

CTE CONTENT AREA: Trade and Technical Education

CONTENT MODULE TITLE: Exploring Trade and Technical Careers

MODULE DESCRIPTION

This module introduces students to the trade and technical career area. Students identify their natural interests and abilities as they explore trade and technical career cluster options of construction, transportation, manufacturing, visual arts and communication, human and public service, and information technology. Students learn essential workplace and technical skills needed for success in trade and technical fields. Students define what they truly enjoy and match career options to their individual interests. This module encourages students to reflect, critically and objectively, when planning their secondary and postsecondary education pathways.

GUIDING QUESTION

What knowledge and skills are necessary to demonstrate introductory understanding of the personal skills, abilities, and aptitudes needed for success in trade and technical careers?

MODULE CONTENT

Exploring Trade and Technical Careers

1. Trade and Technical Careers

Students will

- a) Define the term "Career Cluster" and explain the career cluster system
- b) Tell how trade and technical careers are represented in the career clusters of construction, transportation, manufacturing, visual arts and communication, human and public services, and information technology
- c) Identify specific trade and technical fields that are included in each cluster
- a) List and describe the primary activities, tools, and work environments for specific trade and technical fields
- d) Differentiate amongst the various methods for payment of wages and salaries in trade and technical careers
- e) Explore local, regional, state, and national employment outlooks for trade and technical fields
- f) Discover personal interests in trade and technical careers through completion of interest inventories
- g) Participate in classroom activities to identify personal aptitudes and abilities for skills required in trade and technical careers

2. Essential Workplace Competencies

Students will

- a) Explain the importance of applied knowledge, effective relationships, and workplace skills to success in trade and technical careers
- b) Compare and contrast the opportunities for individual initiative, teamwork, collaboration, and leadership in trade and technical careers
- c) Describe strategies for assessing and adjusting personal behaviors to meet workplace

expectations in trade and technical careers

3. Technical Skills

Students will

- a) Define "Industry Standards" and tell how industry standards contribute to consistent, safe, high-quality work in trade and technical fields
- b) Describe the features and characteristics of technical manuals and practice reading and interpreting technical manuals in a variety of classroom workplace simulations
- c) List industry-specific computations and practice computations in a variety of classroom workplace simulations
- d) Demonstrate appropriate use, care, and maintenance of tools in a variety of classroom workplace simulations
- e) Assess personal technical skills and develop a plan for skill practice and improvement

4. Problem-Solving

Students will

- a) Anticipate that novel situations will arise in trade and technical work situations
- b) Analyze resources, processes, and techniques commonly used to resolve problems in trade and technical workplaces
- c) Communicate the nature of a problem, the intended solution, and the probable outcome
- d) Demonstrate individual and group problem-solving skills through practice of these skills in a variety of classroom workplace simulations
- e) Evaluate and refine problem-solving methods based on strengths and weaknesses of solutions

5. Career Pathways

Students will

- a) Investigate a career in a trade or technical field and identify the education and training pathways used to reach that career
- b) Assess personal knowledge, skills, and interest in trade and technical careers
- c) Evaluate personal suitability for meeting workplace culture and climate expectations for careers in specific trade or technical careers

ILLUSTRATIVE ACTIVITIES by Theme Module

Career and Community Connections

Local Employer Panel

Invite a panel of local trade and technical business leaders to class. Ask panelists to share the worker competencies and technical skills they look for in new employees. Students take notes as panelists describe the primary goals of their businesses and the major expectations they have of their employees. Students use their notes to create "Help Wanted Ads" showing the worker traits most desired by local employers.

Communication and Interpersonal Relationships

Customer Complaint Skits

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Students work in small groups to develop skits depicting employee/customer interactions in a trade or technical workplace. Students, acting as employees, explain a problem situation to the customer and attempt to explain the intended solution and probable outcome. Students, acting as customers, show ways customers might react to problem situations. Process the skits as a class and allow groups to replay their skits to show improved employee/customer interaction.

Financial and Consumer Literacy

Compensation

Students work in pairs to research the typical pay model for a specific trade area of interest. Examples include exploring how hair stylists, automobile mechanics, or chefs are compensated, including determining if pay is received as a flat rate, hourly, salary, or on a service basis, and if bonuses are included. Student pairs present their findings and prepare a "Compensation Computation" problem for classmates to solve using the information presented. Together students discuss the benefits and challenges associated with each pay model.

Health, Safety, and Wellness

Personality Assessment

Invite the school counselor or school psychologist to work with students on a worker personality trait assessment. Based on the results, students identify a trade or technical career that would match their worker personality and one that would conflict. Students write a reflection evaluating the accuracy of their assessment results and summarizing ways worker personality assessments can be useful career planning tools.

Problem Solving and Innovation

Scenario Problem

Provide students with a scenario describing an issue they might face as a trade or technical worker (e.g., providing electricity to a remote area). Students research the current practices and processes used by the industry to address this problem. Together students identify the strengths and weaknesses of the current practices. Students collaborate in small groups to formulate new solutions for tackling the scenario issue, predict possible complications, and provide alternatives. Groups present their scenario solutions and refine them based on feedback from classmates.

Sustainability

Employment Projections

Provide students with data showing employment projections for trade and technical careers over the next ten years. Students analyze the data and develop a list of the ten careers that will have the greatest shortages. Students research the characteristics of these careers to determine possible reasons for the shortages. Students develop a marketing plan to promote the career and build a new cadre of workers. Post the plan on the class website.

STANDARDS ADDRESSED

New York State Career Development and Occupational Studies (CDOS) Standards
Intermediate Level

<http://www.p12.nysed.gov/cte/>

Standard 1: Career Development

Students will be knowledgeable about the world of work, explore career options, and relate personal skills, aptitudes, and abilities to future career decisions.

Standard 2: Integrated Learning

Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings.

Standard 3a: Universal Foundation Skills

Students will demonstrate mastery of the foundation skills and competencies essential for success in the workplace.

Common Career Technical Core Standards

<https://www.careertech.org/career-ready-practices>

Career Ready Practices

1. Act as a responsible and contributing citizen and employee
2. Apply appropriate academic and technical skills
4. Communicate clearly and effectively and with reason
6. Demonstrate creativity and innovation
8. Utilize critical thinking to make sense of problems and persevere in solving them
9. Model integrity, ethical leadership, and effective management
10. Plan education and career paths aligned to personal goals
11. Use technology to enhance productivity
12. Work productively in teams while using cultural global competence

USDOE Employability Skills

http://cte.ed.gov/employability_skills/

Applied Knowledge: Applied Academic Skills, Critical Thinking Skills

The thoughtful integration of academic knowledge and technical skills put to practical use

Effective Relationships: Interpersonal Skills, Personal Qualities

The skills that enable individuals to interact effectively with clients, coworkers, and supervisors

Workplace Skills: Resource Management, Information Use, Communication Skills, Systems Thinking, Technology Use

The skills employees need to successfully perform work tasks

RESOURCES

New York State Department of Labor

New York State Career Zone

<https://www.careerzone.ny.gov>

Career Zone is a no-cost online career exploration and planning tool developed by the New York State Department of Labor. It offers career and education information on thousands of careers, as well as self-assessment and career planning tools. Career

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Zone is appropriate for users from middle school through adult.

United States Department of Labor

CareerOneStop

<https://www.careeronestop.org>

CareerOneStop is the career, training, and job search website for the U.S. Department of Labor. The website serves job seekers, businesses, students, and career advisors with a variety of free online tools, information, and resources.

Association of Career and Technical Education

Career Planning Guide

https://www.acteonline.org/wp-content/uploads/2018/02/ACTE_CC_Paper_FINAL.pdf

Research has identified middle school as a time when students can benefit the most from career exploration, a process of building self-awareness, learning about potential careers, and developing a plan for reaching future goals.

AdvanceCTE

Middle Level Career Interest Inventory

<https://cte.careertech.org/sites/default/files/StudentInterestSurvey-English.pdf>

AdvanceCTE provides a Career Interest Inventory worksheet to use with students in helping them identify the potential matches to the sixteen career clusters available to them.

Association of CTE Administrators (ACTEA)

CTE Strong Videos

<http://www.ctestrong.com>

Edge Factor has created a series of inspirational videos related to Career and Education that provide students with a very contemporary perspective on CTE options. Career Cluster videos provide a new look at the many career options that students have in high school and beyond.

New York State Trade and Technical Teachers' Association (NYSTTTA)

<https://www.nysttta.org/>

New York State Trade and Technical Teachers' Association (NYSTTTA) provides statewide opportunities for collaboration and focused professional development on curriculum, project ideas, assessment strategies, technical assessments, and student management.

Career and Technical Education Technical Assistance Center of New York (CTE TAC)

<http://nyctecenter.org/>

The Career and Technical Education Technical Assistance Center (CTE TAC) operates under a state contract to assist the New York State Education Department (NYSED) in carrying out its mission of improving the quality, access, and delivery of career and technical education through research-based methods and strategies resulting in broader CTE opportunities for all students.