

CURRICULUM MAP (rev 8/25)

Subject: Technology Education - Introduction to Engineering Design (IED) Grade Level: Mixed

Teacher(s):

FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
UNIVERSAL LANGUAGE <ul style="list-style-type: none"> ● SKETCHING (PICTORIAL) ● OBLIQUE ● ISOMETRIC ● PERSPECTIVE VISUAL ELEMENTS <ul style="list-style-type: none"> ● LINE ● SHAPE ● FORM ● COLOR ● SPACE ● TEXTURE ● VALUE TECHNICAL DRAWING <ul style="list-style-type: none"> ● ORTHOGRAPHIC PROJECTION ● ISOMETRIC 	COMPUTER-AIDED DRAWING <ul style="list-style-type: none"> ● COMPUTER LITERACY ● CAD APPLICATION ● FUSION 360 PROBLEM-SOLVING DESIGN <ul style="list-style-type: none"> ● TECHNOLOGICAL METHOD ● DESIGN BRIEF CHALLENGE ● PROCESSES/APPLICATIONS ● PROTO-TYPE CONSTRUCTION ● EVALUATION ● PRESENTATION 	SECTIONS <ul style="list-style-type: none"> ● DESIGN BRIEF CHALLENGE ● TECHNIQUES ● APPLICATIONS ● CAD TRANSITIONS AND DEVELOPMENTS <ul style="list-style-type: none"> ● DESIGN BRIEF CHALLENGE ● TECHNIQUES ● APPLICATIONS ● CAD 	AUXILIARIES <ul style="list-style-type: none"> ● DESIGN BRIEF CHALLENGE ● TECHNIQUES ● APPLICATIONS ● CAD REVOLUTIONS <ul style="list-style-type: none"> ● DESIGN BRIEF CHALLENGE ● TECHNIQUES ● APPLICATIONS ● CAD

CURRICULUM MAP (rev 8/25)

Subject: Technology Education - Architectural Drawing

Grade Level: 10th-12th

Teacher(s):

FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
<p>LANDSCAPING & FLOOR PLANS, SYMBOLS</p> <p>FOUNDATIONS & FLOOR PLANS</p> <p>ROOM AND AREA PLANNING</p> <p>BATH SYMBOLS, KITCHEN SYMBOLS, ELECTRICAL SYMBOLS</p> <p>TOOLS AND TECHNIQUES</p> <ul style="list-style-type: none"> • Scales • Drafting Instruments • Papers, Pencils • Computer Aided Design • utilization of AutoCAD to complete all required drawings <p>HISTORY</p> <p>AESTHETICS</p> <ul style="list-style-type: none"> • Elements of Design • Principles of Design • Creativity • Functional Design <p>PLANNING & DRAWING</p> <ul style="list-style-type: none"> • Site Plan <ul style="list-style-type: none"> o Building location o Landscaping o Symbols <p><u>TERM PROJECT</u></p> <p>As each area is covered, the students will complete the floor plans, electrical plans, plumbing plans, and elevations of a small two bedroom, one bath dwelling.</p>	<p>STAIR & CONSTRUCTION DETAILS</p> <p>DIMENSIONING FLOOR PLANS</p> <p>WALL MATERIALS & CORNICE DETAILS</p> <p>WALL SECTIONS ROOM FINISHING SCHEDULES</p> <p>ROOFS & PERSPECTIVES</p> <p>ELEVATIONS</p> <p>OCCUPATIONS & CAREERS</p> <p>PLANNING/DRAWING</p> <ul style="list-style-type: none"> • Area/Room Plans • Floor Plans <p>ARCHITECTURAL DRAWING TECHNIQUES USING AutoCAD</p> <ul style="list-style-type: none"> • Dimensioning • Floor Plans • Sections/ Framing • Exterior Elevations • Perspectives <p>CAREER EXPLORATION</p> <p><u>FINAL EXAM</u></p> <p>Design and draw their idea of a dream home.</p>		

CURRICULUM MAP (rev 8/25)

Subject: Technology Education - Woodworking

Grade Level: 11th – 12th

Teacher(s): J. Ponsolle

FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
<p>RESOURCES</p> <ul style="list-style-type: none"> ● PEOPLE-JOBS-ORGANIZATIONS ● INFO-HISTORY <p>PROCESSES</p> <ul style="list-style-type: none"> ● MEASUREMENTS ● LAB SAFETY ● MACHINE USE ● MACHINE USE PRACTICE ● TIME MANAGEMENT ● WORKING DRAWINGS <p>OUTPUTS</p> <ul style="list-style-type: none"> ● PROJECT UPDATE (REFLECTION) ● IMPACTS- ENV., ECO.,SOCIETAL, PERSONAL <p>TOOLS COVERED</p> <ul style="list-style-type: none"> ● CHOP SAW ● PLANER ● JOINTER ● BAND SAW ● CORDLESS DRILL ● PALM SANDER ● BELT SANDER 	<p>PROCESSES</p> <ul style="list-style-type: none"> ● HOW TO FINISH A PROJECT <ul style="list-style-type: none"> ○ STAIN ○ POLYURETHANE ○ PAINT ● DIFFERENT ASSEMBLY MEANS ● WORKING DRAWINGS <p>OUTPUTS</p> <ul style="list-style-type: none"> ● PROJECT UPDATE (REFLECTION) ● IMPACTS- ENV., ECO.,SOCIETAL, PERSONAL <p>TOOLS COVERED</p> <ul style="list-style-type: none"> ● DRILL PRESS ● LATHE ● BISCUIT JOINTER ● CIRCULAR SAW ● TABLE SAW <p>** DURING BOTH SEMESTERS STUDENTS WILL COMPLETE MANY PROJECTS. THE NUMBER OF PROJECTS DEPENDS ON THE PROJECT PICKED, NOT EVERYONE WILL COMPLETE THE SAME NUMBER OF PROJECTS. **</p>		

CURRICULUM MAP (rev 8/25)

Subject: Technology Education - SUNYCAD 101

Grade Level: 10th-12th

Teacher(s):J. Ponsolle

FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
<p>INTRODUCTION TO AutoCAD An introduction to drafting using AutoCAD software. Emphasis is placed on drafting, annotating, and dimensioning two dimensional drawings and composing sheets to be plotted. Emphasis is also placed on training students to follow verbal directions. Achieving appropriate line-weight distinctions when plotting is stressed.</p> <p>A computer system and CAD programs are used as tools in the design drafting process. Students will use a computer system and CAD software in place of traditional pencil-and-paper techniques.</p> <p>TECHNICAL DRAWING PROCEDURES</p> <ul style="list-style-type: none"> ● Orthographic ● Isometric ● Perspectives ● Section 	<p>At the end of the course, students who successfully complete this course will be able to:</p> <ol style="list-style-type: none"> 1. Demonstrate proficiency using Drawing and Modifying commands to draft two dimensional drawings. 2. Demonstrate an understanding of using AutoCAD operations to draft two dimensional drawings. 3. Produce dimensioned annotated plans, sections, and elevations. 4. Create and use blocks. 5. Utilize Modelspace and Paperspace (Layout). 6. Compose sheets using Layout, including scaling viewports and managing text height. 7. Combine files using XREF. 8. Plot large sheets with appropriate line-weights. <p>Demonstrate a basic understanding of AutoCAD Architecture.</p>		

CURRICULUM MAP (rev 8/25)

Subject: Technology Education - Principles of Engineering

Grade Level: 11th-12th

Teacher(s): J. Ponsolle

FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
<p>INTRODUCTION TO ENGINEERING</p> <ul style="list-style-type: none"> • COLLEGE MAJOR REPORT AND PRESENTATION RESEARCH • TECHNOLOGY AND SOCIETY INTERACTION <p>AUTOCAD REVIEW</p> <ul style="list-style-type: none"> • 3D PEN PROJECT • AUTOCAD DRAWINGS <ul style="list-style-type: none"> ◦ 3D MODELING TOOLS IN AUTOCAD <p>CIVIL ENGINEERING</p> <ul style="list-style-type: none"> • BRIDGE BUILDING PROJECT FORCES AT WORK • ROLLER COASTER PROJECT ENGINEERING STABILITY 	<p>CIVIL ENGINEERING</p> <ul style="list-style-type: none"> • CARDBOARD KAYAK PROJECT • AUTOCAD DRAWINGS <p>PRESENTATION SYSTEMS</p> <ul style="list-style-type: none"> • INVENTION REPORT AND PRESENTATION PROJECT <p>MECHANICAL ENGINEERING</p> <ul style="list-style-type: none"> • 2L BOTTLE ROCKET PROJECT <p>ENGINEERING ETHICS</p>		

CURRICULUM MAP (rev 8/25)

Subject: Technology Education - 3d Modeling

Grade Level: 9th-10th

Teacher(s): J. Ponsolle

FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
<p style="text-align: center;">PROBLEM SOLVING</p> <ul style="list-style-type: none"> • HOW TO COME UP WITH SOLUTIONS <p style="text-align: center;">TINKER CAD REVIEW</p> <ul style="list-style-type: none"> • HOW TO USE • BASIC DRAWING SKILLS • 3D PRINT OUT <p>FREECAD</p> <ul style="list-style-type: none"> • HOW TO USE • BASIC DRAWING SKILLS • 3D PRINT OUT 	<p>AUTODESK INVENTOR</p> <ul style="list-style-type: none"> • HOW TO USE • BASIC DRAWING SKILLS • 3D PRINT OUT <p style="text-align: center;">VINYL CUTTER</p> <ul style="list-style-type: none"> • HOW TO USE • BASIC DRAWING SKILLS • PRINT OUT VARIOUS IMAGES THAT THE STUDENTS DESIGNED <p>** DURING BOTH SEMESTERS STUDENTS WILL HAVE MANY DRAWINGS TO WORK IN IN THE VARIOUS CAD PROGRAMS BEING UTILIZED **</p>		

CURRICULUM MAP (rev 8/25)

Subject: Technology Education - Residential Structures

Grade Level: mixed

Teacher(s):

FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
<p style="text-align: center;">TERMINOLOGY</p> <ul style="list-style-type: none"> ● PARTS OF A WALL ● PARTS OF A WINDOW FRAME ● PARTS OF A DOOR FRAME <p style="text-align: center;">MODEL HOMES</p> <ul style="list-style-type: none"> ● CONSTRUCT A SCALED DOWN MODEL OF A HOME <ul style="list-style-type: none"> ○ GROUPS WILL PICK FROM 2-3 DIFFERENT HOME DESIGN TYPES ● REVIEW CONSTRUCTION PROCEDURES AS STUDENTS COMPLETE SECTIONS OF THE HOUSE <ul style="list-style-type: none"> ○ FOUNDATIONS ○ WALLS ○ ROOF 	<p style="text-align: center;">TERMINOLOGY</p> <ul style="list-style-type: none"> ● ELECTRICAL COMPONENTS ● PLUMBING COMPONENTS ● ROOFING MATERIAL <p style="text-align: center;">MODEL WALLS</p> <ul style="list-style-type: none"> ● STUDENTS WILL CONSTRUCT FULL SIZE MODEL WALLS ● INSTALL ELECTRIC OUTLET AND SWITCH ● INSTALL A BATHROOM SINK ● INSTALL DRYWALL ● DISCUSS FINISHING TECHNIQUES <p>** DURING BOTH SEMESTERS STUDENTS WILL WORK ON THE MODELS AND PERFORM VARIOUS TASKS ASSOCIATED WITH HOUSE CONSTRUCTION**</p>		

CURRICULUM MAP (rev 8/25)

Subject: Intro to Computer Science

Grade Level: 9th- 12th

FIRST QUARTER	SECOND QUARTER	THIRD QUARTER	FOURTH QUARTER
Unit 1: Beginning in Computer Science Unit 2: Number Calculations and Data Unit 3: Making Decisions	Unit 4: Repetition and Loops Unit 5: Programming in EarSketch Unit 6: Graphics	Unit 7: Functions Unit 8: Arrays Unit 9: 2D Arrays	Unit 10: Programming in EarSketch Unit 11: Internet Unit 12: Careers in Computer Science