# Middle School Career Investigations: Manufacturing Pathways

## Menu

Within the Manufacturing Career Cluster, there are six pathways: Health, Safety, and Environmental Assurance; Logistics and Inventory Control; Manufacturing Production Process Development; Maintenance, Installation, and Repair; Production; and Quality Assurance. Click on each of the buttons to learn more about each. Make sure to visit each one.

## Health, Safety, and Environmental Assurance Job Description

People with careers in the Health, Safety and Environmental Assurance Pathway ensure that the equipment is being used safely in the workplace. They plan for safety in new production processes, as well as conduct health, safety and environmental incident and hazard investigations. To prevent accidents, they conduct preventive incident and hazard inspections. People with jobs in this pathway also implement health, safety and/or environmental programs, projects, policies, and procedures.

## Health, Safety, and Environmental Assurance Sample Jobs

Some of the different careers in the Health, Safety and Environmental Assurance Pathway include Occupational Health and Safety Specialist and Safety Engineer.

## Health, Safety, and Environmental Assurance Salaries and Education

Most careers in Health, Safety, and Environmental Assurance Pathway require some level of higher education. An Occupational Health and Safety Specialist requires a Bachelor’s Degree. They have an average salary of $67,910. Safety Engineers also require a Bachelor’s Degree. They have an average salary of $73,200.

## Logistics and Inventory Control Job Description

People with careers in the Logistics and Inventory Control Pathway work with an inventory of raw materials and finished parts. They unload trucks with raw materials, move raw materials to the production line, wrap pallets of finished products for shipment, and communicate with traffic managers.

## Logistics and Inventory Control Sample Jobs

Some of the different careers in the Logistics and Inventory Control Pathway include Dispatcher, Logistician, Materials Handler, and Shipping and Receiving Clerk.

## Logistics and Inventory Control Salaries and Education

There is a range in educational requirements and salaries in the Logistics and Inventory Control Pathway. A Dispatcher requires an Associate Degree. They have an average salary of $38,020. A Logistician requires a Bachelor’s Degree. They have an average salary of $87,160.

## Manufacturing Production Process Development Job Description

People with careers in the Manufacturing Production Process Development Pathway are responsible for product design and design of the manufacturing process. They work with customers to ensure the manufacturing process produces a product that meets or exceeds customer expectations. They also monitor the manufacturing process and the materials used to manufacture the product.

## Manufacturing Production Process Development Sample Jobs

Some of the different careers in the Manufacturing Production Process Development Pathway include Electro-Mechanical Technician, Industrial Engineering Technician, Manufacturing Systems Engineer, Precision Inspector, Tester, or Grader, Production Manager, and Statistical Process Control Coordinator.

## Manufacturing Production Process Development Salaries and Education

There is a range in educational requirements and salaries in the Manufacturing Production Process Development Pathway. An Electro-Mechanical Technician requires an Associate Degree, as well as on-the-job and technical training. They have an average salary of $56,180. A Manufacturing Systems Engineer requires a Bachelor’s Degree. They have an average salary of $115,650.

## Maintenance, Installation, and Repair Job Description

People with careers in the Maintenance, Installation, and Repair Pathway perform preventive maintenance procedures on machines, tools, and equipment. They also troubleshoot and repair electrical, electronic, and mechanical systems. This includes mechanical repair as well as using computer-based inventory control systems, retrieving information histories on each machine from computer records, and recording repair activities on the system to keep accurate records of repairs performed on each machine.

## Maintenance, Installation, and Repair Sample Jobs

One of the careers in the Maintenance, Installation, and Repair Pathway is a Millwright.

## Maintenance, Installation, and Repair Salaries and Education

A career as a Millwright requires an Associate Degree, as well as on-the-job and technical training. They have an average salary of $52,240.

## Production Job Description

People with careers in the Production Pathway work on the shop floor making parts or assembling them. They work with machines, making or assembling electronic parts, constructing or assembling modular housing, performing welding jobs, or printing various materials.

## Production Sample Jobs

Some of the different careers in the Production Pathway include Assembler, Automated Manufacturing Technician, Extruding and Drawing Machine Operator, Tool and Die Maker, and Welder.

## Production Salaries and Education

There is a range in educational requirements and salaries in the Production Pathway. An Assembler requires a high school diploma, as well as on-the-job and technical training. They have an average salary of $31,310. A Tool and Die Maker requires an Associate Degree, as well as on-the-job and technical training. They have an average salary of $52,810.

## Quality Assurance Job Description

People with careers in the Quality Assurance Pathway assure that standards and procedures are adhered to and that delivered products or services meet performance requirements. They may be responsible for monitoring and maintaining the quality of parts and manufacturing processes. This could include identifying the raw product to ensure it meets specifications, as well as measuring or otherwise testing products and parts to ensure they meet required customer specifications.

## Quality Assurance Sample Jobs

Some of the different careers in the Quality Assurance Pathway include Calibration Technician and Quality Control Technician.

## Quality Assurance Salaries and Education

There is a range in educational requirements and salaries in the Quality Assurance Pathway. A Quality Control Technician requires a high school diploma, as well as on-the-job and technical training. They have an average salary of $45,000. A Calibration Technician requires an Associate Degree, as well as on-the-job and technical training. They have an average salary of $47,844.