# ORGANIZING THEME/TOPIC

## Drafting Foundations:
- Graphic Communication
- Drafting Equipment
- Geometry for Technical Drawing
- CAD
- Integrated Skills

**Time Frame:** 10 Weeks

## Orthographic Drafting:
- Multi-view Projections
- Dimensioning techniques

**Time Frame:** 8 Weeks

## Pictorials:
- Isometric
- Oblique
- Perspective

**Time Frame:** 6 Weeks

## FOCUS STANDARDS & SKILLS

### Drafting Foundations:
- **KS 21107.13** Construct drawings using straight line, circle, and hidden line statements, etc.
- Demonstrate basic architectural sketches and lettering.
- Measure accurately.
- Identify function and use of manual drafting tools.
- Identify and create common geometric shapes.
- Apply geometric construction as a problem solving tool in technical drawing.
- Introduction to CAD interface and commonly used drawing commands.
- Demonstrate knowledge of social and ethical issues in computing.
- Define qualities of leadership.
- Recognize connection of graphic communication to other areas.

### Orthographic Drafting:
- **KS 21107.2** Demonstrate the ability to dimension drawings on the CAD system.
- Visualize the “Glass Box” concept and apply it to the process of selecting and locating views on a drawing.
- Develop a multi-view drawing, following a prescribed process, from the initial idea to a finished drawing.
- Apply measurements, notes, and symbols to orthographic views on a technical drawing.

### Pictorials:
- **KS 21107.06** Demonstrate the ability to create drawings in 3D.
- **KS 21107.14** Construct isometric and 3D drawings.
- Layout and execute an Isometric drawing.
- Describe and define the various types of oblique pictorial styles.
- Select and draw the most practical type of oblique for a specific purpose.
- Describe and define the various types of perspective drawings.
- Select and draw the most practical type of perspectives for a specific purpose.
### Special Views:
- Sections
- Auxiliary
- Developments

**Time Frame:** 5 Weeks

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<thead>
<tr>
<th>KS 21107.16</th>
<th>Define and use commands to modify a drawing.</th>
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<tbody>
<tr>
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<td>Describe and define the purpose of sectional views.</td>
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<tr>
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<td>Select and draw the appropriate type of sectional views.</td>
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<td>Describe and define the purpose of auxiliary views.</td>
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<td>Select and draw the appropriate auxiliary view.</td>
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<td>Describe and define the purpose of a development.</td>
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<td>Select and draw an appropriate development.</td>
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### Specialties:
- Gears
- Fasteners
- CAD applications in Architecture
- Careers in Architecture and Construction

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<thead>
<tr>
<th>KS 21107.17</th>
<th>Identify and demonstrate the use of CAD symbols, commands and system peripherals.</th>
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<tbody>
<tr>
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<td>Define and draw a common cam or gear.</td>
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<td>Draw, identify and describe various types of fasteners.</td>
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<td>Draw simplified, schematic and detailed threads.</td>
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<td>Draw a basic floor plan.</td>
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<td>Add dimension and appropriate notes, symbols to a floor plan.</td>
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<td>Demonstrate proficiency in setting limits and scale on the CAD system (KS).</td>
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<td>Demonstrate proficiency in setting, turning on and turning off layers (KS).</td>
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<td>Place text on a drawing and change styles, size and angles (KS).</td>
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<td>Set grid and snap specifications (KS).</td>
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### Career and College Readiness
- Investigate use of drafting and CAD in Architectural and Construction careers.
- Communicate ideas effectively orally and in writing.
- Accurately apply mathematical reasoning and calculations.