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| Time Frame | Topic/Unit | Skills/Concepts | Major Assessments | Core Standards | Resources |
| Week 1 | **Introduction to Course + Introduction to Tools** | * Exposure to drafting tools (Drawing board, T-Square, 30/60 Triangle, 45/90 Triangle, Compass, Brush, Eraser + Shield, Ruler, etc)
 | Diagnostic assessment of intuitive drafting tool knowledge (Tool Drawing 1) |  |  |
| Weeks 2 - 10 | **Tool & Equipment Usage** | * Drawing paper set-up
* Horizontal Lines
* Vertical Lines
* 30$°$, 45$°$, 60$°$ lines
* Circles
* Construction Points
* Erasers & Reconstruction
* Lettering
 | * Moon Phases Project (Research, Design, and Draw a chart of the 8 Moon Phases)

 * Tool Drawing 2 (Demonstrate use and purpose of tools)
 |  | Hearlihy Instructional Workbook for Drafting – Paul Wallach and Dan Hearlihy (4th Edition) |
| Weeks 11 – 20 | **Orthographic Projection Drawings (Part I)** | * Define and identify Orthographic Projection Drawings
* Understand Orthographic Projection Drawing layout of views
* Overall sketch dimensions
* Border and Title Block
* 1:1 Scale Drawings - Simple
 | * Orthographic Projection Exercise 6 - Wedge Block
 |  | Hearlihy Instructional Workbook for Drafting – Paul Wallach and Dan Hearlihy (4th Edition) |
| Weeks 21 - 32 | **Orthographic Projection Drawings (Part II)** | * Sketching for layout and dimensioning
* Spacing calculations for drawing layout
* Scale and determination of scale
* Orthographic Projection Drawing creation
* Line Types (Object, Hidden, Center, Dimension, Extension)
* Dimensioning (placement of dimensions, identification of necessary dimensions)
 | * Model to Ortho 1 – Flexion Point
* Model to Ortho 2 – Weird Barbell
* Model to Ortho 3 – Shape Sorter
* Model to Ortho 4 – Uncomfortable Toilet
* Model to Ortho 5 – Whirley Gig
* Model to Ortho 6 – Hole Pattern Disc
* Model to Ortho 7 – Countersunk Drill Hole
* Model to Ortho 8 – Fillet Corners
 |  | Hearlihy Instructional Workbook for Drafting – Paul Wallach and Dan Hearlihy (4th Edition)3D Printed components for Model to Ortho assessments. |
| Weeks 33 - 36 | **3D Modeling** | * Creating a part file
* Selecting a sketch plane
* Using sketch tools to create a profile
* Dimensioning sketches to be fully defined
* Extruding to add or remove material
* Creating subsequent planes, sketches, and extrusion features
* Creating a drawing from a part
* Dimensioning a drawing from a part
 | * Model to Ortho 1 – Flexion Point
* Model to Ortho 2 – Weird Barbell
* Model to Ortho 3 – Shape Sorter
* Model to Ortho 6 – Hole Pattern Disc
 |  | Autodesk Inventor software3D Printed components from Model to Ortho assessments |
| Weeks 37 - 38 | **Sketching Design Concepts** | * Drawing:
	+ Lines
	+ Ellipses
	+ Circles
	+ Hatching
	+ Arcs
* One Point Perspective Drawings
* Two Point Perspective Drawings
* Three Point Perspective ideas
 | * Chair in 1 Point
* Chair in 2 Point
* House in 1 Point
* House in 2 Point
* Arch Bridge in 1 Point
* Arch Bridge in 2 Point
* Freehand Toothbrush design
* Freehand Game Console design
* Freehand desk fan design
 |  | Concepts “How to Draw” video tutorials (YouTube) |