

Core Concept: Engineering-Related Careers

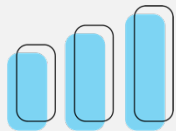
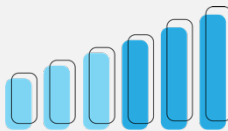
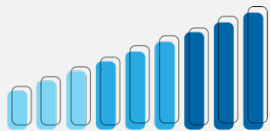
Engineering Literacy Dimension: Engineering Practices

Practice: Professionalism

Overview: *Engineering-Related Careers* are the wide variety of occupations that require technical knowledge to design, assess, implement, use, sell, and/or maintain technologies across industries, which includes a range of jobs including, but not limited to, skilled production workers, technicians, engineering technologists, engineers, engineering managers, and engineering entrepreneurs. This core concept includes knowledge related to (a) *the nuances of engineering-related career pathways and disciplines*, (b) *professional licensing*, (c) *professional/trade organizations*, and (d) *engineering entrepreneurship*. Knowledge of Engineering Related Careers is important to Professionalism, as there are a variety of professions and employment opportunities in engineering and technology fields across industries, such as manufacturing, construction, medicine, transportation, and the military, in which one can make a difference and earn their livelihood.

Performance Goal for High School Learners

I can successfully appraise engineering-related careers and the general requirements of the associated employment opportunities to create a long-term plan to pursue my career goals, whether it be engineering related or not.

	 Basic	 Proficient	 Advanced
CAREER PATHWAYS AND DISCIPLINES	I can list and distinguish between a variety of engineering-related disciplines.	I can select one or more engineering-related disciplines that I am most interested in and identify a variety of career options in each.	I can select one or more engineering-related careers that I am most interested in and list typical employers, education, and specialties for each of the careers.
PROFESSIONAL LICENSING	I can describe the importance of licensure and professional training in technological industries.	I can explain the requirements and procedures needed to obtain and retain an engineer license.	I can create a plan to achieve career-related goals in terms of education, training, or work experience necessary to achieve professional qualifications.
PROFESSIONAL/TRADE ORGANIZATIONS	I can identify the needs and importance of trade organizations for the engineering and technology industry.	I can explain functions of more than one trade organization in the U.S. engineering and technology industry.	I can examine an industry standard developed by a trade organization and evaluate how the standard can be applied to practice and industry.
ENTREPRENEURSHIP	I can describe how entrepreneurial thinking can enable the exploitation of technological innovations.	I can explain business functions (e.g. marketing, sales, human resource, finance, research, production, etc.) needed to validate and launch a technological enterprise.	I can develop a business model in conjunction with a technological innovation.