

Curriculum Map: Advanced Computer Aided Design 2022/23

Course: BLDG CONST Sub-topic: Uncategorized

Grade(s): 10 to 12

Course Description: Utilizing Computer Assisted Drafting Programs, this course will explore pictorial drafting techniques (isometric and oblique), sectional drawings, auxiliary views, threads and fasteners, as well as architectural design and drafting. Advanced drafting techniques will be employed based upon the individual student's ability level and comprehension. Students may opt to take more than one semester of advanced drafting for additional credit if their schedule allows.

Course Textbooks, Workbooks, Materials Citations: 2017 sketchup for schools student coursebook
3DVinci
2017

Unit: Material Sizes

Timeline: Week 1 to 2

Unit Description: Discuss the differences between rough cut and manufactured materials.

Unit Essential Questions: What are the differences between rough cut and manufactured materials?

Unit Big Ideas: Determine the differences between rough cut and manufactured materials.

Unit Materials: Sketchup for schools free software

Unit Assignments: Plant Stand - pg. 74 2p
Secretary Topper - pg. 154 2.5p
Drafting Stool - pg. 170
Mission Lamp Base - pg. 188
Nightstand-pg. 200
Silverware Caddy - pg. 236 1.5p
Pantry Cabinet - pg. 252 OMIT holes for adjustable shelves
Writing Desk - p 174 Review dimensions for side pc H. Use M, L, K
Cedar Chest - p 206 Omit Tray
Cookbook Easel p 220 and Mug Rack p 228 DEMO how angled grooves. Import mug pegs.
Dado info for Cookbook Easel bottom left of p222. 3-1/4" width on side pc is before adding 3/4 Radius

Unit Key Terminology & Definitions : A=2point arc, B=paint bucket, C=circle, E=eraser F=follow me G=Component H=hand (pan) K= Hidden Lines L=Line M=move O=Orbit P=push/pull Q=rotate R=rectangle T=tape measure S=Scale Z=zoom Space Bar=select

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: Rough Cut

Minutes for Topic: 220

STANDARDS

STATE: Pennsylvania SAS Academic Standards (2009-2013)

[3.4.10.D1 \(Advanced\)](#)

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Topic: Manufactured

Minutes for Topic: 44

STANDARDS

STATE: Pennsylvania SAS Academic Standards (2009-2013)

[3.4.10.D1 \(Advanced\)](#)

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Unit: Drawing layout

Timeline: Week 3 to 6

Unit

Description: Discuss a logical consistent way to layout the house drawing.

Unit Essential

Questions: How can the house drawing be laid out so it's easy to understand?

Unit Big Ideas: Determine how to layout the house drawing so it's easy to understand.

Unit Materials: Sketchup for schools free software

Unit

Assignments:

Folding Table - pg. 98

Knickknack Shelf - pg. 94 2.5p

Corner Display Stand - pg. 102

China Cabinet - pg. 132

Wine and Stemware Cart - pg. 140 Demo detail pc E using circle and 2 pt arc.

Library table- pg. 162

Armoire p 212- Make Door panels K&J fit inside door openings, flush on back. Demo Part G detail bottom p213

Spice Holder p 224 Radius center points for side pc are radius amount to the left of high point of radius, see p227

Kitchen Island p 258

Pine Pantry p 264

Plate Rack p 240

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(* standards consolidated from Topic level)

Topic: Orientation

Minutes for Topic: 220

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: Samples

Minutes for Topic: 220

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: Home layout

Timeline: Week 5 to 15

Unit

Description: Show examples of a logical way to layout a series of house drawings.

Unit Essential

Questions: What are the differences between interior walls and exterior walls?

Unit Big Ideas: Determine the differences between interior walls and exterior walls.

Unit Materials: Sketchup for schools free software

Unit

Assignments:

Collector's Table - pg. 106

Two-tier Bookshelf - pg. 70 3p

Mission Window Seat - pg. 62 5p

Dry Sink - pg. 112 4p

Nesting Office - pg. 180 Omit holes

Spice Holder - pg. 224 3p

Kitchen Island - pg. 258 4p

Jewelry Box p. 196 Design Top profile use follow me tool. Design foot profile.

Utility Cart p 276 Must have horizontal trim. Search for dentil molding by golden eagles.

Omit vertical molding on corners.

Recycling Center p270 Must have 4x8 plywood sheet layout p273

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[3.4.10.D1 \(Advanced\)](#)

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(* standards consolidated from Topic level)

Topic: Exterior Walls

Minutes for Topic: 2420

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: Interior Walls

Minutes for Topic: 44

STANDARDS

STATE: Pennsylvania SAS Academic Standards (2009-2013)

[3.4.10.D1 \(Advanced\)](#)

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