Curriculum Map: Design Build

Course: BLDG CONST Sub-topic: Uncategorized

Grade(s): 11

Course Description: Design-Build is a semester long course. The class consists of two parts that begin with the students learning the basics of Computer Aided Design (CAD), drawing layout, dimensioning, standard material sizing, design for manufacturing (DFMA) and reverse engineering. The second part of the course is hands-on. The students will learn to measure, cut, drill, and assemble various wood and metal components while building a full scale model of their design.

Unit:

This Curriculum Map Unit has no Topics to display

Unit: Drawings

Timeline: Week 1 to 2

Unit Description: Determine the different drawing layouts and orientations.

Unit Essential Questions: HOw to Determine the different drawing layouts and orientations?

Unit Big Ideas: Determine the different drawing layouts and orientations.

Unit Materials: 2017 Sketchup for students coursebook

3Dvinci

2017

Unit Assignments: Sketchup Components vs groups 2:12

2x4 porch swing 095 E, 1.5p

Pocket hole bookcase 099 E

Bar Stool 129 E

Bread box with plan 097- layout E Copy and layout box. 1.5p

STANDARDS:

STANDARDS

STATE: Pennsylvania SAS Academic Standards (2009-2013)

3.4.10.D2 (Advanced) Diagnose a malfunctioning system and use tools, materials, and knowledge to repair it.

Topic: 1 View Drawing

Minutes for Topic: 44

STANDARDS

STATE: Pennsylvania SAS Academic Standards (2009-2013)

3.4.10.D1 (Advanced) Refine a design by using prototypes and modeling to ensure quality, efficiency, and productivity of a final product.

Topic: 2 view drawings

Minutes for Topic: 44

STANDARDS

STATE: Pennsylvania SAS Academic Standards (2009-2013)

3.4.10.D1 (Advanced) Refine a design by using prototypes and modeling to ensure quality, efficiency, and productivity of a final product.

Topic: 3 view drawings

Minutes for Topic: 44

STANDARDS

STATE: Pennsylvania SAS Academic Standards (2009-2013)

3.4.10.D1 (Advanced) Refine a design by using prototypes and modeling to ensure quality, efficiency, and productivity of a final product.

Unit: safety

Timeline: Week 4 to 5

Unit Description: Learn to safely use hand tools, power tools and personal protective equipment.

Unit Essential Questions: HOw to safely use hand tools, power tools and personal protective equipment?

Unit Big Ideas: Learn to safely use hand tools, power tools and personal protective equipment.

Unit Materials: Agricultural Mechanics

delmar

2002

Unit Assignments: Complete safety test.

STANDARDS:

STANDARDS

STATE: Pennsylvania SAS Academic Standards (2009-2013)

3.4.10.D1 (Advanced) Refine a design by using prototypes and modeling to ensure quality, efficiency, and productivity of a final product.

(* standards consolidated from Topic level)

Topic: hand tools

Minutes for Topic: 44

STANDARDS

STATE: Pennsylvania SAS Academic Standards (2009-2013)

3.4.10.D1 (Advanced) Refine a design by using prototypes and modeling to ensure quality, efficiency, and productivity of a final product.

Topic: power tools

Minutes for Topic: 44

STANDARDS

STATE: Pennsylvania SAS Academic Standards (2009-2013)

3.4.10.D1 (Advanced) Refine a design by using prototypes and modeling to ensure quality, efficiency, and productivity of a final product.

Topic: personal protective equipment

Minutes for Topic: 44

STANDARDS

STATE: Pennsylvania SAS Academic Standards (2009-2013)

3.4.10.D1 (Advanced) Refine a design by using prototypes and modeling to ensure quality, efficiency, and productivity of a final product.

Unit: student project

Timeline: Week 4 to 15

Unit Description: Learn wood shop nomenclature, theory and complete the project.

Unit Essential Questions: HOw to learn wood shop nomenclature, theory and complete the project?

Unit Big Ideas: Learn wood shop nomenclature, theory and complete the project.

Unit Materials: Shop provided hand and power tools.

Raw material.

Unit Assignments: complete project

STANDARDS:

STANDARDS

STATE: Pennsylvania SAS Academic Standards (2009-2013)

3.4.10.D1 (Advanced) Refine a design by using prototypes and modeling to ensure quality, efficiency, and productivity of a final product.

(* standards consolidated from Topic level)

Topic: wood shop nomenclature

Minutes for Topic: 44

STANDARDS

STATE: Pennsylvania SAS Academic Standards (2009-2013)

3.4.10.D1 (Advanced) Refine a design by using prototypes and modeling to ensure quality, efficiency, and productivity of a final product.

Topic: wood shop theory

Minutes for Topic: 44

STANDARDS

STATE: Pennsylvania SAS Academic Standards (2009-2013)

3.4.10.D1 (Advanced) Refine a design by using prototypes and modeling to ensure quality, efficiency, and productivity of a final product.

Topic: wood shop project

Minutes for Topic: 44

STANDARDS

STATE: Pennsylvania SAS Academic Standards (2009-2013)

3.4.10.D1 (Advanced) Refine a design by using prototypes and modeling to ensure quality, efficiency, and productivity of a final product.