

CTE CONTENT AREA: Family and Consumer Sciences  
CONTENT MODULE TITLE: Environmental Design and Management

**MODULE DESCRIPTION**

This module introduces students to the ways living spaces can be managed to ensure safety, conserve natural resources, and achieve personal expression. Students will address aspects of household management to include budgeting, purchasing, maintaining, and problem solving as individual and family needs change. Students will have the opportunity to explore the wide variety of career options related to environment, housing, and interior design and to identify the knowledge, skills, education, and training necessary for success within these industries.

**GUIDING QUESTION**

What knowledge and skills are necessary for designing and managing living spaces to ensure safety, conserve natural resources, and achieve personal expression?

**MODULE CONTENT**

**Environmental Design and Management**

1. Healthy, Safe, Sustainable Living Spaces

Students will

- a) Recognize that family, school, work, and community settings are all part of the individual's broader living space
- b) Plan ways of maintaining Identify common safety hazards found in living spaces and describe ways to minimize risks to individuals, families, and household members
- c) Formulate a safety plan for home, work, and community settings
- d) Investigate ways to conserve natural resources in family, school, work, and community settings

2. Environment and Interior Design

Students will

- a) Design shared environments and living space zones (for home, school, work, and/or community) which show respect for individual privacy needs and appreciation of large group social needs
- b) Create a floor plan designed to meet the needs of individuals, families, or communities
- c) Incorporate the elements and principles of design into a design plan
- d) Research how environmental and green home factors influence the design of functional, safe and aesthetic living spaces
- e) Predict future housing design incorporating technology and demographic data

3. Consumer Resources and Finance

Students will

- a) Construct a budget for implementation of a floor plan design
- b) Use consumer skills to select household items

#### 4. Career Pathways

Students will

- a) Explain roles and functions of individuals engaged in environment, housing, and interior design careers
- b) Investigate education and training requirements and opportunities for career paths in environment, housing, and interior design fields
- c) Assess personal employability skills for careers in environment, housing, architecture, and interior design and evaluate personal suitability for these careers

## ILLUSTRATIVE ACTIVITIES by Theme Module

### Career and Community Opportunities

#### Research vs. Guest Speaker

Students research careers related to environment, housing, architecture, and interior design, noting typical tasks and working conditions, education and certification required, personality traits, technology used, salary potential, and employment outlook. Invite a guest speaker employed in one of these careers to meet with students; have students develop questions for the speaker to address. Discuss the similarities and differences between the information obtained through research and the information gained from the guest speaker.

### Communication and Interpersonal Relationships

#### Role Play

Provide small groups of students with scenarios describing needs for different home improvements. Have student groups investigate and develop a set of important questions for homeowners to ask contractors when hiring professionals to complete a home improvement project. Role play an interview that the homeowner may have when hiring professionals to make home improvements.

### Financial and Consumer Literacy

#### Making Rental Decisions

Have students analyze the advertisements and websites of furniture rental companies to determine a list of common fees associated with renting furniture or appliances. Students will calculate the cost of renting a specific home furnishing or appliance for a set period of time. Students will compare the costs for renting to the costs for purchasing. The class will discuss reasons, including financial considerations, that a consumer might decide to rent home furnishings or appliances.

### Health, Safety, and Wellness

#### Floor Plan Revisions

Small groups of students develop floor plans for a public space, such as a living room or family room. Once the floor plans are complete, provide the groups with a scenario describing the family who will use the room. In each scenario, include family members who would need special considerations in floor planning (e.g., a toddler, a person using a walker or wheelchair,

a person with limited vision, etc.) Students evaluate the original floor plans for safety and make recommendations for adjustments based on the scenario.

### **Problem Solving and Innovation**

#### Tiny Houses

Students research the concept of tiny houses to develop a list of common features of tiny houses. In small groups, design tiny houses that incorporate the generated list of features using graph paper or design software. Participate in a gallery walk to analyze and critique designs of classmates, designating design elements they admire and proposing alternatives for areas of concern.

### **Sustainability**

#### Carbon Footprint

Students learn about the concept of the carbon footprint from a variety of scholarly sources. Students stand on newsprint and outline their two feet to draw their footprints. In one footprint, students define “carbon footprint” using 20 words or less (GIST technique). In the second footprint, students write a personal goal to reduce their own “carbon footprint.” Post the outlines outside the classroom to raise awareness of this issue in others.

## **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

#### Standards 3a: Universal Foundation Skills

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

### NYS Learning Standards for Family and Consumer Sciences Intermediate Level

#### Standard 2: Safe and Healthy Environment

Students will acquire the knowledge and ability necessary to create and maintain a safe and healthy environment

#### Standard 3: Resource Management

Students will understand and can manage their personal and community resources

### Common Career Technical Core Standards

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

2. Apply appropriate and academic and technical skills

June 2018

NYS Middle-level CTE

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3. Attend to personal health and financial well-being
5. Consider environmental, social, and economic impacts of decisions
6. Demonstrate creativity and innovation
7. Employ valid and reliable research strategies
8. Utilize critical thinking to make sense of problems and persevere in solving them
10. Plan education and career paths aligned to personal goals

National Family and Consumer Sciences Standards

<https://www.nasafacs.org/national-standards-and-competencies.html>

- 2.0 Consumer and Family Resources  
Evaluate management practices related to the human, economic, and environmental resources in a global context
- 3.0 Consumer Services  
Integrate knowledge, skills, and practices needed for careers in consumer services
- 11.0 Housing and Interior Design  
Integrate knowledge, skills, and practices required for careers in housing and interior design
  - 11.1 Analyze career paths within the housing, interior design, and furnishings industry
  - 11.2 Evaluate housing and design theories and concepts, including sustainability and universal design, in relation to available resources and options
  - 11.3 Apply interior design knowledge, skills, and processes to meet specific design needs

## RESOURCES

New York State Energy Research and Development Authority (NYSERDA)

<https://www.nysERDA.ny.gov/Communities-and-Governments/K-12-Schools>

Healthy, Safe, Sustainable Living Spaces

Site dedicated to a K-12 initiative that provides resources to inspire students to think green. The site includes lesson plans, projects, and other resources.

US Department of Homeland Security

<https://www.ready.gov/make-a-plan>

Knowledge Empowers!

Site offers materials to teach what to do before, during, and after an emergency using skills such as problem-solving, teamwork, creativity, leadership and communication.

US Energy Information Administration

Energy Kids

<https://www.eia.gov/kids/>

Site offers energy-related stories, hands-on activities, and research articles for the classroom. Options are offered to explore environmental issues and how they relate to home living decisions.

The College Board

Create Your Roadmap: Environment and Interior Design

<https://bigfuture.collegeboard.org/careers/arts-visualand-performing-interior-designers>

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This interactive college and career planning website provides details on several career pathways related to interior design. Educational requirements are included on this site.

Association of Career and Technical Education  
Career Planning Guide

[https://www.acteonline.org/wp-content/uploads/2018/02/ACTE\\_CC\\_Paper\\_FINAL.pdf](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 Association of Family and Consumer Sciences Educators (NYS AFCSE)

<http://www.nysafcse.org/>

Family and Consumer Sciences education in New York state is delivered through a variety of courses designed to promote student attainment of the intermediate and commencement level New York State Learning Standards for Family and Consumer Sciences (FACS) and Career Development and Occupational Studies (CDOS). This professional organization hosts a website that includes "Curriculum" and a "Best Practices" tabs.

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.