

Unit 7 Construction Framing

Content Area: **Industrial Technology**
Course(s): **Construction Technology I**
Time Period: **3rd Marking Period**
Length: **Weeks**
Status: **Published**

Unit Overview

Students will be able to apply the skills and techniques they will acquire to frame a small 16" on center wall.

Transfer

Students will be able to independently use their learning to...

-Frame a wall, build a shed or construct a house when they leave the class.

For more information, read the following article by Grant Wiggins.

http://www.authenticeducation.org/ae_bigideas/article.lasso?artid=60

Meaning

Understandings

Students will understand that...

-The importance of laying out and constructing a wall properly so insulation and sheetrock fit on the wall without the waste of material

-That building codes are designed to make sure that framing is done correctly to support structures and allow

building materials to fit properly.

Essential Questions

Students will keep considering...

-Will my wall properly support a roof system?

Will my wall fit sheetrock or insulation?

Application of Knowledge and Skill

Students in groups will cut bottom plate, top plate and studs and secure them properly to create a framed wall.

Students will know...

Students will know...

Students will identify how a structure is built from the Foundation to the Roof?

Students will identify what methods of fastening should be selected for Construction Materials .

What type of Portable Power tools are needed to separate lumber and fasten lumber.

Dimensional sizes of lumber.

The difference between level, plumb, square.

Students will be skilled at...

Students will be skilled at...

Laying out Construction Framing with a print and a measuring tape.

Building a framed wall 16" on center that is Plumb, Level and Square.

Fasteners and Portable Fastening Tools.

Portable Separating Tools and Safety. ie: Portable Circular Saw, Bayonet Saw, Jig Saw.

Academic Vocabulary

Level, Plumb, Square, Toe-nailing,

Learning Goal 1

SWBAT identify framing construction of a house from footings to the roof and blue print reading.

| | |
|-----------------|--|
| 9.3.12.AC.1 | Use vocabulary, symbols and formulas common to architecture and construction. |
| 9.3.12.AC.2 | Use architecture and construction skills to create and manage a project. |
| 9.3.12.AC.3 | Comply with regulations and applicable codes to establish and manage a legal and safe workplace. |
| 9.3.12.AC.4 | Evaluate the nature and scope of the Architecture & Construction Career Cluster and the role of architecture and construction in society and the economy. |
| 9.3.12.AC.5 | Describe the roles, responsibilities, and relationships found in the architecture and construction trades and professions, including labor/management relationships. |
| 9.3.12.AC.6 | Read, interpret and use technical drawings, documents and specifications to plan a project. |
| 9.3.12.AC.7 | Describe career opportunities and means to achieve those opportunities in each of the Architecture & Construction Career Pathways. |
| 9.3.12.AC-CST | Construction |
| 9.3.12.AC-CST.1 | Describe contractual relationships between all parties involved in the building process. |
| 9.3.12.AC-CST.2 | Describe the approval procedures required for successful completion of a construction project. |
| 9.3.12.AC-CST.3 | Implement testing and inspection procedures to ensure successful completion of a construction project. |
| 9.3.12.AC-CST.4 | Apply scheduling practices to ensure the successful completion of a construction project. |
| 9.3.12.AC-CST.7 | Compare and contrast the building systems and components required for a construction project. |
| 9.3.12.AC-DES.2 | Use effective communication skills and strategies (listening, speaking, reading, writing and graphic communications) to work with clients and colleagues. |

| | |
|-----------------|--|
| 9.3.12.AC-DES.4 | Apply building codes, laws and rules in the project design. |
| 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. |
| 9.3.12.AC-MO.4 | Determine work required to repair or renovate an existing building. |

Target 1

SWBAT identify parts of a house and how it is constructed.

Target 2

SWBAT read a blueprint and identify symbols and drawing line types.

Learning Goal 2

SWBAT operate Portable Power Tools and Fastening Power Tools Safely.

| | |
|-----------------|--|
| 9.3.12.AC.2 | Use architecture and construction skills to create and manage a project. |
| 9.3.12.AC.7 | Describe career opportunities and means to achieve those opportunities in each of the Architecture & Construction Career Pathways. |
| 9.3.12.AC-CST.5 | Apply practices and procedures required to maintain jobsite safety. |
| 9.3.12.AC-CST.8 | Demonstrate the construction crafts required for each phase of a construction project. |
| 9.3.12.AC-CST.9 | Safely use and maintain appropriate tools, machinery, equipment and resources to accomplish construction project goals. |

Target 1

SWBAT safely operate Circular Saw, Bayonet Saw and Jig Saw.

Target 2

SWBAT safely operate framing gun and how to toe-nail by hand.

Learning Goal 3

SWBAT frame a small wall 16" on center.

| | |
|-----------------|--|
| 9.3.12.AC.2 | Use architecture and construction skills to create and manage a project. |
| 9.3.12.AC.4 | Evaluate the nature and scope of the Architecture & Construction Career Cluster and the role of architecture and construction in society and the economy. |
| 9.3.12.AC.5 | Describe the roles, responsibilities, and relationships found in the architecture and construction trades and professions, including labor/management relationships. |
| 9.3.12.AC.6 | Read, interpret and use technical drawings, documents and specifications to plan a project. |
| 9.3.12.AC.7 | Describe career opportunities and means to achieve those opportunities in each of the Architecture & Construction Career Pathways. |
| 9.3.12.AC-CST.5 | Apply practices and procedures required to maintain jobsite safety. |
| 9.3.12.AC-CST.7 | Compare and contrast the building systems and components required for a construction project. |
| 9.3.12.AC-CST.8 | Demonstrate the construction crafts required for each phase of a construction project. |
| 9.3.12.AC-CST.9 | Safely use and maintain appropriate tools, machinery, equipment and resources to accomplish construction project goals. |
| 9.3.12.AC-DES.6 | Apply the techniques and skills of modern drafting, design, engineering and construction to projects. |
| 9.3.12.AC-MO.1 | Recognize and employ universal construction signs and symbols to function safely in the workplace. |

Target 1

SWBAT cut lumber to pre determined size for the wall.

Target 2

SWBAT layout wall with a tape measure to allow for 16" on center.

Target 3

SWBAT to assemble wall with portable framing gun or hand nailing checking for square, plumb and level.

Formative Assessment and Performance Opportunities

Students will be assessed by the accuracy of the framed wall they have created in small groups.

Summative Assessment

Based on online or written tests and Safety Tests on Print Reading and Framing.

Accommodations/Modifications

Students with Accommodations/Modifications can receive help from students that have completed the task. Extra time will also be allowed.

Unit Resources

You tube videos on house construction.

On line resources for print reading.

You tube videos on Framing.

21st Century Life and Careers

| | |
|-----------------|---|
| CAEP.9.2.12.C.1 | Review career goals and determine steps necessary for attainment. |
| CAEP.9.2.12.C.3 | Identify transferable career skills and design alternate career plans. |
| CAEP.9.2.12.C.4 | Analyze how economic conditions and societal changes influence employment trends and future education. |
| CAEP.9.2.12.C.6 | Investigate entrepreneurship opportunities as options for career planning and identify the knowledge, skills, abilities, and resources required for owning and managing a business. |
| CAEP.9.2.12.C.7 | Examine the professional, legal, and ethical responsibilities for both employers and employees in the global workplace. |

Interdisciplinary Connections
