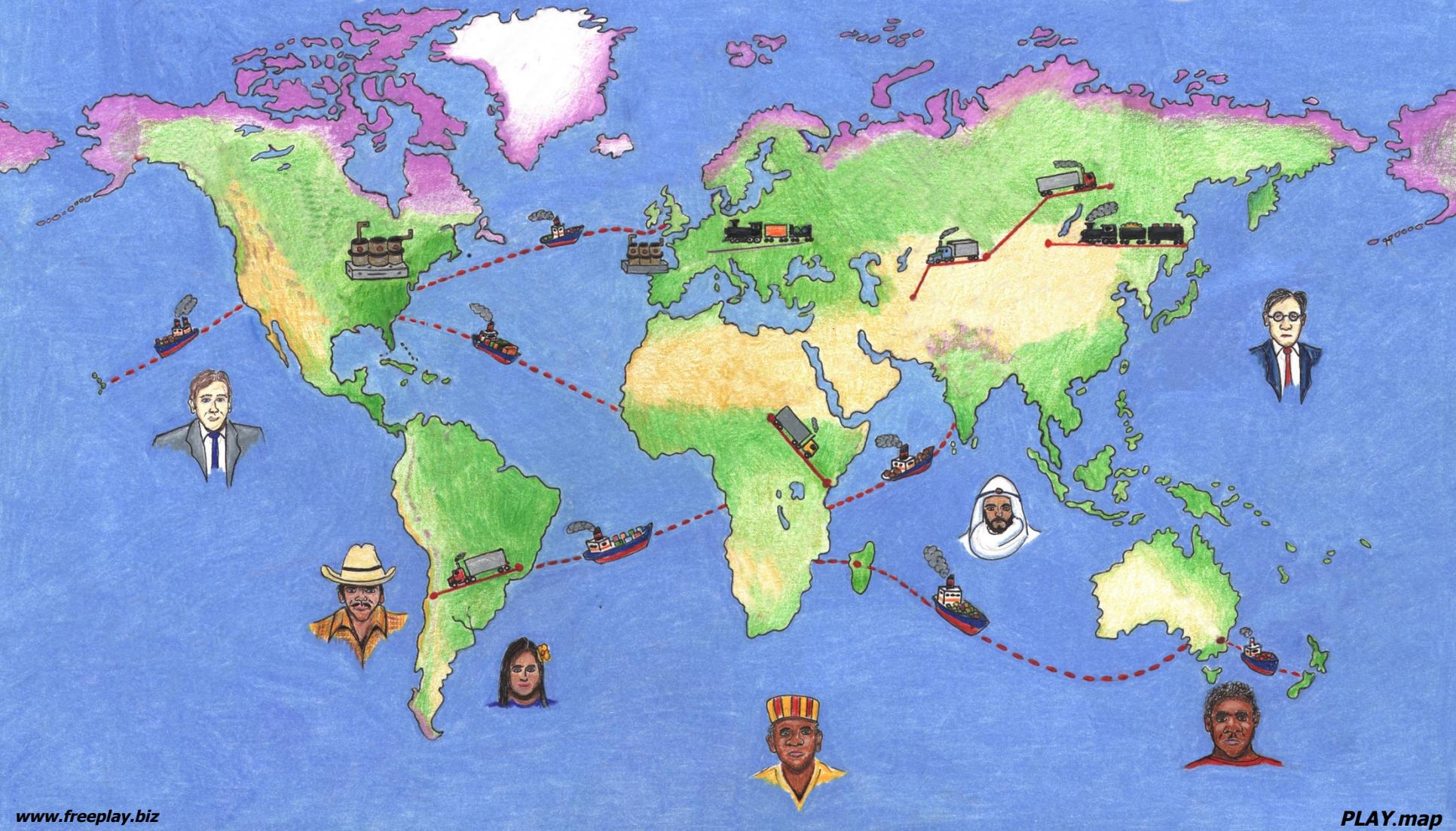
- **Subject:**
  - Manufacturing Evolution
- **Process:**
  - Group of 3-5
- **Time: :15**
- **Task:**
  - Study the PLAY.map and identify all the technology advances that triggered major changes within mfg.
  - Class Discussion



# The Impact of Manufacturing:

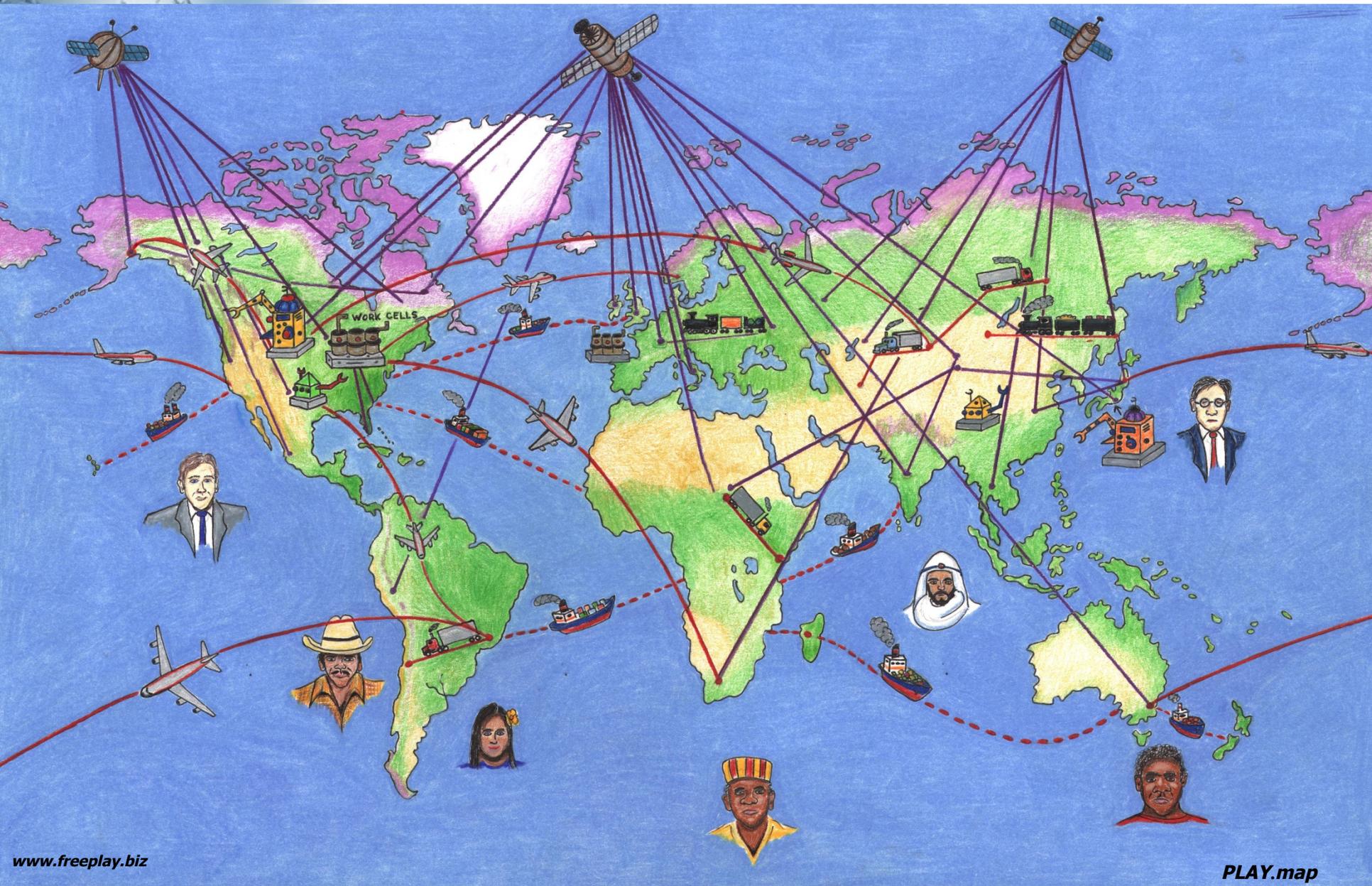


# The Impact of Manufacturing:



# The Impact of Manufacturing:





[www.freeplay.biz](http://www.freeplay.biz)

PLAY.map

# The Expansion of the Global Economy



# Regulations and Standards:

## Health and Safety Practices

OSHA -Occupational Safety & Health Act

NIOSH -

## Environmental Practices

EPA –Environmental Protection Agency

ISO –International Standards Organization

## Protecting Worker Rights

Federal Labor Laws

State Labor Laws

Collective Bargaining

**Note:** When Federal and State regulations cover the same topic; an employer must follow the stronger of the two

# Knowledge Check!

## Pg. 55

- **Category:**
  - Review
- **Process :**
  - Individual
- **Time: :05**



# Knowledge Check!

## Pg. 55



### Questions:

- How does manufacturing's high productivity rate benefit the economy?
- How did introduction of continuous process and interchangeable parts advance manufacturing?
- Explain how customization can help meet customer needs.
- How has globalization led to more competition?
- How has environmental concerns changed the way manufacturers make products?



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