COURSE: INTRODUCTION TO CAD	GRADES: 9 - 12
UNIT: Measurement	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS: **3.1.12** **3.2.12** **3.7.12** **3.8.12**	**UNIT OBJECTIVES:** After completing this unit, students will be able to: - Students will demonstrate correctness in measuring using various scales and instruments.
ACTIVITIES: Demonstrate the various marks that make up a ruler including 1/16, 1/8, ¼ and ½. Demonstrate skill and accuracy in measuring utilizing different measuring instruments. **RESOURCES:** - CAD Software - Computer Equipment	**ASSESSMENTS:** Assessment is based on the following: - Mastery in ruler reading - Accuracy in measuring **REMEDIATION:** **ENRICHMENT:**

COURSE: INTRODUCTION TO CAD	GRADES: 9 - 12
UNIT: Isometric Sketching	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS:
3.1.12
3.2.12
3.7.12
3.8.12

UNIT OBJECTIVES:
After completing this unit, students will be able to:
- Draw Isometric objects utilizing sketching paper
- Utilize the Isometric Axis to sketch Isometric projections.
- Draw arcs using major and minor arc concepts.
- Demonstrate accuracy in counting squares on Isometric paper.

ACTIVITIES:
Sketching Isometric Problems:
Missing Line Problems:
Missing View Problems:
Free Hand Sketching Problems:

ASSESSMENTS:
Students will be evaluated on exactness of sketches through:
- neatness
- correct axis
- sizing
- proper visualization

REMEDIATION:

RESOURCES:

- CAD Software
- Computer Equipment

ENRICHMENT:

COURSE: INTRODUCTION TO CAD	GRADES: 9 - 12
UNIT: Orthographic Sketching	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS:
3.1.12
3.2.12
3.7.12
3.8.12

UNIT OBJECTIVES:
After completing this unit, students will be able to:
- Properly layout an orthographic projection.
- Visualize views from a 3 dimensional object.
- Locate views of an Orthographic projection
- Familiarize students with construction center, hidden and guide lines.

ACTIVITIES:
Discussion and practice the following:
- Orthographic Layout
- Visualization of views
- Location of views
- Construction lines between views
- Discuss center lines, hidden lines, and guidelines

ASSESSMENTS:
Orthographic sketches are evaluated on the following:
- neatness
- solution of the problem
- accuracy of center lines, hidden lines, and guidelines.

RESOURCES:

- CAD Software
- Computer Equipment

REMEDIATION:

ENRICHMENT:

COURSE: INTRODUCTION TO CAD	GRADES: 9 - 12
UNIT: Basic AutoCAD Commands	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS: **3.1.12** **3.2.12** **3.7.12** **3.8.12**	**UNIT OBJECTIVES:** After completing this unit, students will be able to: - Create a template - Understand the AutoCAD window - Understand the use of function keys - Draw, erase and select lines - Save and close a drawing
ACTIVITIES: Students will utilize simple AutoCAD commands to complete exercises that meet the above objectives. **RESOURCES:** - CAD Software - Computer Equipment	**ASSESSMENTS:** Students will be evaluated upon the following: - neatness - accuracy - solution of the problem - proper use of the above commands **REMEDIATION:** **ENRICHMENT:**

COURSE: INTRODUCTION TO CAD	GRADES: 9 - 12
UNIT: Circles and Simple Shapes	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS:
3.1.12
3.2.12
3.7.12
3.8.12

UNIT OBJECTIVES:
After completing this unit, students will be able to:
- Create a circle using 6 different methods
- Create a rectangle with width, chamfers, fillet and rotation.
- Set grids and increment snap using the DRAFTING SETTINGS option.
- Change current layers.

ACTIVITIES:

Students will utilize the AutoCAD commands to complete exercises that meet the above objectives.

RESOURCES:

- CAD Software
- Computer Equipment

ASSESSMENTS:

Students will be evaluated upon the following:
- neatness
- accuracy
- solution of the problem
- proper use of the above commands

REMEDIATION:

ENRICHMENT:

COURSE: INTRODUCTION TO CAD	GRADES: 9 - 12
UNIT: Object Snap	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS:
3.1.12
3.2.12
3.7.12
3.8.12

UNIT OBJECTIVES:
After completing this unit, students will be able to:
- Understand the function of Object Snap
- Use 7 Object Snap modes
- Operate the Running Snap function
- Change the drawing paper size
- Select the Units of Measurement to draw with

ACTIVITIES:

Students will utilize the AutoCAD commands to complete exercises that meet the above objectives.

RESOURCES:

- CAD Software
- Computer Equipment

ASSESSMENTS:

Students will be evaluated upon the following:
- neatness
- accuracy
- solution of the problem
- proper use of the above commands

REMEDIATION:

ENRICHMENT:

COURSE: INTRODUCTION TO CAD	GRADES: 9 - 12
UNIT: Polygons and Ellipses	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS:
3.1.12
3.2.12
3.7.12
3.8.12

UNIT OBJECTIVES:
After completing this unit, students will be able to:
- Draw an Inscribed and Circumscribed Polygon
- Create an Ellipse using two different methods
- Draw an object called a donut
- Define a Point location
- Select various Point Styles
- Use the three new Object Snap modes

ACTIVITIES:

Students will utilize the AutoCAD commands to complete exercises that meet the above objectives.

RESOURCES:

- CAD Software
- Computer Equipment

ASSESSMENTS:

Students will be evaluated upon the following:
- neatness
- accuracy
- solution of the problem
- proper use of the above commands

REMEDIATION:

ENRICHMENT:

COURSE: INTRODUCTION TO CAD	GRADES: 9 - 12
UNIT: Basic Editing Commands	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS: **3.1.12** **3.2.12** **3.7.12** **3.8.12**	**UNIT OBJECTIVES:** After completing this unit, students will be able to: - Use the 4 Break command options - Trim an object to a cutting edge - Extend an object to a boundary - Move an object(s) to a new location - Explode objects into their primitive entities
ACTIVITIES: Students will utilize the AutoCAD commands to complete exercises that meet the above objectives. **RESOURCES:** - CAD Software - Computer Equipment	**ASSESSMENTS:** Students will be evaluated upon the following: - neatness - accuracy - solution of the problem - proper use of the above commands **REMEDIATION:** **ENRICHMENT:**

COURSE: INTRODUCTION TO CAD	GRADES: 9 - 12
UNIT: Advanced Editing Commands	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS: **3.1.12** **3.2.12** **3.7.12** **3.8.12**	**UNIT OBJECTIVES:** After completing this unit, students will be able to: - Copy objects - Make a mirrored image of one or more objects - Add rounded corners to rectangular objects and lines - Add angles to corners
ACTIVITIES: Students will utilize the AutoCAD commands to complete exercises that meet the above objectives. **RESOURCES:** - CAD Software - Computer Equipment	**ASSESSMENTS:** Students will be evaluated upon the following: - neatness - accuracy - solution of the problem - proper use of the above commands **REMEDIATION:** **ENRICHMENT:**

COURSE: INTRODUCTION TO CAD	GRADES: 9 - 12
UNIT: Text in AutoCAD	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS:	UNIT OBJECTIVES:
3.1.12 **3.2.12** **3.7.12** **3.8.12**	After completing this unit, students will be able to: - Add a "Single Line" of text to your drawing - Add a paragraph, using "Multi-line Text" - Control tabs, indents and line spacing - Edit text already in the drawing - Mask text background - Scale Text
ACTIVITIES: Students will utilize the AutoCAD commands to complete exercises that meet the above objectives. **RESOURCES:** - CAD Software - Computer Equipment	**ASSESSMENTS:** Students will be evaluated upon the following: - neatness - accuracy - solution of the problem - proper use of the above commands **REMEDIATION:** **ENRICHMENT:**

COURSE: INTRODUCTION TO CAD	GRADES: 9 - 12
UNIT: Coordinate Inputs	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS:
3.1.12
3.2.12
3.7.12
3.8.12

UNIT OBJECTIVES:
After completing this unit, students will be able to:
- Understand the ORIGIN
- Draw Objects using Coordinate Input
- Input Absolute and Relative coordinates
- Use Direct Distance Entry
- List information about objects
- Determine the distance between two points
- Identify a location within the drawing
- Create your own 11 x 17 Master Border
- Print 11 x 17 drawing in Model Space

ACTIVITIES:

Students will utilize the AutoCAD commands to complete exercises that meet the above objectives.

RESOURCES:

- CAD Software
- Computer Equipment

ASSESSMENTS:

Students will be evaluated upon the following:
- neatness
- accuracy
- solution of the problem
- proper use of the above commands

REMEDIATION:

ENRICHMENT:

COURSE: INTRODUCTION TO CAD	GRADES: 9 - 12
UNIT: The User Coordinate System	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS:
3.1.12
3.2.12
3.7.12
3.8.12

UNIT OBJECTIVES:
After completing this unit, students will be able to:
- Move the Origin
- Turn the UCS Icon On and Off
- Command the UCS Icon to move with the Origin

ACTIVITIES:

Students will utilize the AutoCAD commands to complete exercises that meet the above objectives.

RESOURCES:

- CAD Software
- Computer Equipment

ASSESSMENTS:

Students will be evaluated upon the following:
- neatness
- accuracy
- solution of the problem
- proper use of the above commands

REMEDIATION:

ENRICHMENT:

COURSE: INTRODUCTION TO CAD	**GRADES: 9 - 12**
UNIT: Polar Coordinates	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS: **3.1.12** **3.2.12** **3.7.12** **3.8.12**	**UNIT OBJECTIVES:** After completing this unit, students will be able to: - Understand the Polar Degree Clock - Draw Lines to a specific length and angle - Draw Objects using Polar Coordinate Input - Use Dynamic Input - Construct an Isometric view
ACTIVITIES: Students will utilize the AutoCAD commands to complete exercises that meet the above objectives. **RESOURCES:** - CAD Software - Computer Equipment	**ASSESSMENTS:** Students will be evaluated upon the following: - neatness - accuracy - solution of the problem - proper use of the above commands **REMEDIATION:** **ENRICHMENT:**

COURSE: INTRODUCTION TO CAD	GRADES: 9 - 12
UNIT: Offset	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS:	UNIT OBJECTIVES:
3.1.12 **3.2.12** **3.7.12** **3.8.12**	After completing this unit, students will be able to: - Duplicate an object at a specified distance away - Make changes to an object's properties - Create Tables using Single Line and Multi-line text.
ACTIVITIES: Students will utilize the AutoCAD commands to complete exercises that meet the above objectives. **RESOURCES:** - CAD Software - Computer Equipment	**ASSESSMENTS:** Students will be evaluated upon the following: - neatness - accuracy - solution of the problem - proper use of the above commands **REMEDIATION:** **ENRICHMENT:**

COURSE: INTRODUCTION TO CAD	**GRADES: 9 - 12**
UNIT: Arrays	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS:
3.1.12
3.2.12
3.7.12
3.8.12

UNIT OBJECTIVES:
After completing this unit, students will be able to:
- Create multiple copies in a rectangle or circular pattern

ACTIVITIES:

Students will utilize the AutoCAD commands to complete exercises that meet the above objectives.

RESOURCES:

- CAD Software
- Computer Equipment

ASSESSMENTS:

Students will be evaluated upon the following:
- neatness
- accuracy
- solution of the problem
- proper use of the above commands

REMEDIATION:

ENRICHMENT:

COURSE: INTRODUCTION TO CAD	GRADES: 9 - 12
UNIT: Scaling and Stretching	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS:
3.1.12
3.2.12
3.7.12
3.8.12

UNIT OBJECTIVES:
After completing this unit, students will be able to:
- Make an existing object larger or smaller proportionately
- Stretch or compress an existing object
- Rotate an existing object to a specific angle.

ACTIVITIES:

Students will utilize the AutoCAD commands to complete exercises that meet the above objectives.

RESOURCES:

- CAD Software
- Computer Equipment

ASSESSMENTS:

Students will be evaluated upon the following:
- neatness
- accuracy
- solution of the problem
- proper use of the above commands

REMEDIATION:

ENRICHMENT:

COURSE: INTRODUCTION TO CAD	GRADES: 9 - 12
UNIT: Hatching	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS:
3.1.12
3.2.12
3.7.12
3.8.12

UNIT OBJECTIVES:
After completing this unit, students will be able to:
- Cross hatch a sectional view
- Add gradient to filled areas
- Solidly fill an area
- Make changes to a hatch set already in the drawing.

ACTIVITIES:

Students will utilize the AutoCAD commands to complete exercises that meet the above objectives.

RESOURCES:

- CAD Software
- Computer Equipment

ASSESSMENTS:

Students will be evaluated upon the following:
- neatness
- accuracy
- solution of the problem
- proper use of the above commands

REMEDIATION:

ENRICHMENT:

COURSE: INTRODUCTION TO CAD	**GRADES: 9 - 12**
UNIT: Basic Dimensioning	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS: **3.1.12** **3.2.12** **3.7.12** **3.8.12**	**UNIT OBJECTIVES:** After completing this unit, students will be able to: - Understand the importance of true associative dimensioning. - Use grips - Add linear, baseline, and continued dimensions to a drawing - Control the appearance of dimensions - Create and compare dimension styles
ACTIVITIES: Students will utilize the AutoCAD commands to complete exercises that meet the above objectives. **RESOURCES:** - CAD Software - Computer Equipment	**ASSESSMENTS:** Students will be evaluated upon the following: - neatness - accuracy - solution of the problem - proper use of the above commands **REMEDIATION:** **ENRICHMENT:**

COURSE: INTRODUCTION TO CAD	**GRADES: 9 - 12**
UNIT: Editing Dimensions	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS: **3.1.12** **3.2.12** **3.7.12** **3.8.12**	**UNIT OBJECTIVES:** After completing this unit, students will be able to: - Editing dimensioning text values - Edit the dimension position - Modify a dimension style - Override a dimension style - Edit a dimension using properties palette
ACTIVITIES: Students will utilize the AutoCAD commands to complete exercises that meet the above objectives. **RESOURCES:** - CAD Software - Computer Equipment	**ASSESSMENTS:** Students will be evaluated upon the following: - neatness - accuracy - solution of the problem - proper use of the above commands **REMEDIATION:** **ENRICHMENT:**

COURSE: IINTRODUCTION TO CAD	**GRADES: 9 - 12**
UNIT: Dimensioning Circles & Angles	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS:
3.1.12
3.2.12
3.7.12
3.8.12

UNIT OBJECTIVES:
After completing this unit, students will be able to:
- Dimension a circle using the both radius and diameter commands.
- Draw a center mark.
- Edit the size and appearance of center marks.
- Understand the need for sub-styles
- Create a sub-style.

ACTIVITIES:

Students will utilize the AutoCAD commands to complete exercises that meet the above objectives.

RESOURCES:

- CAD Software
- Computer Equipment

ASSESSMENTS:

Students will be evaluated upon the following:
- neatness
- accuracy
- solution of the problem
- proper use of the above commands

REMEDIATION:

ENRICHMENT:

COURSE: INTRODUCTION TO CAD	GRADES: 9 - 12
UNIT: Dimensioning Objects on Angles & Adding symbols on Dimensions	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS:
3.1.12
3.2.12
3.7.12
3.8.12

UNIT OBJECTIVES:
After completing this unit, students will be able to:
- Dimension objects that are on an angle
- Draw a leader
- Draw a line with an arrow
- Add symbols such as a diameter, plus or minus and degree to text
- Pre Assign a prefix or suffix to a dimension.

ACTIVITIES:

Students will utilize the AutoCAD commands to complete exercises that meet the above objectives.

RESOURCES:

- CAD Software
- Computer Equipment

ASSESSMENTS:

Students will be evaluated upon the following:
- neatness
- accuracy
- solution of the problem
- proper use of the above commands

REMEDIATION:

ENRICHMENT:

COURSE: INTRODUCTION TO CAD	**GRADES: 9 - 12**
UNIT: Using and editing Automatic Dimensioning	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS:
3.1.12
3.2.12
3.7.12
3.8.12

UNIT OBJECTIVES:
After completing this unit, students will be able to:
- Use multiple automatic dimensioning
- Edit multiple dimensions

ACTIVITIES:

Students will utilize the AutoCAD commands to complete exercises that meet the above objectives.

RESOURCES:

- CAD Software
- Computer Equipment

ASSESSMENTS:

Students will be evaluated upon the following:
- neatness
- accuracy
- solution of the problem
- proper use of the above commands

REMEDIATION:

ENRICHMENT:

COURSE: INTRODUCTION TO CAD	**GRADES: 9 - 12**
UNIT: Editing Object Properties & Revision	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS: **3.1.12** **3.2.12** **3.7.12** **3.8.12**	**UNIT OBJECTIVES:** After completing this unit, students will be able to: - Change an objects properties to match the properties of another object - Create a revision cloud - Select the Revision Cloud Style - Cover part of the drawing with a blank patch.
ACTIVITIES: Students will utilize the AutoCAD commands to complete exercises that meet the above objectives. **RESOURCES:** - CAD Software - Computer Equipment	**ASSESSMENTS:** Students will be evaluated upon the following: - neatness - accuracy - solution of the problem - proper use of the above commands **REMEDIATION:** **ENRICHMENT:**

COURSE: INTRODUCTION TO CAD	**GRADES: 9 - 12**
UNIT: Drawing & Dimensioning Arcs	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS: **3.1.12** **3.2.12** **3.7.12** **3.8.12**	**UNIT OBJECTIVES:** After completing this unit, students will be able to: - Draw an arc using ten different methods - Dimension an arc
ACTIVITIES: Students will utilize the AutoCAD commands to complete exercises that meet the above objectives. **RESOURCES:** - CAD Software - Computer Equipment	**ASSESSMENTS:** Students will be evaluated upon the following: - neatness - accuracy - solution of the problem - proper use of the above commands **REMEDIATION:** **ENRICHMENT:**

COURSE: INTRODUCTION TO CAD	**GRADES: 9 - 12**
UNIT: Using Polylines & Polyarcs	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS: **3.1.12** **3.2.12** **3.7.12** **3.8.12**	**UNIT OBJECTIVES:** After completing this unit, students will be able to: - Understand what a polyline is. - Draw a polyline and polyarc - Assign widths to polylines - Set the fill mode to on or off.
ACTIVITIES: Students will utilize the AutoCAD commands to complete exercises that meet the above objectives. **RESOURCES:** - CAD Software - Computer Equipment	**ASSESSMENTS:** Students will be evaluated upon the following: - neatness - accuracy - solution of the problem - proper use of the above commands **REMEDIATION:** **ENRICHMENT:**

COURSE: INTRODUCTION TO CAD	**GRADES: 9 - 12**
UNIT: Modifying and creating your own layers & line types	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS: **3.1.12** **3.2.12** **3.7.12** **3.8.12**	**UNIT OBJECTIVES:** After completing this unit, students will be able to: - Create your own layers - Load line types - Understand the difference between model and layout tabs. - Adjusting the size of the pick box - Creating floating viewports, page setup for plotting, a decimal setup, and creating a new border.
ACTIVITIES: Students will utilize the AutoCAD commands to complete exercises that meet the above objectives. **RESOURCES:** - CAD Software - Computer Equipment	**ASSESSMENTS:** Students will be evaluated upon the following: - neatness - accuracy - solution of the problem - proper use of the above commands **REMEDIATION:** **ENRICHMENT:**

COURSE: INTRODUCTION TO CAD	GRADES: 9 - 12
UNIT: Scaling	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS: **3.1.12** **3.2.12** **3.7.12** **3.8.12**	**UNIT OBJECTIVES:** After completing this unit, students will be able to: - Understand scaled drawings and understanding how scale affects text, hatch, & dimensions. - Adjusting & calculating the drawing scale factor - Dimensioning a scaled drawing - Creating a feet/inches setup file for a drawing - Creating an architectural border to plot a drawing.
ACTIVITIES: Students will utilize the AutoCAD commands to complete exercises that meet the above objectives. **RESOURCES:** - CAD Software - Computer Equipment	**ASSESSMENTS:** Students will be evaluated upon the following: - neatness - accuracy - solution of the problem - proper use of the above commands **REMEDIATION:** **ENRICHMENT:**

COURSE: INTRODUCTION TO CAD	GRADES: 9 - 12
UNIT: Using Blocks	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS: **3.1.12** **3.2.12** **3.7.12** **3.8.12**	**UNIT OBJECTIVES:** After completing this unit, students will be able to: - Understanding what blocks are - Creating a block - Inserting a block into your drawing - Understanding the rules governing color and line type - Re-define and Purge a block
ACTIVITIES: Students will utilize the AutoCAD commands to complete exercises that meet the above objectives. **RESOURCES:** - CAD Software - Computer Equipment	**ASSESSMENTS:** Students will be evaluated upon the following: - neatness - accuracy - solution of the problem - proper use of the above commands **REMEDIATION:** **ENRICHMENT:**

COURSE: INTRODUCTION TO CAD	**GRADES: 9 - 12**
UNIT: Plotting multi-view layouts	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS: **3.1.12** **3.2.12** **3.7.12** **3.8.12**	**UNIT OBJECTIVES:** After completing this unit, students will be able to: - Create a multi-view layout for plotting - Pan a drawing image within a viewport
ACTIVITIES: Students will utilize the AutoCAD commands to complete exercises that meet the above objectives. **RESOURCES:** - CAD Software - Computer Equipment	**ASSESSMENTS:** Students will be evaluated upon the following: - neatness - accuracy - solution of the problem - proper use of the above commands **REMEDIATION:** **ENRICHMENT:**

COURSE: INTRODUCTION TO CAD	**GRADES: 9 - 12**
UNIT: Using the polyline & spline commands	

NATIONAL STANDARDS:
Standards 1, 2, 3: The Nature of Technology. Standards 4, 5, 6, 7: Technology and Society. Standards 8, 9, 10: Design. Standards 11, 12, 13: Abilities of a Technology World. Standards 14-20: The Designed World

STATE STANDARDS: **3.1.12** **3.2.12** **3.7.12** **3.8.12**	**UNIT OBJECTIVES:** After completing this unit, students will be able to: - Use and modify the polyline command - Use and modify the spline command
ACTIVITIES: Students will utilize the AutoCAD commands to complete exercises that meet the above objectives. **RESOURCES:** - CAD Software - Computer Equipment	**ASSESSMENTS:** Students will be evaluated upon the following: - neatness - accuracy - solution of the problem - proper use of the above commands **REMEDIATION:** **ENRICHMENT:**