

MODULE DESCRIPTION

This module introduces students to systems of measurement and to the importance of understanding, interpreting, and accurately using measurements in trade and technical careers. Students will investigate the measurements and measurement tools commonly used in specific trade and technical fields. Students will have the opportunity to weigh their interest in specific trade and technical careers against their skills, abilities, and aptitudes for taking and using measurements required for successful work in those careers.

GUIDING QUESTION

What knowledge and skills are necessary to demonstrate introductory understanding of systems of measurement and the ways accurate measurements assist trade and technical workers in the successful completion of their work?

MODULE CONTENT

1. GLOBAL SYSTEMS OF MEASUREMENT

STUDENTS WILL:

- a) Understand the two measuring systems used in the United States: US Customary and metric
- b) Explain how measuring systems are used to measure distance, weight, volume, time, temperature, and physical shapes
- c) Describe how measuring systems relate to each other
- d) Identify types of measurements typically used to accomplish work in specific trade areas

2. MEASUREMENT TOOLS

STUDENTS WILL:

- a) Select the appropriate tool for the measurement task such as a tape measure for length and a scale for weight
- b) Describe the benefits and challenges of using particular measurement tools for specific measuring applications
- c) Explain the purpose and importance of calibration
- d) Show how measurements made with common tools relate to one another
- e) Identify types of measuring tools typically used to accomplish work in specific trade areas

3. MEASURING DISTANCE

STUDENTS WILL:

- a) Identify tools used for measuring distance
- b) Communicate distance measurements in appropriate units for the measurement task
- c) Demonstrate use and care of distance measuring tools
- d) Utilize appropriate distance measuring tools and procedures to accomplish tasks in specific trade areas

4. MEASURING WEIGHT

STUDENTS WILL:

- a) Identify tools for measuring weight
- b) Communicate weight measurement in appropriate units for the measurement task
- c) Demonstrate use and care of weight measuring tools
- d) Utilize appropriate weight measuring tools and procedures to accomplish tasks in specific trade areas

5. MEASURING VOLUME

STUDENTS WILL:

- a) Identify tools for measuring volume
- b) Communicate volume measurements in appropriate units for the measurement task
- c) Demonstrate use and care of volume measuring tools
- d) Utilize appropriate volume measuring tools and procedures to accomplish tasks in specific trade areas

6. MEASURING TIME

STUDENTS WILL:

- a) Identify tools for measuring time
- b) Communicate time measurements in appropriate units for the measurement task
- c) Demonstrate use and care of time measuring tools
- d) Utilize appropriate time measuring tools and procedures to accomplish tasks in specific trade areas

7. MEASURING TEMPERATURE

STUDENTS WILL:

a)

team selecting a measuring task card. They must find the appropriate measuring tool and find an appropriate career card to complete their turn and tag the next team member. The first team to complete the relay is the class winner. Discuss how different types of measurements

UNITED STATES DEPARTMENT OF EDUCATION 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 advisors

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

The skills employees need to successfully perform work tasks

RESOURCES

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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 Zone is appropriate for users from middle school through adult.

UNITED STATES DEPARTMENT OF LABOR CAREER ONESTOP

<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/wpcontent/uploads/2018/02/ACTE_CC_Paper_FINAL.pdf

Research has identified middle school as a time when students can benefit the most from