

Middle School Career Investigations

Manufacturing Pathways

Menu



MANUFACTURING PATHWAYS

Health, Safety, and
Environmental Assurance

Maintenance, Installation,
and Repair

Logistics and
Inventory Control

Production

Manufacturing Production
Process Development

Quality Assurance



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.

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Health, Safety, and Environmental Assurance Job Description



Health, Safety, and Environmental Assurance Pathway

Job Description

- ✓ Ensure that the equipment is being used safely in the workplace
- ✓ Plan for safety in new production processes
- ✓ Conduct incident and hazard investigations
- ✓ Conduct preventative inspections
- ✓ Implement health, safety and/or environmental programs, projects, policies or procedures



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.

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Health, Safety, and Environmental Assurance Sample Jobs



Health, Safety, and Environmental Assurance Pathway

Sample Jobs

- Occupational Health and Safety Specialist
- Safety Engineer



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

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Health, Safety, and Environmental Assurance Salaries and Education



Health, Safety, and Environmental Assurance Pathway

Sample Jobs

Occupational Health and Safety Specialist	Safety Engineer
Bachelor's Degree	Bachelor's Degree
Average Salary \$67,910	Average Salary \$73,200

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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.

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Logistics and Inventory Control Job Description



Logistics and Inventory Control Pathway

Job Description

- ✓ Work with an inventory of raw materials and finished parts
- ✓ Unload trucks with raw materials, move raw materials to the production line, wrap pallets of finished products for shipment, and communicate with traffic managers



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.

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Logistics and Inventory Control Sample Jobs



Logistics and Inventory Control Pathway

Sample Jobs

- Dispatcher
- Logistician
- Materials Handler
- Shipping and Receiving Clerk



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

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Logistics and Inventory Control Salaries and Education



Logistics and Inventory Control Pathway

Sample Jobs

<u>Dispatcher</u>	<u>Logistician</u>
Associate Degree	Bachelor's Degree
Average Salary \$38,020	Average Salary \$87,160

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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.

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Manufacturing Production Process Development Job Description



Manufacturing Production Process Development Pathway

Job Description

- ✓ Responsible for product design and design of the manufacturing process
- ✓ Work with customers to ensure the manufacturing process produces a product that meets or exceeds customer expectations
- ✓ Monitor the manufacturing process and the materials used to manufacture the product



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.

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Manufacturing Production Process Development Sample Jobs



Manufacturing Production Process Development Pathway

Sample Jobs

- Electro-Mechanical Technician
- Industrial Engineering Technician
- Manufacturing Systems Engineer
- Precision Inspector, Tester, or Grader
- Production Manager
- SPC (Statistical Process Control) Coordinator



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.

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Manufacturing Production Process Development Salaries and Education



Manufacturing Production Process Development Pathway

Sample Jobs	
Electro-Mechanical Technician	Manufacturing Systems Engineer
Associate Degree On-the-Job and Technical Training Average Salary \$56,180	Bachelor's Degree Average Salary \$115,650



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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.

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Maintenance, Installation, and Repair Job Description



Maintenance, Installation, and Repair Pathway

Job Description

- ✓ Perform preventive maintenance procedures on machines, tools, and equipment
- ✓ Troubleshoot and repair electrical, electronic, and mechanical systems
- ✓ Includes mechanical repair as well as using a variety of systems



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.

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Maintenance, Installation, and Repair Sample Jobs



Maintenance, Installation, and Repair Pathway

Sample Job

Millwright



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

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Maintenance, Installation, and Repair Salaries and Education



Maintenance, Installation, and Repair Pathway

Sample Job

Millwright

Associate Degree
On-the-Job and Technical Training
Average Salary \$52,240

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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.

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Production Job Description



Production Pathway

Job Description

- ✓ Work on the shop floor making parts or assembling them
- ✓ Work with machines, making or assembling electronic parts, constructing or assembling modular housing, performing welding jobs, or printing various materials

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.

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Production Sample Jobs



Production Pathway

Sample Jobs

- Assembler
- Automated Manufacturing Technician
- Extruding and Drawing Machine Operator
- Tool and Die Maker
- Welder



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.

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Production Salaries and Education



Production Pathway

Sample Jobs

Assembler High School Diploma On-the-Job Technical Training Average Salary \$31,310	Tool and Die Maker Associate Degree On-the-Job Technical Training Average Salary \$52,810
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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.

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Quality Assurance Job Description



Quality Assurance Pathway

Job Description

- ✓ Assure that standards and procedures are adhered to and that delivered products or services meet performance requirements
- ✓ Responsible for monitoring and maintaining the quality of parts and manufacturing processes

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.

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Quality Assurance Sample Jobs



Quality Assurance Pathway

Sample Jobs

- Calibration Technician
- Quality Control Technician

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

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Quality Assurance Salaries and Education



Quality Assurance Pathway

Sample Jobs	
Quality Control Technician	Calibration Technician
High School Diploma	Associate's Degree
On-the-Job	On-the-Job
Technical Training	Technical Training
Average Salary \$45,000	Average Salary \$47,844

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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.