CURRICULUM MAP

Course/ Subject: Principles of CAD  Grade: 9 - 12

Month: September through November

Enduring Understanding

- Technology is not an object or artifact but a process by which we solve problems.
- Technological design is a creative process that anyone can do which may result in new inventions and innovations.

Essential Questions

- How does Technology effect/affect my life?
- What steps are involved in technological design and problem solving when creating inventions and innovations?

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<th>Standards</th>
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<th>Skills</th>
<th>Assessment</th>
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| 3.4.6.C1. | Intro to AutoCAD design software:  
  - Understanding & applying basic drawing commands:  
    DRAW  
    MODIFY  
    UNITS/LIMITS  
    LAYERING  
    DIMENSIONING  
    LINETYPE  
    LINEWEIGHT  
    TEXT | Proper keyboard & mouse usage  
  Proper command selection  
  Generating multi-view drawings given 1 view  
  Generating isometric drawings from multi-views | Completion of drawing assignments:  
  - Practice exercises  
  - Multi-view drawings  
  - Isometric drawings |
| M6.B.2.1.1: Use or read a ruler to measure to the nearest 1/16 inch or millimeter. | 3.4.6.D1.  
Apply a design process to solve problems beyond the laboratory classroom. | 3.4.6.D2.  
Use computers appropriately to access and organize and apply information. |  
  - Career Opportunities  
  - 2D Design Principles:  
    Orthographic Projection-  
    2 & 3 View  
    Isometric |
Month: December through March

**Enduring Understanding**

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**Essential Questions**

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<td><strong>3.4.6.C1.</strong></td>
<td>Recognize that requirements for a design include such factors as the desired elements and features of a product or system or the limits that are placed on the design.</td>
<td>2D Design Principles: Assembly Drawings: Linear Exploded Isometric Sectional Drawings: Half Full Offset</td>
<td>Proper command selection Generating assembly drawings given a solid object Generating sectional drawings from a solid object Generating Inventor part &amp; assembly drawings</td>
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<td><strong>M6.B.2.1.1:</strong> Use or read a ruler to measure to the nearest 1/16 inch or millimeter.</td>
<td><strong>3.4.6.D1.</strong> Apply a design process to solve problems beyond the laboratory classroom.</td>
<td><strong>3.4.6.D2.</strong> Use computers appropriately to access and organize and apply information.</td>
<td><strong>2D Design Principles</strong></td>
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Month: April through June

**Enduring Understanding**

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**Essential Questions**

- How does Technology effect/affect my life?
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| **3.4.6.C1.** | Recognize that requirements for a design include such factors as the desired elements and features of a product or system or the limits that are placed on the design. | Architectural Design Basics:  
- Room layout  
- Arrangement of rooms  
- House placement on building site  
- House styles  
- Roof styles | Developing an understanding of proper “flow” of rooms in a floor plan  
Understanding site placement in relationship to true North  
Understanding topography  
Identify various house & roof styles | Completion of drawing assignments:  
- Practice exercises  
- Floor Plan  
- Site Plan  
- Elevations |
| **M6.B.2.1.1:** Use or read a ruler to measure to the nearest 1/16 inch or millimeter. | Career Opportunities  
- Architect  
- Engineer  
- Carpenter | | |
| **3.4.6.D1.** | Apply a design process to solve problems beyond the laboratory classroom. | | |
| **3.4.6.D2.** | Use computers appropriately to access and organize and apply information. | | |