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GATEWAY TO EDUCATION & PROFESSIONAL RESOURCES
One Stop Shop For Teachers

PROGRAM CONCENTRATION:	**Family and Consumer Sciences**
CAREER PATHWAY:	**Interior Design**
COURSE TITLE:	**Textile Science**
PREREQUISITES:	**None**

Course Description: The textile science course introduces students to the fascinating world of fabrics, fibers, dyes and fabric construction. Textiles for apparel, interior furnishings, and industrial applications are investigated. Testing methods, labeling laws, trends, applications, and color forecasting are all included. Various career paths will be researched to determine educational levels, salary expectations, and growing industry demand. Projects will involve individual work, team work, verbal presentations, fabric swatches, and computer applications.

FCS-TS-1. Students will examine the various career paths within the textile industry.

    a. Explore basic knowledge and awareness of employment expectations.
    b. Research and evaluate careers where knowledge of textile science is required or valuable.
    c. Analyze the future employment outlook in the textile industry.
    d. Describe levels of employment and entrepreneurial opportunities in the textile industry and local sources of employment information.
    e. Determine continuing education opportunities that enhance career advancement.

Academic Standards:
ELALSV1 The student participates in student to teacher, student to student, and group verbal interactions.

ELAW3 The student uses research and technology to support writing.

NFCS 16.1 Analyze career paths within textile apparel and design industries.

FCS-TS-2. Students will develop a general knowledge of textiles for interiors, furnishings and industrial use from a historic perspective to current applications.

    a. Examine the construction and use of textiles from antiquity to the industrial revolution.
    b. Examine the construction and use of textiles from the industrial revolution through the 21st century.

Academic Standards:
SCSh7 Students analyze how scientific knowledge is developed.

NFCS 16.3 Demonstrate fashion, apparel, and textile design skills.

FCS-TS-3. Students will investigate, describe and recognize fiber characteristics and properties.

a. Analyze and identify natural and man-made fibers.
b. Investigate aesthetic features, mechanical properties, and chemical properties of all fibers.
c. Demonstrate fiber identification by burning.

Academic Standards:
SCSh8 Students will understand important features of the process of scientific inquiry.

NFCS 16.2 Evaluate fiber and textile products and materials.

FCS-TS-4. Students will examine and identify the fabrication and properties of yarns.

a. Analyze and identify simple and complex yarns.
b. Investigate aesthetic features, mechanical properties, and chemical properties of all yarn constructions.
c. Identify textured yarns and describe the effect they have on fabrics.
d. Differentiate yarns within fabric structures.

Academic Standard:
SCSh4 Students use tools and instruments for observing, measuring, and manipulating scientific equipment and materials.

FCS-TS-5. Students will identify textiles according to construction methods for the appropriate application in interiors.

a. Identify woven fabrics and determine how they may be used in interiors, both residential and commercial.
b. Identify non woven fabrics and the most appropriate use for them in interiors.

Academic Standards:
SEV5 Students will recognize that human beings are part of the global ecosystem and will evaluate the effects of human activities and technology on ecosystems.

NFCS 16.2 Evaluate fiber and textile products and materials.

FCS-TS-6. Students will demonstrate an understanding of textile finishes and methods.

a. Compare and contrast mechanical, chemical, and functional finishes.
b. Demonstrate and identify fiber finishes through swatch tests.
c. Compare and contrast printing and dyeing methods.

   d. Demonstrate and identify printing and dyeing methods.

Academic Standards:
SCHh3 Students will identify and investigate problems scientifically.

NFCS 16.3 Demonstrate fashion, apparel, and textile design skills.

FCS-TS-7. Students will understand the characteristics and maintenance concepts of textile products in interior and living environments.

   a. Research various testing methods for textiles.
   b. Identify laws and regulations governing the textile industry including labeling laws.
   c. Read and interpret textile labels.
   d. Discuss current environmental issues relevant to the textile industry.

Academic Standards:
SEV4 Students will understand and describe availability, allocation and conservation of energy and other resources.

NFCS 16.3 Demonstrate fashion, apparel, and textile design skills.

FCS-TS-8. Students will distinguish the characteristics and identify the appropriate use of textiles.

   a. Evaluate textiles for interiors.
   b. Evaluate textiles for living environments.
   c. Evaluate textiles for industrial applications.

Academic Standards:
SCSh8 Students will understand important features of the process of scientific inquiry.

NFCS 16.3 Demonstrate fashion, apparel, and textile design skills.

FCS-TS-9. Students will investigate how trends and color forecasting are used in the development of new products.

   a. Investigate textiles for interiors.
   b. Investigate textiles for living environments.
   c. Investigate textiles for industrial applications.

Academic Standards:
ELAW3 The student uses research and technology to support writing.

SSEMI3 The student will explain how markets, prices, and competition influence economic behavior.

NFCS 16.5 Evaluate elements of textile, apparel, and fashion merchandising.

FCS-TS-10. Students will discuss the continuing use of technology in advancing textile products using innovative skills and tests.

   a. Discuss the role textiles play in sports equipment.
   b. Identify how textiles are being used in the medical field.
   c. Discuss the careers that rely on wearing textiles and how they vary from uniforms to body armor.

FCS-TS-11. Students will identify legislation on the federal, state and local levels that regulate the textile industry.

   a. Analyze legislation, regulations, and public policy affecting the textile industry.
   b. Analyze personal and employer responsibilities and liabilities regarding industry related safety, security, and environmental factors.

Academic Standard:
ELALSV2 The student formulates reasoned judgments about written and oral communication in various media genres. The student delivers focused, coherent, and polished presentations that convey a clear and distinct perspective, demonstrate solid reasoning, and combine traditional rhetorical strategies of narration, exposition, persuasion, and description.

Reading Across the Curriculum

Reading Standard Comment
After the elementary years, students engage in reading for learning. This process sweeps across all disciplinary domains, extending even to the area of personal learning. Students encounter a variety of informational as well as fictional texts, and they experience text in all genres and modes of discourse. In the study of various disciplines of learning (language arts, mathematics, science, social studies), students must learn through reading the communities of discourse of each of those disciplines. Each subject has its own specific vocabulary, and for students to excel in all subjects, they must learn the specific vocabulary of those subject areas in *context*.

Beginning with the middle grades years, students begin to self-select reading materials based on personal interests established through classroom learning. Students become curious about science, mathematics, history, and literature as they form contexts for those subjects related to their personal and classroom experiences. As students explore academic areas through reading, they develop favorite subjects and become confident in their verbal discourse about those subjects.

Reading across curriculum content develops both academic and personal interests in students. As students read, they develop both content and contextual vocabulary. They also build good habits for reading, researching, and learning. The Reading Across the Curriculum standard focuses on the academic and personal skills students acquire as they read in all areas of learning.

CTAE-RC-1 Students will enhance reading in all curriculum areas by:
Reading in All Curriculum Areas
>-Read a minimum of 25 grade-level appropriate books per year from a variety of subject disciplines and participate in discussions related to curricular learning in all areas.
>-Read both informational and fictional texts in a variety of genres and modes of discourse.
>-Read technical texts related to various subject areas.

Discussing Books
>-Discuss messages and themes from books in all subject areas.
>-Respond to a variety of texts in multiple modes of discourse.
>-Relate messages and themes from one subject area to messages and themes in another area.
>-Evaluate the merit of texts in every subject discipline.
>-Examine author's purpose in writing.
>-Recognize the features of disciplinary texts.

Building Vocabulary Knowledge
>-Demonstrate an understanding of contextual vocabulary in various subjects.
>-Use content vocabulary in writing and speaking.
>-Explore understanding of new words found in subject area texts.

Establishing Context
>-Explore life experiences related to subject area content.
>-Discuss in both writing and speaking how certain words are subject area related.
>-Determine strategies for finding content and contextual meaning for unknown words.

CTAE Foundation Skills

The Foundation Skills for Career, Technical and Agricultural Education (CTAE) are critical competencies that students pursuing any career pathway should exhibit to be successful. As core standards for all career pathways in all program concentrations, these skills link career, technical and agricultural education to the state's academic performance standards.

The CTAE Foundation Skills are aligned to the foundation of the U. S. Department of Education's 16 Career Clusters. Endorsed by the National Career Technical Education Foundation (NCTEF) and the National Association of State Directors of Career Technical Education Consortium (NASDCTEc), the foundation skills were developed

from an analysis of all pathways in the sixteen occupational areas. These standards were identified and validated by a national advisory group of employers, secondary and postsecondary educators, labor associations, and other stakeholders. The Knowledge and Skills provide learners a broad foundation for managing lifelong learning and career transitions in a rapidly changing economy.

CTAE-FS-1 Technical Skills: Learners achieve technical content skills necessary to pursue the full range of careers for all pathways in the program concentration.

CTAE-FS-2 Academic Foundations: Learners achieve state academic standards at or above grade level.

CTAE-FS-3 Communications: Learners use various communication skills in expressing and interpreting information.

CTAE-FS-4 Problem Solving and Critical Thinking: Learners define and solve problems, and use problem-solving and improvement methods and tools.

CTAE-FS-5 Information Technology Applications: Learners use multiple information technology devices to access, organize, process, transmit, and communicate information.

CTAE-FS-6 Systems: Learners understand a variety of organizational structures and functions.

CTAE-FS-7 Safety, Health and Environment: Learners employ safety, health and environmental management systems in corporations and comprehend their importance to organizational performance and regulatory compliance.

CTAE-FS-8 Leadership and Teamwork: Learners apply leadership and teamwork skills in collaborating with others to accomplish organizational goals and objectives.

CTAE-FS-9 Ethics and Legal Responsibilities: Learners commit to work ethics, behavior, and legal responsibilities in the workplace.

CTAE-FS-10 Career Development: Learners plan and manage academic-career plans and employment relations.

CTAE-FS-11 Entrepreneurship: Learners demonstrate understanding of concepts, processes, and behaviors associated with successful entrepreneurial performance.