



## STUDENT ACTIVATION



# Process Engineer

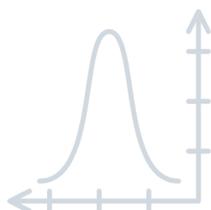
## OVERVIEW

Process engineers work onsite at factories and plants to oversee the production of a variety of goods, including oil and gas products. They purchase, test, and maintain plant equipment to make sure it operates correctly and in accordance with government regulations and internal safety and operation standards. They consult with other experts to formulate detailed procedures for producing goods, and then oversee implementation of these plans. Process engineers ensure employees are safe and productive. They collect data, write reports, and maintain paperwork that documents their facilities' compliance with regulations and overall efficiency. They collaborate with senior management to formulate budgets that minimize costs while achieving maximum productivity.



## EVALUATE YOUR INTEREST

- I love learning by doing. My favorite activities at school involve hands-on experiences such as labs, field trips, and research.
- I am a natural leader who works well with others. During group activities, people turn to me for help overcoming challenges.
- I enjoy bringing people together from different areas of expertise with different strengths.
- 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 am a highly organized multi-tasker who can keep track of several projects at once, each with many moving parts.
- I am a rule follower, but also flexible. I can implement an existing plan, but make adjustments if problems arise.
- I love seeing how the complicated science and math concepts I learn about in the classroom apply to the real world.



# Process Engineer

STUDENT ACTIVATION (CONTINUED)



<b>How does this career affect me?</b>	<b>What are some other similar careers?<sup>1</sup></b>	<b>How does this career affect the world?<sup>2,3</sup></b>
<p>From the home you live in to the foods you eat and the devices you use to interact with others, most of the goods you enjoy every day are the product of highly complex production processes that bring together resources obtained from different parts of the world and workers from different areas of expertise. These goods and services would not be affordable to most consumers unless they were produced with a minimum of costs in dollars, time, and labor. Process engineers provide leadership at production facilities to reduce costs and maximize efficiency for producing goods. Their ability to improve production processes keeps goods affordable for consumers.</p>	<p><b>Architectural and Engineering Managers</b> design and supervise tasks for architectural and engineering firms.</p> <p><b>Cost estimators</b> study data to project the time, funding, resources, and labor required to produce goods or provide services.</p> <p><b>Logisticians</b> design and analyze a production company's supply chains.</p> <p><b>Industrial engineering technicians</b> help industrial and process engineers design systems that make production more efficient and less costly.</p> <p><b>Industrial production managers</b> supervise the day to day operations of a factory or production facility.</p>	<p>The world is an increasingly interconnected place. The goods and services people utilize on a daily basis, from automobiles to digital devices to the foods they eat and fuels they consume, are often the product of resources that come from many different locations from all over the globe. As a result of globalization, processes for producing goods and services and delivering them to consumers is becoming more and more complex. Process engineers are needed to design processes that make sure goods are produced efficiently and safely. Efficient production means a higher quality of life, as goods that were once unattainable become affordable for the average person.</p>

## TAKE ACTION

- Help to plan a household construction project, such as the building of a gazebo or patio, a room renovation, or the installation of a new appliance or entertainment system. Conduct necessary measurements. Think about the answers to these questions: In what order should tasks be completed? What tools will be needed? What materials and services need to be acquired? After the project is completed, reflect on how the planning process might be improved next time.
- Join a science-oriented club at school that is involved with using principles of math and science to construct products, conduct outside research, or address community problems. Possibilities include robotics, the recycling club, or the engineering society. Establish as a personal goal working to earn the opportunity to occupy a leadership position on a specific project or within the group as a whole.

