Ag Mechanics Lab

**Units**

U3022a
*Safety in the Shop*, 32p  
Price: $4.00

Q3022
*Student Safety Tests*, 32p  
Price: $4.00

K3022
*Teachers’ Key for Q3022*  
Price: $4.00

**Transparencies**

T457
*Shop Tool Identification*, 24 fr., w/guide  
Price: $25.00

171 shop tools are divided into 6 categories: carpentry and woodworking, engine and machinery, metalworking, various construction skills, hand power, and horticulture.

**Other Materials**

MZ490
*Safety Chart Set*, Set of 27 Charts on Safety Rules  
Price: $55.00

27 laminated 8 1/2” x 11” charts constantly remind students of the importance of working safely. Heavy black print is highly visible on bright yellow paper. Special lists of safety rules should be posted in every work area.

Z490.1  General Shop  
Z490.2  Everyone Must Wear Safety Glasses at all Times in Shop  
Z490.3  Think Safety to be Safe  
Z490.4  No Horseplay or Running in Shop  
Z490.5  Tools Must be Returned & Shop Cleaned After Each Class  
Z490.20  Hand Tool  
Z490.21  Electrical Equipment  
Z490.22  Vehicle and Machinery Repair
Z490.23  Soldering and Sheet Metal Work
Z490.30  Portable Circular Saw
Z490.31  Tilting Arbor Saw
Z490.32  Radial Arm Saw
Z490.33  Saber and Reciprocating Saw
Z490.34  Band Saw
Z490.35  Power Metal-Cutting Saw
Z490.40  Jointer
Z490.41  Router and Planer
Z490.42  Sander
Z490.43  Stationary Grinder
Z490.44  Portable Grinder
Z490.45  Drill Press
Z490.46  Portable Drill
Z490.60  Shielded Metal Arc Welder
Z490.61  Oxyfuel Welder
Z490.62  Inert Gas Shielded Arc Welder
Z490.63  Spot Welder
Z490.70  Gas Forge

**CD-ROMS**

**MDS320**

**Hardware and Fastener Identification** CD-ROM
Price: $110.00

This CD-ROM instructional resource provides PowerPoint slides for hardware and fastener items in the following categories:

- Bolts
- Braces, Brackets, and Hinges
- Miscellaneous Fasteners
- Nails
- Nuts
- Other Hardware
- Screws
- Washers

Each hardware category presents a set of images with names, a practice set with images-only, and an interactive quiz that allows the user to identify the item among three choices. Quizzes (including printed quizzes and keys) are provided for each category.

This unique teaching resource of more than 1,650 slides is designed with a master navigation slide to make it easy to find the desired file for viewing. Internal navigation links the table of contents with each item and permits the user an efficient method of viewing this large collection of information.

**MDS320-10**

**Hardware and Fastener Identification** CD-ROM Quiz Pack
Price: $220.00

This product is a collection of quizzes from the Hardware and Fastener Identification CD-ROM. This product is designed to be distributed to students as they review hardware and fastener identification at individual workstations in a computer lab, classroom computer, or on home and laptop computers.

The quiz packs provide helpful review sessions for students by providing immediate feedback. The quiz packs are also ideal for anyone preparing to participate in career development events.

The quiz packs are developed in Microsoft PowerPoint and will run well on PC or Mac computer platforms. A Master Navigation file is provided to view the files on the quiz pack.

This is a set of 10 identical CD-ROMs.
MDS340  
**Hand Tool Identification**  
$120.00

MDS320 is an onscreen instructional resource that provides digital images for approximately 300 hand tools. The tools are divided into 18 categories and the presentations have been developed using Microsoft PowerPoint and should run well on PCs or Macs. The hand tool categories include Clamps, Cutting and Scraping Tools, Drilling and Boring Tools, Files, Hammers and Striking Tools, Leveling Tools, Measuring Tools, Miscellaneous Tools, Planes, Pliers, Pry Bars, Punches and Chisels, Saws, Screwdrivers, Small Gas Engine Tools, Squares, Threading Tools, Wrenches, and a single set containing all of the tools in a single presentation. The presentation includes a set of images with names, a practice set that includes only the image, a set of images with a description that includes use, size and maintenance, and the final set of presentations includes an interactive quizzing session which allows the user to identify a predetermined hand tool among three choices. Also on the CD-ROM are quizzes and keys for each hand tool category. In total, this CD-ROM contains over 2,100 slides.

MDS340-10  
**Hand Tool Identification Quiz Pack**  
Price: $250.00

MDS340-10 Hand Tool Identification Quiz Pack is a collection of quizzes from the MDS340 CD-ROM (Hand Tool Identification). This product is packaged as 10 CD-ROMs and is designed to be distributed to students as they review hand tool identification at individual work stations in a school computer lab, classroom computer, or on home and laptop computers. The quiz packs are ideal for students who need review sessions that provide immediate feedback and who are preparing to participate in Career Development Events.

The quiz packs are developed in Microsoft PowerPoint and should run well on PC or Mac computers. There are over 1,070 frames of PowerPoint on this CD-ROM. A Master Navigation file is provided to view the many files on the Quiz Pack.

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**Carpentry & Construction**

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**Units**

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U3009a  
**Using the Carpenter's Square**, 20p  
Price: $2.50

U3045  
**Metal Roofing & Siding for Farm Structures**, 16p  
Price: $2.00

U3051b  
**Planning a Construction Project**, 24p  
Price: $4.50

This instructional unit is designed to provide instruction to beginners as they learn to plan and construct a wood or metal project. The unit provides step-by-step instruction for developing a project plan, creating a bill of materials, and making a stock cutting list. Additionally, the unit provides instruction on developing a procedure for constructing the project. Determining material lists and purchasing materials is discussed with some information on pricing project materials. Example pages for each project planning step are included in the unit. Blank pages for student use are also included in the unit. Sample student evaluation pages are provided in addition to a sample instructor evaluation form.
**Ag Mechanics**

**U3055**  
*Lumber: Grading, Selecting, Buying, Using, and Storing*, 20p  
Price: $2.50

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**Transparencies**

*T426**  
*Lumber–Buying, Grading, Selecting, Storing and Using*, 50 fr., w/guide  
Price: $45.00

Use with the unit U3055 with the same title. Features illustrations, examples, and tables about lumber.

**CD-ROMS**

*DT422a**  
*Rafter Marking*, 62 fr.  
Price: $55.00

Rafter Marking is a 62-frame PowerPoint revision of the Rafter Marking transparency set with a teacher supplement. This set provides step-by-step directions for marking gable and shed rafters using a framing square. The PowerPoint presentation is supplemented with internal navigation and is designed to work in cooperation with U3009a Using the Carpenter's Square. Building parts are identified and defined as part of this colorful presentation. Teacher supplemental materials include two quizzes and four practice problems, each with a key included on the CD-ROM.

*DT423a**  
*The Steel Square*  
Price: $55.00

This presentation provides general information about square types, scales, and tables plus step-by-step directions are provided for marking a brace and stair stringers. Also included are images of roof types and rafter types as they apply to different roof styles. Teacher supplemental materials include a test, 2 quizzes, and 7 practice problems, each with a key.

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**Electricity**

**Units, Exercises, Teacher’s Key**

*U3003c**  
*Planning for Electrical Wiring*, 48p  
Price: $6.50
### Ag Mechanics

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<tr>
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<th>Title</th>
<th>Pages</th>
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<tr>
<td>U3016a</td>
<td><strong>Electrical Wiring Procedures</strong></td>
<td>28</td>
<td>$3.75</td>
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<tr>
<td>Z3016b</td>
<td><strong>Electrical Wiring Exercises</strong></td>
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<td>8</td>
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<td><strong>Electrical Controls in Agriculture</strong></td>
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<td>U3058</td>
<td><strong>Selecting Electric Motors for Use in Agriculture</strong></td>
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<td><strong>Installing and Caring for Electric Motors in Agriculture</strong></td>
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<td>U3061</td>
<td><strong>Selecting Equipment for Electrical Installations</strong></td>
<td>24</td>
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<tr>
<td>T400a</td>
<td><strong>Wiring Exercises</strong></td>
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The illustrations and diagrams for 48 electrical wiring exercises are clearly drawn and easy to follow. The 32-page study guide discusses and explains each transparency in detail.

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<td>DT400a</td>
<td><strong>Electric Wiring Diagramming – Steps and Examples</strong></td>
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This on-screen instructional tool of over 430 PowerPoint frames provides a sequential, step-by-step procedure to sketch 20 electric wiring diagrams. The material is organized as 5 PowerPoint units, each with 4 sample exercises. The CD-ROM also contains 9 practice problems, 2 quizzes, and keys for all supporting material.

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<tr>
<td>MDS300</td>
<td><strong>Electric Wiring Hardware Identification</strong></td>
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This on-screen instructional resource provides more than 1,200 PowerPoint slides detailing over 170 electric wiring hardware items. In addition to the complete set, the hardware is subdivided into 9 categories: boxes, cable and conduit, connectors and couplings, cord equipment and covers, knockout plugs and lampholders, miscellaneous hardware, receptacles and service equipment, switches and wall plates, and tools. The presentations include a set of images with names, a practice set with only images, and an interactive quiz format that lets the user identify an image among three choices.
Machinery

Transparencies

T440
Basic Principles of Hydraulics, 59 fr., w/guide
Price: $50.00

Emphasis is on hydraulic principles, basic formulas, pistons, pumps, valves, and design functions of hydraulic systems.

Small Engines

Units

U3014
Small Engines—Principles of Operation, Trouble-Shooting & Tune-Up, 16p
Price: $2.00

U3019
Small Engines—Repair and Overhaul, 20p
Price: $2.50

U3020
The Two-Cycle Engine, 20p
Price: $2.50

CD-ROM

DT486
Small Gas Engine Parts Identification
Price: $85.00

This on-screen instructional resource provides an introduction to small gas engine parts. It contains a series of PowerPoint presentations covering two-cycle engines, four-cycle engines, two-cycle carburetors, and four-cycle carburetors. Each category includes a presentation with photos and names of engine parts; a presentation with photos and a description of each part and how it functions within an engine; a practice set with photos of engine parts and no names; an evaluation quiz for checking student progress; and a key for the quiz. The engine images include parts from L-head, overhead valve, two-cycle mower engines, and fixed jet carburetors.
Ag Mechanics

Transparencies

T489
Small Gas Engines, 50 fr.
Price: $45.00

Basic principles of small engine operation, repair and overhaul, and maintenance are included.

Surveying

Units, Test Questions, Teacher’s Key, Other Materials.....

U2042
Land Surveys and Descriptions, 8p (bundle of 10)
Price: $10.00

Q2042
Test Questions, Land Surveys and Descriptions, pkg. of 10 plus key
Price: $2.50

U3010b
Surveying in Agriculture, 44p
$5.50

Z436
Field Book for Surveying Notes
Price: $2.00

CD-ROM

DT310
Introduction to Surveying
$99.00

This on-screen instructional resource is designed to introduce the skills used in surveying. The materials are divided into land measurement and instrument surveying. Each category contains several PowerPoint presentations focusing upon skills and accepted practices. The land measurement presentations include introduction to taping; procedures for taping; angles and perpendiculars; and measuring area. The instrument surveying presentations include calculations and formulas; hand levels; field notebook entries; reading the target rod; and setting up the instrument. Additionally, the CD-ROM contains 15 practice problems, 5 tests, set of keys for all, a printable set of tables, and a blank field notebook page.
Tractors & Large Engines

Transparencies

T485a
Tractor Safety, 50 fr., w/guide
Price: $45.00
Safety rules and procedures presented apply to all sizes of tractors. The 24-page study guide includes information about each transparency.

Welding & Metalwork

Units

U3001a
Oxyacetylene Welding and Cutting, 28p
Price: $3.75

U3004a
Shielded Metal-Arc Welding, 48p
Price: $6.00

U3027
Soldering for Home, Farm and Shop Applications, 24p
Price: $3.00
U3036  
**Tungsten Inert Gas (TIG) Welding**, 32p  
Price: $4.00

U3037  
**Metal Inert Gas (MIG) Welding**, 44p  
Price: $5.50

U3080  
**Plasma Cutters**, 12p  
Price: $3.50

SETU3080  
**Plasma Cutters**, Set of 10  
Price: $32.00

This unit provides a detailed introduction to the use of plasma cutters. It includes a description of plasma and plasma cutting, and covers plasma cutter operation, selection, use, and safety. Illustrated throughout with photos and line drawings, this unit is an ideal resource for anyone who needs a basic understanding of plasma cutting and how to operate a plasma cutter. Also sold in bundles of 10.