Technological Systems offers unique opportunities to apply numerous academic concepts through practical, hands-on activities. This course will provide students with opportunities to learn through discovery, exploration and practical application. Students are provided with opportunities to research, design, develop, build, test and evaluate solutions to human needs and wants. A variety of “challenge activities” are introduced, some in kit form, others using raw materials. During the building process, students become familiar with a variety of hand and power tools, safety practices, and assembly and finishing procedures. Grades 9 -12
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<tr>
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<tr>
<td>UNIT: Lego's Problem Solving</td>
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- Standards 8, 9, 10: Design
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**STATE STANDARDS:**
- **3.6.10-C:** Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design to real world problems
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- **3.8.10-C:** Evaluate possibilities consequences and impacts of scientific and technological solutions.

**UNIT OBJECTIVES:**
- Experiment with manual Legos. To learn the correct procedures to assemble a model car.
- Understand the differences, advantages, and disadvantages of pulleys, gears and chain drive systems.
- Students explore cooperative learning.

**ACTIVITIES:**
- Build three cars: one chain drive, one gear drive, one pulley drive.
- List advantages and disadvantages.
- Have instructor check completed assignments on check sheet.
- Worksheet day 1 card 8-15.
- Students work in cooperative learning groups

**RESOURCES:**

**ASSSESSMENTS:**
- Completed cars checked on check sheet and evaluate lists.

**REMEDIATION:**

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<tr>
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<td>UNIT: Gear Train</td>
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<tr>
<td>3.6.10-C: Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design to real world problems</td>
<td>- Become familiar with several methods to increase torque and reduce speed using a gear train.</td>
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<td>3.7.10-A: Identify and safely use a variety of tools, basic machines, materials and techniques to solve problems and answer questions.</td>
<td>- Use cooperative learning to advance learning and share ideas.</td>
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<tr>
<td>- Build a tug of war car</td>
<td>- Round Robin tournament</td>
</tr>
<tr>
<td>- Compete with other teams for the championship</td>
<td>- Teacher assessment of gear train and drive train</td>
</tr>
<tr>
<td>- Worksheet day 1</td>
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| RESOURCES: | |
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| ASSESSMENTS: | |
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| REMEDIATION: | |
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- **3.8.10-C**: Evaluate possibilities consequences and impacts of scientific and technological solutions.

**UNIT OBJECTIVES:**

- Students will explore how Legos allow problem solving in the class.
- Experiment with motors, gears, pulleys and chains to build several models from packet.

**ACTIVITIES:**

- Experiment with Legos
- List names of Lego parts

**RESOURCES:**

**ASSESSMENTS:**
Instructor will monitor class progress and check lists.

**REMEDIATION:**

**ENRICHMENT:**
# Technology Systems

## UNIT: Gear Reduction

### NATIONAL STANDARDS:
- Standards 1, 2, 3: The Nature of Technology
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### UNIT OBJECTIVES:

- Experiment with different size gears to facilitate change of speed
- Experiment with packets to build project using step by step procedures and from pictures

### ACTIVITIES:

- Build project card 14 – change speed, yellow and red dots, add gears.
- Build cam and value train from picture.

### RESOURCES:

### ASSESSMENTS:

Instructor to evaluate completed project and sign worksheet.

### REMEDIATION:

### ENRICHMENT:

Add four gears
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**UNIT OBJECTIVES:**

- Students will understand the concept of a transmission.
- Experiment with 90° change of direction.

**ACTIVITIES:**

- Build transmission and merry go round.

**RESOURCES:**

**ASSESSMENTS:**

- Instructor to evaluate completed project and sign worksheet.

**REMEDIATION:**

**ENRICHMENT:**

- 290° Changes of direction
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**UNIT OBJECTIVES:**
- Students will experiment with machines that hop and walk.
- Students will understand the principal of timing in relation to gears.

**ACTIVITIES:**
- Build a hoping bunny.
- Build a walking robot.
- Change gears to change speed of machine.

**RESOURCES:**

**ASSESSMENTS:**
- Instructor to evaluate completed project and sign worksheet.

**REMEDIATION:**

**ENRICHMENT:**
**COURSE:** Technology Systems  
**GRADES:** 9 - 12  
**UNIT:** Multi Stacked Gears

### NATIONAL STANDARDS:
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### UNIT OBJECTIVES:
- Students will experiment with multistacked gears.
- Students will become familiar with the principals of power torque and speed.

### ACTIVITIES:
- Build a drill gear set.
- Change torque on gear set.
- Build drill model.

### ASSESSMENTS:
- Instructor to evaluate completed project and sign worksheet.

### RESOURCES:

### REMEDIATION:

### ENRICHMENT:
## COURSE: Technology Systems

### GRADES: 9 - 12

### UNIT: Lifting 5 lb. Weight

### NATIONAL STANDARDS:
- Standards 1, 2, 3: The Nature of Technology.
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### UNIT OBJECTIVES:

- Students will experiment with legos to find a gear set and frame to lift heavy weights.

### ACTIVITIES:

- Students attempt to lift a 5 lb. Weight using only parts from kit.

### RESOURCES:

### ASSESSMENTS:

- Instructor to evaluate completed project and sign worksheet.

### REMEDIATION:

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3.8.10-C: Evaluate possibilities consequences and impacts of scientific and technological solutions.

**UNIT OBJECTIVES:**

- Students will experiment with designs to build a clutch device.
- Students will understand how to start and stop a machine while the engine still runs.

**ACTIVITIES:**

- Build a clutch capable of starting and stopping the steam locomotive drive wheel.

**ASSESSMENTS:**

- Instructor to evaluate completed project and sign worksheet.

**RESOURCES:**

**REMEDICATION:**

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**UNIT OBJECTIVES:**
- Students in cooperative learning groups will experiment with a machine capable of moving objects up and over a ramp.

**ACTIVITIES:**
- Use 2-3 kits to make a machine capable of moving a Lego block up a ramp and across a flat surface

**RESOURCES:**

**ASSESSMENTS:**
- Instructor to evaluate completed project and sign worksheet.

**REMEDITION:**

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**UNIT OBJECTIVES:**

- Students will experiment with gear drives and drive trains to solve a problem.

**ACTIVITIES:**
- Build an automobile capable of climbing a 45° ramp.

**ASSESSMENTS:**
- Instructor to evaluate completed project and sign worksheet.

**RESOURCES:**

**REMEDICATION:**

**ENRICHMENT:**
**COURSE:** Technology Systems  
**GRADES:** 9 - 12

**UNIT:** Lego Logo

**UNIT OBJECTIVES:**
- Students will experiment with Lego Logo computer language.
- Students will understand the commands necessary to program a Lego robot.

**NATIONAL STANDARDS:**

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**ACTIVITIES:**
- Learn computer language.
- Build greenhouse.
- Program robot to open when hot and close when cold.

**ASSESSMENTS:**
- Instructor to evaluate completed project and sign worksheet

**RESOURCES:**

**REMEDICATION:**

**ENRICHMENT:**
- Enrichment objective
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**UNIT OBJECTIVES:**

- Students will explore theory of four stroke engines.
- Students will become familiar with parts manual.
- Students explore cooperative learning.

**ACTIVITIES:**

- Lecture on engine basics.
- Set cooperative learning teams.
- Work Sheet questions.
- Students work in cooperative learning groups.

**RESOURCES:**

**ASSESSMENTS:**

Teacher assessment of worksheet.

**REMEDIATION:**

**ENRICHMENT:**
## COURSE: Technology Systems

### GRADES: 9 - 12

### UNIT: Safety and Tools

**NATIONAL STANDARDS:**

**STATE STANDARDS:**

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### UNIT OBJECTIVES:

- Students will become familiar with safety rules and regulations.
- Students will experiment with the correct procedures to loosen and tighten nuts and screws.

### ACTIVITIES:

- Lecture on safety rules
- Lecture on tools and rules

### RESOURCES:

### ASSESSMENTS:

Teacher assessment of student progress

### REMEDIATION:

### ENRICHMENT:
**COURSE:** Technology Systems  
**GRADES:** 9 - 12  

**UNIT:** Procedure To Disassemble Engine  

**NATIONAL STANDARDS:**

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**UNIT OBJECTIVES:**
- Students will become familiar with engine parts and names.
- Students will become familiar with procedures listed on worksheet.
- Students will experiment with removal of parts from engine.
- Students will experiment with replacement of parts on engine.

**ACTIVITIES:**
- Students will use worksheet and parts manual to assist in the removal and replacement of engine parts.
- Students will use torque wrench to replace head-bolts.
- Students will be able to name all parts.
- Students will reassemble engine.
- Students will run engine.

**ASSESSMENTS:**
- Teacher assessment of student progress.
- Completion of worksheet.
- Run engine.

**RESOURCES:**

**REMEDIATION:**

**ENRICHMENT:**
**COURSE:** Technology Systems  
**GRADES:** 9 - 12

**UNIT:** Engine Enrichment

**NATIONAL STANDARDS:**  

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**UNIT OBJECTIVES:**

- Students will explore ICPE, fuels, fuel delivery, electricity, and electrical terms.

**ACTIVITIES:**

- Lectures on: ICEP, gasoline alternative fuels, fuel injection and carburetion, alternators, magnetic batteries, amps, volts, and sparks.

**RESOURCES:**

**ASSESSMENTS:**

- Pretest and Post test

**REMEDIATION:**

**ENRICHMENT:**
**COURSE:** Technology Systems  
**GRADES:** 9 - 12

**UNIT:** Car Builder Computer Program

**NATIONAL STANDARDS:**  

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<td>3.6.10-C: Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design to real world problems</td>
<td>Students will experiment with a computer program that allows them to design and build a car.</td>
</tr>
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<td>3.7.10-A: Identify and safely use a variety of tools, basic machines, materials and techniques to solve problems and answer questions.</td>
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</tbody>
</table>

**ACTIVITIES:**  
- Students will decide on engine transmission size and shape, to design the fastest and slowest auto they can build.

**RESOURCES:**

**ASSESSMENTS:**  
Teacher assessment of completed program.

**REMEDICATION:**

**ENRICHMENT:**
## COURSE Technology Systems

<table>
<thead>
<tr>
<th>UNIT:</th>
<th>Travel Requirements</th>
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</table>

### 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:

| 3.6.10-C | Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design to real world problems |
| 3.7.10-A | Identify and safely use a variety of tools, basic machines, materials and techniques to solve problems and answer questions |
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| 3.8.10-C | Evaluate possibilities consequences and impacts of scientific and technological solutions |

### UNIT OBJECTIVES:
- Students will experiment with the use of maps.
- Students will become familiar with making a map, trip planner, and cost.
- Computing time, gas mileage, and cost of travel.

### ACTIVITIES:
- Students will complete a worksheet on: terminology, trip planning and cost.
- Map design.

### RESOURCES:

### ASSESSMENTS:
- Teacher assessment
- Completed work sheets

### REMEDIATION:

### ENRICHMENT:
**COURSE:** Technology Systems  
**GRADES:** 9 - 12

**UNIT:** Mechanical Drawing Introduction

**NATIONAL STANDARDS:**

**STATE STANDARDS:**

**3.6.10-C:** Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design to real world problems

**3.7.10-A:** Identify and safely use a variety of tools, basic machines, materials and techniques to solve problems and answer questions.

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**3.8.10-A:** Analyze the relationship between societal demands and scientific and technological enterprises.

**3.8.10-B:** Analyze how human ingenuity and technological resources satisfy specific human needs and improve the quality of life.

**3.8.10-C:** Evaluate possibilities consequences and impacts of scientific and technological solutions.

**UNIT OBJECTIVES:**

- Students will experiment with drafting tools.
- Students will understand drafting terms and tools.
- Students will experiment with alphabet and fractions

**ACTIVITIES:**

- Demonstration on tools and procedures to squared paper.
- Students will draw plans in perspective.
- Students will write cap alphabet and fraction work sheet.

**ASSESSMENTS:**

- Pre test
- Post test.
- Instructor evaluation of completed worksheet and drawing.

**RESOURCES:**

**REMEDIATION:**

**ENRICHMENT:**
<table>
<thead>
<tr>
<th>COURSE: Technology Systems</th>
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</thead>
<tbody>
<tr>
<td>UNIT: Mechanical Drawing L’s and Measuring</td>
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**UNIT OBJECTIVES:**

- Students will experiment with measurement and squaring paper.
- Students will understand the use of L45-90, L30-60-90.
- Students will experiment with dimensioning.

**ACTIVITIES:**

- Plate 1-2-3 allow students to learn border and name plates.
- Students will learn to use instruments to draw plates.
- Students will use L45-90 and L 30-60-90 triangles.
- Students will place correct dimension drawings.

**RESOURCES:**

**ASSESSMENTS:**
Instructor assessment of completed drawings

**REMEDICATION:**

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<tbody>
<tr>
<td>UNIT: Mechanical Drawing Circles</td>
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**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
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**STATE STANDARDS:**
- **3.6.10-C**: Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design to real world problems.
- **3.7.10-A**: Identify and safely use a variety of tools, basic machines, materials and techniques to solve problems and answer questions.
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- **3.8.10-A**: Analyze the relationship between societal demands and scientific and technological enterprises.
- **3.8.10-B**: Analyze how human ingenuity and technological resources satisfy specific human needs and improve the quality of life.
- **3.8.10-C**: Evaluate possibilities consequences and impacts of scientific and technological solutions.

**UNIT OBJECTIVES:**
- Students will experiment with compass to make circles.
- Students will experiment with compass to make decagon.
- Students will understand radius and diameter.

**ACTIVITIES:**
- Plates: 4-5-6-7 allow students to practice use of compass to draw circles and construct decagon.

**RESOURCES:**

**ASSESSMENTS:**
Instructor assessment of completed drawings

**REMEDIATION:**

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<tr>
<th>COURSE Technology Systems</th>
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<tbody>
<tr>
<td>UNIT: Mechanical Drawing Three View Orthographic</td>
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<td>• Students will experiment with extension lines.</td>
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<tr>
<td>• Plate 8, 9, 10, 11, 12, 13. Allow student to practice three view drawing and extension lines.</td>
<td>Instructor assessment of completed drawings</td>
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| ENRICHMENT: | |
|-------------| |
**COURSE:** Technology Systems

**UNIT:** Mechanical Drawing Isometric Construction

**GRADES:** 9 - 12

**NATIONAL STANDARDS:**

**STATE STANDARDS:**
3.6.10-C: Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design to real world problems

3.7.10-A: Identify and safely use a variety of tools, basic machines, materials and techniques to solve problems and answer questions.

3.7.10-B: Apply appropriate instruments and apparatus to examine a variety of objects and processes.

3.8.10-A: Analyze the relationship between societal demands and scientific and technological enterprises.

3.8.10-B: Analyze how human ingenuity and technological resources satisfy specific human needs and improve the quality of life.

3.8.10-C: Evaluate possibilities consequences and impacts of scientific and technological solutions.

**UNIT OBJECTIVES:**
- Students will experiment with centering isometric drawings.
- Students will experiment with construction of isometric drawings

**ACTIVITIES:**
- Plates 14-21 will allow students to center and construct isometric drawings.

**RESOURCES:**

**ASSESSMENTS:**
Instructor assessment of completed drawings.

**REMEDIATION:**

**ENRICHMENT:**


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<tr>
<td>3.6.10-C: Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design to real world problems</td>
<td>• Students will experiment with interpreting an orthographic into an isometric.</td>
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**ACTIVITIES:**
- Plates 8, 9, 10, 11, 12, 13 will be converted from orthographic to isometric.

**ASSESSMENTS:**
- Instructor assessment of completed drawings.

**RESOURCES:**

**REMEDICATION:**

**ENRICHMENT:**
**COURSE:** Technology Systems  
**GRADES:** 9 - 12  
**UNIT:** Mechanical Drawing Enrichment #1

**NATIONAL STANDARDS:**  

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<td><strong>3.6.10-C:</strong> Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design to real world problems</td>
<td>• Students will experiment with construction of three dimensional object.</td>
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</table>

**ACTIVITIES:**  
- Students will use plates 9, 10, 11, 12, 13 to construct three dimensional paper models.

**RESOURCES:**

**ASSESSMENTS:**  
- Instructor assessment of completed plans.

**REMEDICATION:**

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<tbody>
<tr>
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**NATIONAL STANDARDS:**

**STATE STANDARDS:**

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**3.7.10-A:** Identify and safely use a variety of tools, basic machines, materials and techniques to solve problems and answer questions.

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**3.8.10-B:** Analyze how human ingenuity and technological resources satisfy specific human needs and improve the quality of life.

**3.8.10-C:** Evaluate possibilities consequences and impacts of scientific and technological solutions.

**UNIT OBJECTIVES:**

- Students will experiment with designing a house.

**ACTIVITIES:**
- Students will be given criteria and encouraged to design a house.

**ASSESSMENTS:**
- Instructor assessment of completed house plans.

**RESOURCES:**

**REMEDICATION:**

**ENRICHMENT:**
**COURSE:** Technology Systems  
**GRADES:** 9 - 12  
**UNIT:** Mechanical Drawing

**NATIONAL STANDARDS:**  

**STATE STANDARDS:**

3.6.10-C: Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design to real world problems

3.7.10-A: Identify and safely use a variety of tools, basic machines, materials and techniques to solve problems and answer questions.

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3.8.10-B: Analyze how human ingenuity and technological resources satisfy specific human needs and improve the quality of life.

3.8.10-C: Evaluate possibilities consequences and impacts of scientific and technological solutions.

**UNITOBJECTIVES:**

- Students will experiment with drawing plans for a model car

**ACTIVITIES:**

- Students will use the skill learned in mechanical drawing to construct four drawings to be used in wood construction.

**RESOURCES:**

**ASSESSMENTS:**

- Instructor assessment of completed drawings.

**REMEDIATION:**

**ENRICHMENT:**
### Course: Technology Systems

**Grades:** 9 - 12

**Unit:** Wood Technology Safety

**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:**

- 3.6.10-C: Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design to real world problems.
- 3.7.10-A: Identify and safely use a variety of tools, basic machines, materials and techniques to solve problems and answer questions.
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- 3.8.10-B: Analyze how human ingenuity and technological resources satisfy specific human needs and improve the quality of life.
- 3.8.10-C: Evaluate possibilities, consequences and impacts of scientific and technological solutions.

**Unit Objectives:**

- Students will understand the principles of safety

**Activities:**

- Teacher lecture and discussion of safety, including hand and power tools, safety zones, and emergency power switch.

**Assessments:**

- Pre and post test
- Class discussion
- Instructor observation

**Remediation:**

**Enrichment:**
### COURSE: Technology Systems  
**GRADES:** 9 - 12

#### UNIT: Wood Technology Hand Tools

#### NATIONAL STANDARDS:

#### STATE STANDARDS:

<table>
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<tr>
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#### UNIT OBJECTIVES:
- Students will experiment with the safe use of hand tools.
- Students will become familiar with hand tool names.

#### ACTIVITIES:
- Teacher lecture and demonstration.
- Students will independently experiment with hand tools.
- Students will call tools by correct name

#### RESOURCES:

#### ASSESSMENTS:
- Teacher assessment of student progress.
- Pre test post test

#### REMEDIATION:

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<tr>
<th>COURSE: Technology Systems</th>
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<tr>
<td>UNIT: Wood Technology Radial Arm Saw</td>
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<table>
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<table>
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<tbody>
<tr>
<td>• Students will become familiar with the safe use of this machine.</td>
</tr>
<tr>
<td>• Students will show knowledge of safety and proper use of machine.</td>
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<table>
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<tr>
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<tr>
<td>• Demonstrate safety and proper use of machine safety test.</td>
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<tr>
<td>• Hands-on demonstration with instructor present.</td>
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<td>• Pre test</td>
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<td>• Instructor signs safety work-use sheet.</td>
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<tr>
<td>---------------------------</td>
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<tr>
<td>UNIT: Wood Technology Compound Miter Saw</td>
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**NATIONAL STANDARDS:**
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- 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:**
- 3.6.10-C: Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design to real world problems
- 3.7.10-A: Identify and safely use a variety of tools, basic machines, materials and techniques to solve problems and answer questions.
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- 3.8.10-B: Analyze how human ingenuity and technological resources satisfy specific human needs and improve the quality of life.
- 3.8.10-C: Evaluate possibilities consequences and impacts of scientific and technological solutions.

**UNIT OBJECTIVES:**
- Students will become familiar with the safe use of this machine.
- Students will show knowledge of safety and proper use of machine.

**ACTIVITIES:**
- Demonstrate safety and proper use of machine safety test.
- Hands-on demonstration with instructor present.

**RESOURCES:**

**ASSESSMENTS:**
- Pre test
- Instructor signs safety work-use sheet

**REMEDIATION:**

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**NATIONAL STANDARDS:**

**STATE STANDARDS:**

3.6.10-C: Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design to real world problems

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3.8.10-B: Analyze how human ingenuity and technological resources satisfy specific human needs and improve the quality of life.

3.8.10-C: Evaluate possibilities consequences and impacts of scientific and technological solutions.

**UNIT OBJECTIVES:**
- Students will become familiar with the safe use of this machine.
- Students will show knowledge of safety and proper use of machine.

**ACTIVITIES:**
- Demonstrate safety and proper use of machine safety test.
- Hands-on demonstration with instructor present.

**ASSSESSMENTS:**
- Demonstrate safety and proper use of machine safety test.
- Hands-on demonstration with instructor present.

**REMEDIATION:**

**ENRICHMENT:**
COURSE: Technology Systems  
GRADES: 9 - 12

UNIT: Wood Technology Drill Press

NATIONAL STANDARDS:

STATE STANDARDS:

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UNIT OBJECTIVES:

- Students will become familiar with the safe use of this machine.
- Students will show knowledge of safety and proper use of machine.

ACTIVITIES:

- Demonstrate safety and proper use of machine safety test.
- Hands-on demonstration with instructor present.

ASSESSMENTS:

- Pre test
- Instructor signs safety work-use sheet.

REMEDIATION:

ENRICHMENT:

RESOURCES:
**COURSE:** Technology Systems  
**GRADES:** 9 - 12

**UNIT:** Wood Technology Scroll Saw

**NATIONAL STANDARDS:**

**STATE STANDARDS:**

3.6.10-C: Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design to real world problems.

3.7.10-A: Identify and safely use a variety of tools, basic machines, materials and techniques to solve problems and answer questions.

3.7.10-B: Apply appropriate instruments and apparatus to examine a variety of objects and processes.

3.8.10-A: Analyze the relationship between societal demands and scientific and technological enterprises.

3.8.10-B: Analyze how human ingenuity and technological resources satisfy specific human needs and improve the quality of life.

3.8.10-C: Evaluate possibilities consequences and impacts of scientific and technological solutions.

**UNIT OBJECTIVES:**
- Students will become familiar with the safe use of this machine.
- Students will show knowledge of safety and proper use of machine.

**ACTIVITIES:**
- Demonstrate safety and proper use of machine safety test.
- Hands-on demonstration with instructor present.

**RESOURCES:**

**ASSESSMENTS:**
- Pre test
- Instructor signs safety work-use sheet.

**REMEDICATION:**

**ENRICHMENT:**
<table>
<thead>
<tr>
<th>COURSE: Technology Systems</th>
<th>GRADES: 9 - 12</th>
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<tr>
<td>UNIT: Wood Technology Belt Sander</td>
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</table>

**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:**
- 3.6.10-C: Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design to real world problems
- 3.7.10-A: Identify and safely use a variety of tools, basic machines, materials and techniques to solve problems and answer questions.
- 3.7.10-B: Apply appropriate instruments and apparatus to examine a variety of objects and processes.
- 3.8.10-A: Analyze the relationship between societal demands and scientific and technological enterprises.
- 3.8.10-B: Analyze how human ingenuity and technological resources satisfy specific human needs and improve the quality of life.
- 3.8.10-C: Evaluate possibilities consequences and impacts of scientific and technological solutions.

**UNIT OBJECTIVES:**
- Students will become familiar with the safe use of this machine.
- Students will show knowledge of safety and proper use of machine.

**ACTIVITIES:**
- Demonstrate safety and proper use of machine safety test.
- Hands-on demonstration with instructor present.

**ASSESSMENTS:**
- Pre test
- Instructor signs safety work-use sheet

**RESOURCES:**

**REMEDICATION:**

**ENRICHMENT:**
<table>
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<tr>
<th>COURSE Technology Systems</th>
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<tbody>
<tr>
<td>UNIT: Wood Technology</td>
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</table>

**NATIONAL STANDARDS:**

**STATE STANDARDS:**

3.6.10-C: Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design to real world problems

3.7.10-A: Identify and safely use a variety of tools, basic machines, materials and techniques to solve problems and answer questions.

3.7.10-B: Apply appropriate instruments and apparatus to examine a variety of objects and processes.

3.8.10-A: Analyze the relationship between societal demands and scientific and technological enterprises.

3.8.10-B: Analyze how human ingenuity and technological resources satisfy specific human needs and improve the quality of life.

3.8.10-C: Evaluate possibilities consequences and impacts of scientific and technological solutions.

**UNIT OBJECTIVES:**

- Students will experiment with procedures necessary to fasten wood pieces together.

**ACTIVITIES:**

- Students will learn procedures to glue and clamp wood.

**RESOURCES:**

**ASSESSMENTS:**

- Instructor evaluation of glued project.

**REMEDICATION:**

**ENRICHMENT:**
### COURSE: Technology Systems

### GRADES: 9 - 12

#### UNIT: Wood Technology Model Construction

#### 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:

- **3.6.10-C**: Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design to real world problems.

- **3.7.10-A**: Identify and safely use a variety of tools, basic machines, materials and techniques to solve problems and answer questions.

- **3.7.10-B**: Apply appropriate instruments and apparatus to examine a variety of objects and processes.

- **3.8.10-A**: Analyze the relationship between societal demands and scientific and technological enterprises.

- **3.8.10-B**: Analyze how human ingenuity and technological resources satisfy specific human needs and improve the quality of life.

- **3.8.10-C**: Evaluate possibilities consequences and impacts of scientific and technological solutions.

#### UNIT OBJECTIVES:

- Students will use the acquired knowledge of machines, hand tools and gluing to assemble a model car.
- Students will use drawings to find correct L’s and sizes.

#### ACTIVITIES:

- Students will assemble a model car using machines, hand tools and glue.
- Model car will be built to sizes indicated in plans.

#### RESOURCES:

#### ASSESSMENTS:

- Instructor assessment of completed model car.

#### REMEDIATION:

#### ENRICHMENT:
<table>
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<tr>
<th>COURSE: Technology Systems</th>
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<tr>
<td>UNIT: Wood Technology Enrichment #1, #2, #3</td>
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</table>

**NATIONAL STANDARDS:**  

**STATE STANDARDS:**  
3.6.10-C: Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural production, marketing, research and design to real world problems  
3.7.10-A: Identify and safely use a variety of tools, basic machines, materials and techniques to solve problems and answer questions.  
3.7.10-B: Apply appropriate instruments and apparatus to examine a variety of objects and processes.  
3.8.10-A: Analyze the relationship between societal demands and scientific and technological enterprises.  
3.8.10-B: Analyze how human ingenuity and technological resources satisfy specific human needs and improve the quality of life.  
3.8.10-C: Evaluate possibilities consequences and impacts of scientific and technological solutions.

**UNIT OBJECTIVES:**  
- Students will experiment with the design and construction of additional wood projects.

**ACTIVITIES:**  
- Students will design and draw plans to aid in construction of projects.  
- Students will cut, glue and build projects.

**RESOURCES:**

**ASSESSMENTS:**  
- Instructor assessment of finished projects.

**REMEDATION:**

**ENRICHMENT:**