



## STUDENT ACTIVATION



## Maintenance Technician

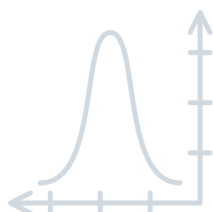
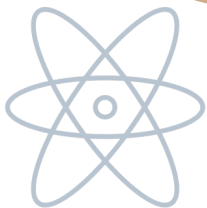
### OVERVIEW

Maintenance technicians are highly observant, detail-oriented, dexterous professionals who inspect, maintain, and repair complex and hi-tech equipment used to help produce, process, and refine oil and gas. They interpret data and use diagnostic tools to conduct tests of instruments and parts of equipment, such as pumps, valves, and compressors. They determine when equipment is in need of repair, replacement, or upgrade and are able to disassemble and reassemble equipment to address issues. They read complex manuals to learn repair procedures and utilize a variety of hand and power tools to replace defective parts and address problems. Finally, maintenance technicians conduct inspections to ensure completed work is up to standard and keep records of repair work. In all of their work, maintenance technicians are required to follow rules and equipment maintenance schedules established by both corporate and government regulations and standards. They also must keep up-to-date on the latest trends and innovations in oil and gas production equipment.



### EVALUATE YOUR INTEREST

- I enjoy diagnosing problems and then fixing things, especially items with engines and motors.
- I like figuring out how things work and identifying the importance of the various component parts of complex items.
- I am dexterous. I have excellent hand-eye coordination and can use my fingers and hands to work on parts that might be in tight places.
- I am able use instruction manuals to complete complicated, multi-step tasks.
- I am a problem-solver. I have a knack for asking smart questions that help others identify problems and issues. I work with others to formulate solutions to problems.
- I enjoy working with a wide variety of tools.



# Maintenance Technician

STUDENT ACTIVATION (CONTINUED)



<b>How does this career affect me?</b>	<b>What are some other similar careers?</b>	<b>How does this career affect the world?</b>
<p>Most of the energy you and your family and friends use for transportation, heating your home, and electricity comes from petroleum and natural gas products. Petroleum and natural gas are extracted from onshore and offshore deposits underneath the Earth's surface. Maintenance technicians work onsite at wells and oil and gas production facilities. They maintain and repair machines and equipment that are needed to operate wells and pipelines. Reliable, safe, and efficient equipment operation makes oil and gas production more efficient and less costly. This keeps energy products affordable for you and other customers.</p>	<p><b>Aircraft Maintenance Technicians</b> maintain and perform repairs on airplanes and helicopters.</p> <p><b>Aerospace Engineering and Operations Technicians</b> operate and maintain equipment used to design, build, and maintain aircraft and space vehicles.</p> <p><b>Automotive and Heavy Equipment Service Technicians and Mechanics</b> inspect, maintain, and repair automobiles and trucks; as well as heavy equipment such as tractors, cranes, and military vehicles.</p> <p><b>Diesel service technicians</b> perform maintenance on vehicles, such as trucks or buses with diesel engines.</p>	<p>Nearly 70% of Americans' primary energy consumption comes from petroleum or natural gas products. The energy needs of countries such as India and China, with large populations and rapidly expanding economies, are also increasing quickly. Petroleum and natural gas are extracted from wells that provide oil and gas companies with access to deposits below the Earth's surface. Maintenance technicians maintain and repair machines and equipment onsite at wells and oil and gas production facilities. Safe and effective machine operation makes oil and gas production safer, more efficient and less costly. This helps to ensure that energy products are affordable for consumers around the world.</p>

## TAKE ACTION

- Consult manuals and online resources to learn more about the workings of mechanized items in your home, such as appliances, vehicles, and yard equipment. When possible, assist with repair work on these items, learning to use a variety of tools and your hands to replace, adjust, and manipulate parts.
- Visit a flea market or thrift store and acquire an old and inexpensive bicycle, appliance, power tool, or other mechanized item. Use tools and your hands to take the item apart, study how it works, and reassemble it. Make observations about differences between the item you acquired and newer, improved versions.
- Join an organization or take a class at school that assembles or repairs mechanized items. Examples might include a small engine repair course, the robotics team, or mechanical sculpture.