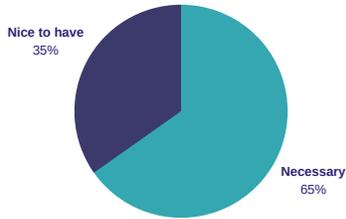


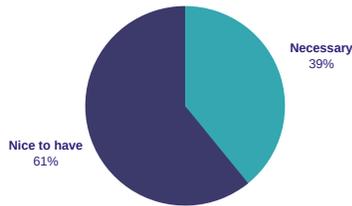
Employability Skills Survey Results

Energy, Construction, & Utilities

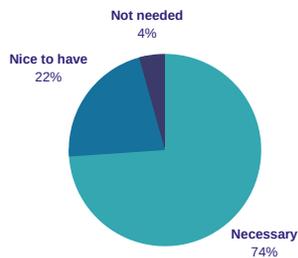
Identify barriers to accurate and appropriate communication.



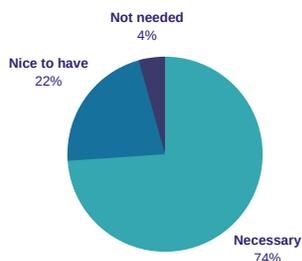
Communicate information and ideas effectively to customers and coworkers.



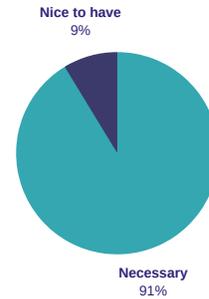
Solve predictable and unpredictable work-related problems using various types of reasoning as appropriate.



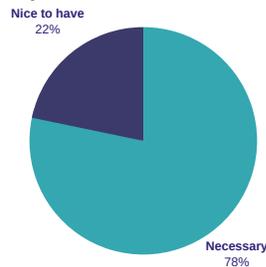
Interpret information and draw conclusions, based on the best analysis, to make informed decisions.



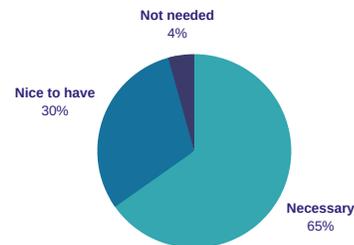
Interpret verbal and nonverbal communications and respond appropriately.



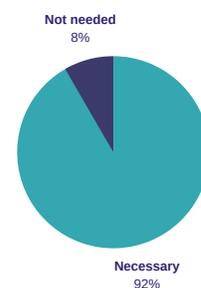
Identify and ask significant questions that clarify various points of view to solve problems.



Use systems thinking to analyze how various components interact with each other to produce outcomes in a complex work environment.



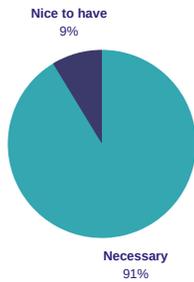
Maintain proper use of safety apparel at all times, including but not limited to, eye protection, hearing protection, skin protection, head protection, footwear and protection from airborne particulate matter.



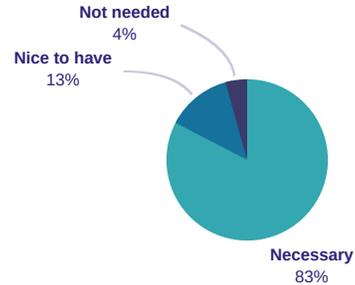
Employability Skills Survey Results

Energy, Construction, & Utilities

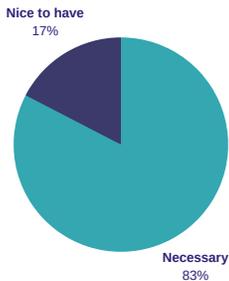
Use health and safety practices for storing, cleaning, and maintaining tools, equipment, and supplies.



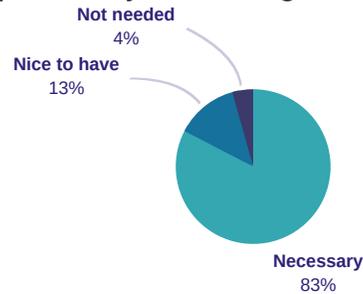
Demonstrate how to prevent and respond to work-related accidents or injuries.



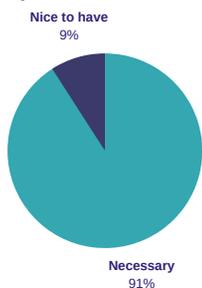
Interpret policies, procedures, and regulations for the workplace environment.



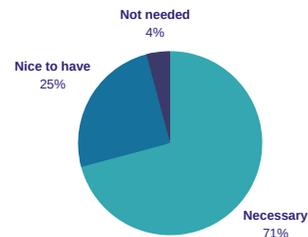
Explain the importance of accountability and responsibility in fulfilling workplace roles.



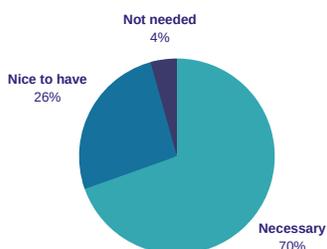
Demonstrate the qualities and behaviors that constitute a positive and professional work demeanor, including appropriate attire for the profession.



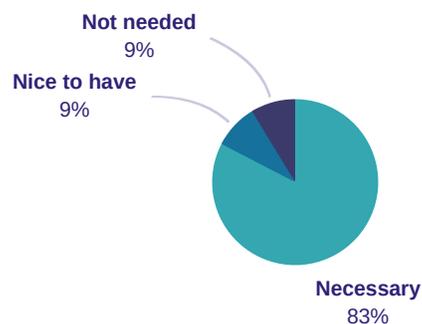
Practice time management and efficiency to fulfill responsibilities.



Access, analyze, and implement quality assurance standards of practice.



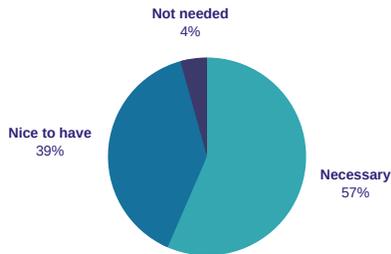
Demonstrate ethical and legal practices consistent with Building and Construction Trades sector workplace standards.



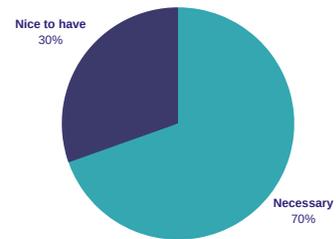
Employability Skills Survey Results

Energy, Construction, & Utilities

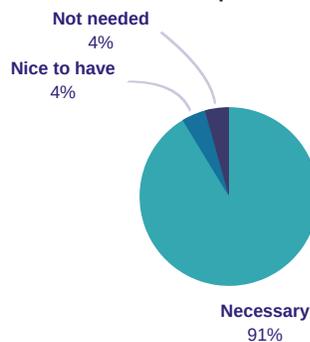
Identify the characteristics of successful teams, including leadership, cooperation, collaboration, and effective decision-making skills.



Understand the characteristics and benefits of teamwork, leadership, and citizenship in the workplace setting.



Respect individual and cultural differences and recognize the importance of diversity in the workplace.



Employability Skills: Energy, Construction, & Utilities

Additional Comments

- Always be on time
- This is business keep emotions out.
- Attendance and punctuality
- Complacency is the parent cause of all accidents
- Understanding the value of face to face communication and how it gives you the ability to read body language.

Cabinetry, Millwork, & Woodworking

Pathway Skills Survey Results

Demonstrate competence in planning, design, layout, and technical drawing interpretation for practical use in cabinetmaking and millworking.

Necessary

Differentiate between the various furniture and cabinet styles used in the cabinet and furniture industry.

Necessary

Interpret and apply information to develop a bill of materials, estimate the cost of materials, and develop a plan of procedures to complete a project.

Necessary

Demonstrate proper selection and use of woodworking tools.

Necessary

Identify wood products and materials used in the furniture and cabinetmaking industry and describe their characteristics and uses.

Necessary

Compare and contrast the advantages and disadvantages of using laminates verses using veneers.

Necessary

Demonstrate competence in various construction processes in the cabinetmaking, furniture making, and millworking industries.

Necessary

Utilize appropriate abrasives to prepare a project for a specific finish.

Necessary

Understand finishes and when to apply paint, stains, sealers, varnishes, and catalyzed finishes, including water and oil-based finishes.

Necessary

Demonstrate proper techniques for cabinet installation.

Necessary

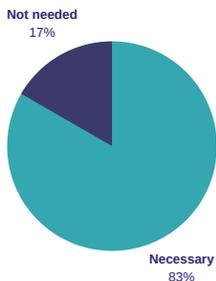
Identify the advantages and disadvantages for various countertop materials.

Nice to Have

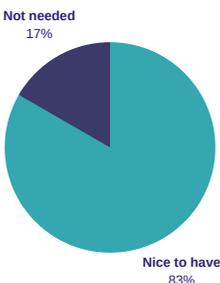
Energy & Power Technology

Pathway Skills Survey Results

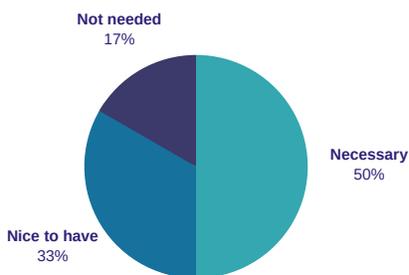
Explain the flow of energy from generation through distribution to the customer.



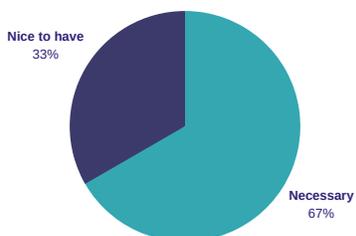
Identify various conventional electric power generation fuel sources and the cost and efficiency issues associated with each.



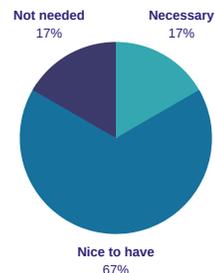
Discriminate the differences and similarities of power generation, including use of different fuel types and different power plant uses.



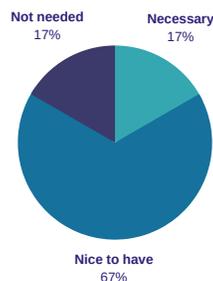
Use the fundamental concepts associated with electricity (e.g., electric charge, electric current).



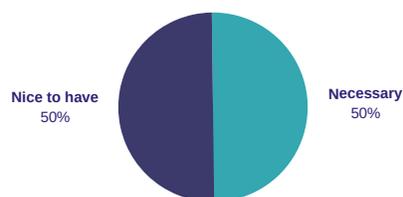
Explain the role of regulatory bodies in the energy industry (Federal Energy Regulatory Commission, Public Utilities Commission [PUC]).



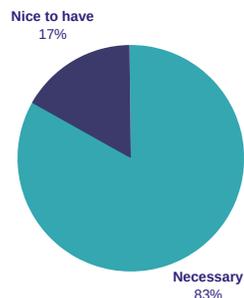
Identify emerging and alternative electric power generation technologies and fuel sources.



Summarize the basic operating principles of fossil, hydroelectric, and internal combustion systems.



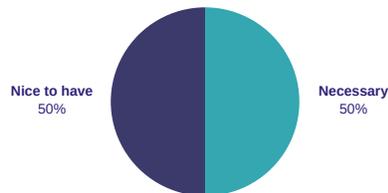
Operate, repair, and test machines, devices, and equipment based on electrical or mechanical principles in order to diagnose machine malfunctions, using basic hand and small electric tools and equipment.



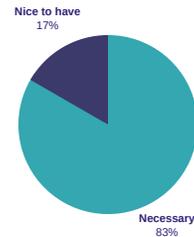
Energy & Power Technology

Pathway Skills Survey Results

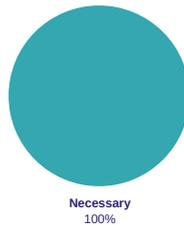
Describe the electric power transmission principles and processes.



Define and explain voltage, current, resistance, power, and energy.



Measure voltage, amperage, and resistance using a volt-ohm meter (VOM) and a digital volt-ohm meter (DVM).



Energy & Power Technology

Pathway Skills Additional Comments

- National Electrical Codes and Standards
- The first page of the survey is the most important, the second page are skills that can be trained for the most part. Obviously the more well rounded a employee is the better their chances of advancement, but the soft skills and character and willingness to work are number 1.

Mechanical Systems Installation & Repair

Pathway Skills Survey Results

Demonstrate an understanding of the methods and devices used to improve air quality and comfort.

Necessary

Describe the basic components and concepts of heating, air-conditioning, and refrigeration.

Necessary

Demonstrate an understanding of the scientific theories and physical properties of heat and matter.

Necessary

Analyze the effects and reactions of fluids, pressures, and temperatures on refrigerants.

Necessary

Demonstrate skills necessary to fabricate and service the tubing, piping, and fittings utilized in accordance with accepted industry standards.

Necessary

Demonstrate the skills necessary to service, maintain, and repair heating, air-conditioning, and refrigeration system components and accessories.

Necessary

Demonstrate a practical knowledge of basic electricity and skills necessary to service and maintain the electrical components of heating, air-conditioning, and refrigeration equipment.

Necessary

Troubleshoot electrical control systems, motors, and their components.

Necessary

Demonstrate a practical knowledge of solid-state electronics.

Necessary

Demonstrate a practical knowledge of combustion heating systems.

Necessary

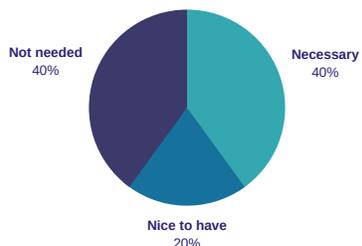
Demonstrate practical knowledge of systems designed to improve air quality.

Necessary

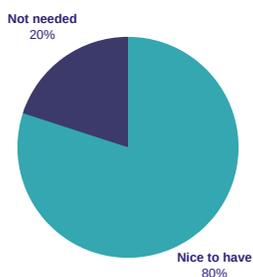
Engineering & Heavy Construction

Pathway Skills Survey Results

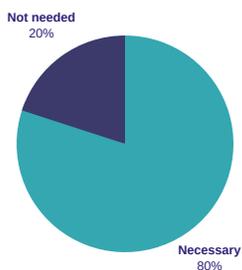
Describe various geologic structures and land forms and determine the best approach for preparing a site for construction.



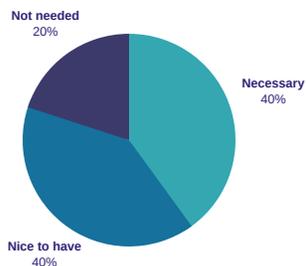
List sources of NPS and their possible impact related to water quality.



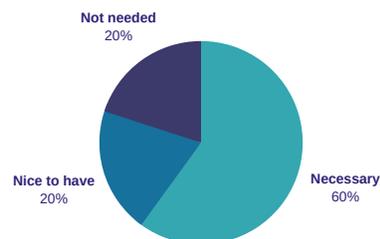
Identify common types of heavy equipment and describe their unique features and uses.



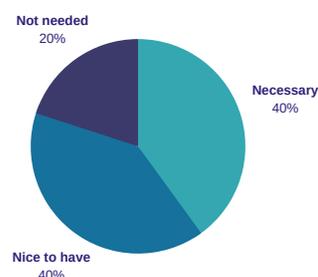
Understand the layout of utilities in regards to underground electrical, sewer, water, phone, cable, etc



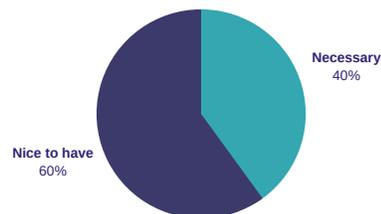
Use conventional engineering and heavy construction mathematical functions to calculate on-site preparation and site development and improvement materials



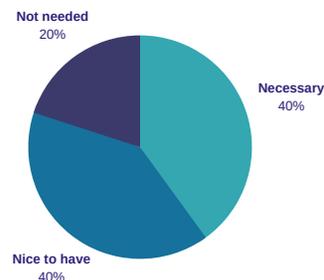
Perform basic calculations for sizing pipe and pumps for the movement of water.



Demonstrate basic concrete maintenance and repair methods.

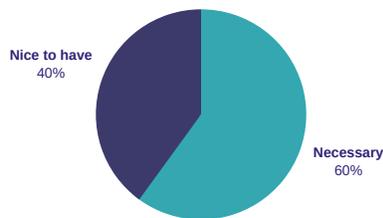


Solve common construction problems (e.g., grading, drainage) by using commercial construction codes, building standards, and appropriate mathematical calculations.

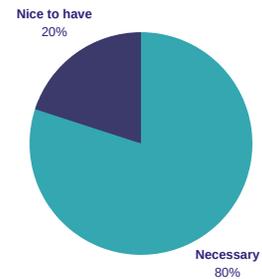


Engineering & Heavy Construction Pathway Skills Survey Results

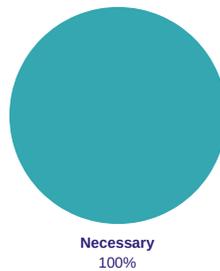
Know the appropriate processes and materials in architectural design, project development, and engineering and heavy construction (e.g., structural, electrical, mechanical, and finish phases).



Identify local and state building codes as appropriate to heavy construction, especially as it relates to highway and bridge projects.



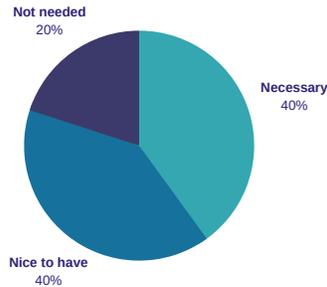
Understand the importance of safety and safe work practices (e.g., fire safety, protective clothing) in the welding phases of engineering and heavy construction and the safe operation of heavy equipment (e.g., earth movers, graders, bulldozers).



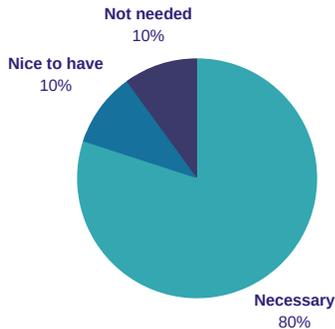
Residential & Commercial Construction

Pathway Skills Survey Results

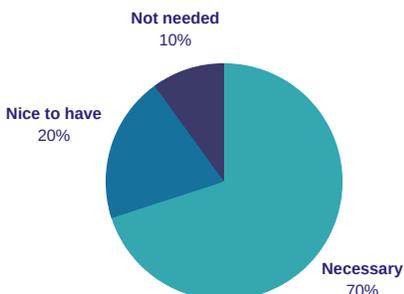
Recognize the impact of financial, technical, environmental, and labor trends on the past and future of the construction industry.



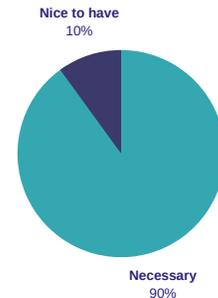
Interpret and apply information from technical drawings, schedules, and specifications used in the construction trades.



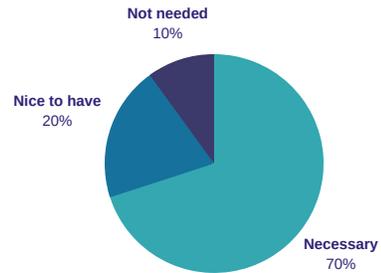
Demonstrate foundation layout techniques to include setting forms, placing reinforcements, and placing concrete according to construction drawings, specifications, and building codes.



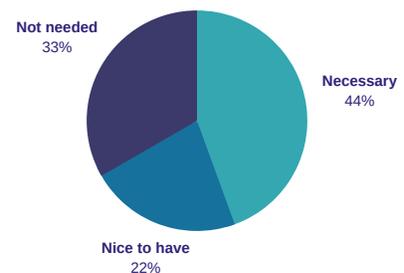
Apply the appropriate mathematical calculations used in the construction trades.



Demonstrate techniques for proper site preparation.

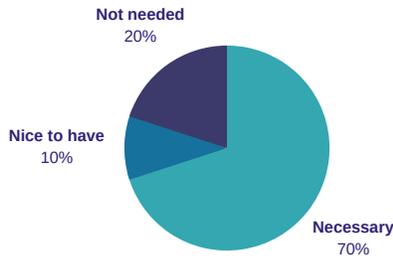


Demonstrate carpentry techniques for the construction of a single-family residence.

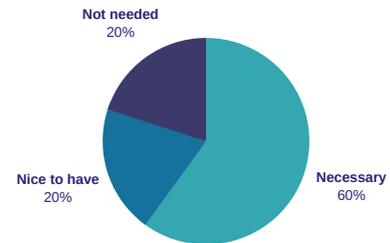


Residential and Commercial Construction Pathway Skills Survey Results

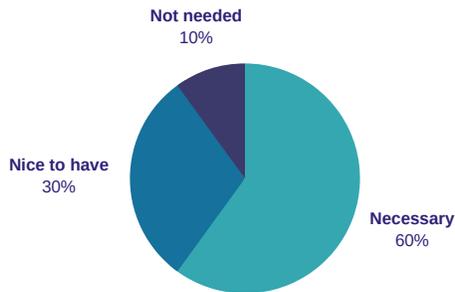
Demonstrate proper installation techniques of interior finish materials and protective finishes.



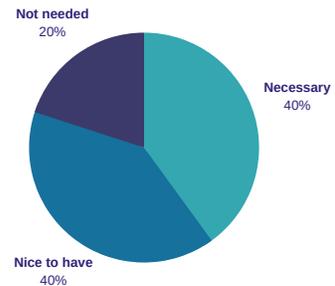
Demonstrate the application of exterior finish materials and protective finishes in building construction.



Understand, integrate, and employ sustainable construction practices in the building trades.



Demonstrate skills necessary to complete a plumbing system in a single-family residence in accordance with accepted industry standards.



Demonstrate skills necessary to complete an electrical system in a single-family residence in accordance with accepted industry standards.

