

Sustainable Materials/Practices

Content Area: **21st Century Life & Careers**
Course(s): **Generic Course**
Time Period: **Marking Period 3**
Length: **2 Weeks**
Status: **Published**

Unit Introduction

Standards

9.3.12.AC.1	Use vocabulary, symbols and formulas common to architecture and construction.
9.3.12.AC.6	Read, interpret and use technical drawings, documents and specifications to plan a project.
9.3.12.AC-DES.1	Justify design solutions through the use of research documentation and analysis of data.
9.3.12.AC-DES.4	Apply building codes, laws and rules in the project design.
9.3.12.AC-DES.6	Apply the techniques and skills of modern drafting, design, engineering and construction to projects.
9.3.12.AC-DES.8	Apply standards, applications and restrictions pertaining to the selection and use of construction materials, components and assemblies in the project design.
ARCH.9-12.9.4.12.B.(1).1	Demonstrate communication skills and strategies that are used to work effectively with potential clients and others.
ARCH.9-12.9.4.12.B.(1).9	Develop technical drawings drafted by hand and computer-generated plans to design structures.
ARCH.9-12.9.4.12.B.(1).10	Demonstrate understanding of principles, conventions, standards, applications, and restrictions pertaining to the manufacture and use of construction materials, components, and assemblies, and incorporate this understanding into project design.
ARCH.9-12.9.4.12.B.(1).11	Apply basic organizational, spatial, structural, and constructional principles to the design of interior and exterior space so that design plans are effective.
ARCH.9-12.9.4.12.B.7	Demonstrate use of the concepts, strategies, and systems for obtaining and conveying ideas and information to enhance communication.
ARCH.9-12.9.4.12.B.13	Apply active listening skills to obtain and clarify information.
ARCH.9-12.9.4.12.B.17	Use vocabulary and visual cues commonly used in design and construction to communicate successfully.
ARCH.9-12.9.4.12.B.22	Create and implement project plans to accomplish realistic planning in design and construction situations, considering available resources and requirements of a project/problem.
ARCH.9-12.9.4.12.B.61	Demonstrate skills related to seeking and applying for employment in a desired job.
ARCH.9-12.9.4.12.B.62	Maintain a career portfolio to document knowledge, skills, and experience in a career field.
ARCH.9-12.9.4.12.B.74	Read, interpret, and use technical drawings, documents, and specifications to plan a project.
STEM.9-12.9.4.12.O.20	Conduct technical research to gather information necessary for decision-making.
STEM.9-12.9.4.12.O.24	Operate Internet applications to perform tasks.

STEM.9-12.9.4.12.O.30	Employ computer operations applications to manage tasks.
STEM.9-12.9.4.12.O.48	Employ teamwork skills to achieve collective goals and use team members' talents effectively.
STEM.9-12.9.4.12.O.51	Employ mentoring skills to assist others.

Essential Questions

1. What new technologies/sustainable materials can we consider in your plan to make the home/lifestyle energy efficient as well as cost efficient.

Content / Skills

Students will research various sustainable building materials/practices and add some of the new ideas/features in the plan.

Textbooks:

Basic Technical Drawing - Spencer, Dygdon, Novak, 8th edition, 2004

Engineering Drawing & Design - D.A. Madsen, D.P. Madsen, 6th edition, 2017

Skills: See Below

- decision making
- internet research
- math operations
- measurement
- Plotting Drawings to Scale
- presentation
- teamwork
- using CAD
- visualization