

## Trade & Industrial Education

<b>Arts, A/V Technology &amp; Communications</b> .....	36
<b>Career Exploration</b> .....	36
<b>Construction</b> .....	37
<b>Drafting &amp; CAD Technology</b> .....	40
<b>Electronics</b> .....	41
<b>Health Science</b> .....	41
<b>Heating &amp; Cooling</b> .....	42
<b>Manufacturing</b> .....	43
<b>Safety</b> .....	44
<b>Science, Technology, Engineering &amp; Mathematics</b> ..	44
<b>SkillsUSA</b> .....	47
<b>Transportation, Distribution &amp; Logistics</b> .....	50
<b>Welding</b> .....	52

---

## Arts, A/V Technology and Communications

---

T&I 13.1397 B812

### **Successful Technical Writing**

*Bill Wesley Brown*

BOOK ---- Instructors guide to accompany textbook by the same title. Tinley Park, IL, Goodheart-Willcox, 2000.

---

T&I 13.1399 GAP6

### **Graphic Arts - Process Camera, Stripping, Platemaking, 4th Edition**

*Dan Crummett*

BOOK ---- Units include: process camera and darkroom equipment; line photography; halftone photography; darkroom techniques; process color photography; stripping procedures; plate making procedures; digital impact on prepress activities. OK, MAV, 1999.

---

T&I 13.1399 GAP7

### **Graphic Arts: The Press and Finishing Process, Fourth**

*Brett Jones*

BOOK ---- Addresses new technologies changing the printing industry and covers basic concepts and skills necessary for an entry-level graphic communication occupation. Also includes student edition. Stillwater, OK, Multistate Academic and Vocational Curriculum Consortium, Inc., 2000.

---

T&I 21.0103 G S96

### **Exploring Communications**

*Richard Seymour*

BOOK ---- Introduces the process of communication in its various forms, explaining the designing and transmitting of messages, the technical devices aiding that process, and the impact of communication on society. IL, Goodheart-Willcox, 2000.

---

T&I DVD ROM 15

### **Behind the Scenes: Printing**

*Meridian Education Corporation*

DVD ROM ---- This program is designed for students interested in graphic arts and the printing industry. 16 minutes. Princeton, NJ, Meridian Education Corporation, 2001.

---

T&I DVD ROM 17

### **Digital Movie Maker: Guidance from an Expert**

*Shopware*

DVD ROM ---- This program focuses on the real-world techniques of producer Bill Cote, a 25-year veteran of the television industry, who uses footage from a recently wrapped film to demonstrate proper equipment operation. Divided into four main chapters covering pre-production, camera work, lighting, and audio recording, the program explains shooting schedules, shot lists, storyboards, camera exposure, shutter speed, lenses, filters, three-point lighting, time code and logs, shotgun mics, lapel mics, mic levels, audio ambience, and much more. 58 minutes. Lawrenceville, NJ, Shopware, 2005.

---

T&I VIDEO 16

### **Career Clusters 3: The Arts, Audio Visual Technology & Communications**

*Cambridge Educational*

VIDEO ---- This program looks at opportunities to design, produce, exhibit, perform, write, or publish in a variety of media, including theater, film, textiles, newspapers, radio, and television. Real-world insights into this cluster are provided through interviews with a cable TV broadcast engineer, newspaper reporter, professional actor, commercial artist, and a TV director/producer. 24 minutes. Lawrenceville, NJ, Cambridge Educational, 2004.

---

T&I VIDEO 60

### **How to Produce a Video**

*Meridian Education Corporation*

VIDEO ---- What is it like to work for a television station or a video production company? This program provides a concise overview of the video production process from conceptualization, through the planning and production phases, to the finished product. Microphones, lights, editing equipment, and cameras are all touched upon, along with everything else that it takes to create an informational or documentary video. 15 minutes. Bloomington, IL, Meridian Education Corporation, 2000.

---

## Career Exploration

---

T&I DVD ROM 20

### **Architect: Career Opportunities for Young People**

*TMW Media Group, Inc.*

DVD ROM ---- This video explores what it takes to become an architect as host Melody Young visits an architectural team. Subjects covered include: How long does it take to become an architect; Do architects build the buildings they design; What subjects are important in school to prepare to be an architect; What is a blueprint; Can computers design buildings; Do architects need to know a lot about math? 13 minutes. Venice, CA, TMW Media Group, 2003.

---

T&I DVD ROM 21

### **The Blueprint: Overview of the Manufacturing Skilled Trades**

*Shopware*

DVD ROM ---- This program lets students see what the manufacturing skilled trades have to offer, surveying the various occupations available and providing a quick sketch of each job, including general machinist, industrial electrician, industrial mechanic millwright, mold maker, pattern maker, tool and die maker, and industrial welder. 19 minutes. Lawrenceville, NJ, Shopware, 2003.

---

T&I VIDEO 4

### **Chef: Career Opportunities for Young People**

*TMW Media Group, Inc.*

VIDEO ---- Chef Valerie Rovira shows host Jeff Gardner the teamwork and creativity required to be a chef and discusses the safety issues in the kitchen. Subjects covered include: How does one become a chef; What is a sous-chef; Do chefs need to know about math; Why do chefs use computers; Do you have to go to college to be a chef; Why is safety important to a chef; What makes food taste good; Why do chefs cook with hats on? 14 minutes. Venice, CA, TMW Media Group, 2003.

---

T&I VIDEO 5

**Crane Operator: Career Opportunities for Young People**

*TMW Media Group, Inc.*

VIDEO ---- Crane operator Mike Crumrine shows host Jeff Gardner how cranes work and the training and skills necessary to become a crane operator. Subjects covered include: How do you become a crane operator; What does a crane operator do; Do crane operators take tests; Why is math important; What school subjects are important to be a crane operator? 14 minutes. Venice, CA, TMW Media Group, 2003.

---

T&I VIDEO 6

**Web Designer: Career Opportunities for Young People**

*TMW Media Group, Inc.*

VIDEO ---- Host Melody Young visits cyberspace where she teams up with a website designer to show what can be done with a working knowledge of computers. Subjects covered include: Website design as a career; Why is communication important; What type of training is necessary; Is college important? 14 minutes. Venice, CA, TMW Media Group, 2003.

---

T&I VIDEO 7

**Architect: Career Opportunities for Young People**

*TMW Media Group, Inc.*

VIDEO ---- This video explores what it takes to become an architect as host Melody Young visits an architectural team. Subjects covered include: How long does it take to become an architect; Do architects build the buildings they design; What subjects are important in school to prepare to be an architect; What is a blueprint; Can computers design buildings; Do architects need to know a lot about math? 13 minutes. Venice, CA, TMW Media Group, 2003.

---

---

T&I VIDEO 8

**Civil Engineer: Career Opportunities for Young People**

*TMW Media Group, Inc.*

VIDEO ---- A civil engineer shows the host, Jeff Gardner the technical side of roads, bridges and buildings. Subjects covered include: What does a civil engineer do; Does a civil engineer actually build roads; Why is math important to be a civil engineer; What is a survey; Do you have to go to college to be a civil engineer; Can girls be civil engineers; Is it important for civil engineers to know about computers? 13 minutes. Venice, CA, TMW Media Group, 2003.

---

T&I VIDEO 9

**Auto Mechanic: Career Opportunities for Young People**

*TMW Media Group, Inc.*

VIDEO ---- Host Jeff Gardner finds out what kind of training is needed to move from an apprentice to a top-notch auto mechanic. He learns about the challenges faced by auto mechanics, including the use of computers in today's automobiles. Subjects covered include: What does it take to be an auto mechanic; Why do cars have computers in them; Do auto mechanics have their own tools; What schooling is necessary to be an auto mechanic; Can girls become auto mechanics? 12 minutes. Venice, CA, TMW Media Group, 2003.

---

T&I VIDEO 10

**Medical Technician: Career Opportunities for Young People**

*TMW Media Group, Inc.*

VIDEO ---- Host Melody Young visits a cardiac technician and learns about the career opportunities in medicine besides becoming a doctor or a nurse. Subjects covered include: What education is necessary to become a medical technician; What is an ultrasound; Do ultrasound machines hurt; Is science important to becoming a medical technician; Where do medical technicians work; What is anatomy? 12 minutes. Venice, CA, TMW Media Group, 2003.

---

---

T&I VIDEO 15

**Career Clusters 3: Architecture & Construction**

*Cambridge Educational*

VIDEO ---- With over 13 million jobs in the U.S. alone, the Architecture & Construction Career cluster is simply huge. This program offers a sense of how wide-ranging the opportunities can be by looking at the educational and training requirements, as well as the actual work of an architect, plumber, electrician, and construction and building inspector. 20 minutes. Lawrenceville, NJ, Cambridge Educational, 2004.

---

T&I VIDEO 21

**Career Cluster Series: Scientific, Engineering, and Technical Services**

*Cambridge Educational*

VIDEO ---- Whether it is a computer screen or an airplane engine or a bridge, someone has to decide how big it will be and how it will work. The men and women in the scientific, engineering, and technical services field create the designs and draw up the plans that determine how things will be built. This program will offer insights into the jobs of civil engineer, and electronics technician, a hazardous waste technician, and a water and liquid waste treatment plant and systems operator. 18 minutes. Monmouth Junction, NJ, Cambridge Educational, 2002.

---

**Construction**

---

T&I 13.1111 U4

**Modern Cabinetmaking**

*William D. Umstatt*

BOOK ---- Covers cabinetmaking and woodworking techniques employed by custom cabinetmakers and home woodworkers. Numerous illustrations with a strong emphasis on safety. Tinley Park, IL, Goodheart-Willcox Company Inc, 2000.

---

T&I 13.1313 H577F

**Power Product Equipment**

**Technician: Construction Equipment**

*Robert Hilley*

BOOK ---- Three units include: 1.) concrete equipment (powered concrete mixers, tampers, vibrators, floats, trowels, and screeds) 2.) water pumps and air compressors and 3.) alternators, generators, and welding equipment. Stillwater, OK, Multistate Academic and Vocational Curriculum Consortium, Inc., 1999.

---

---

T&I 14.0500 BP

**Basic Blueprint Reading & Sketching, Seventh Edition**

*Dr. C. Thomas & Thomas P. Olivo*  
BOOK ---- Develop marketing skills and a solid foundation for reading and interpreting industrial drawings and preparing technical sketches. Albany, NY, Delmar, 1999.

---

T&I 14.0500 BP3

**Construction Print Reading**

*Leonard Koel*  
BOOK ---- Teaches basic skills needed to understand construction plans. Albany, NY, Delmar, 2000.

---

T&I 14.0500 BP5

**Understanding Construction Drawing, Third Edition**

*Mark W. Huth*  
BOOK ---- Helping readers understand and interpret construction drawings by working, hands-on, with actual prints. Albany, NY, Delmar, 2000.

---

T&I 14.0500 CONT 1

**Exploring Construction**

*Richard Henak*  
BOOK ---- A basic text describing the construction industry and methods used in construction. Material focuses on planning, building, and servicing construction projects. Coverage includes construction management, technology, hiring, and contracting, as well as how a building is constructed, installation of mechanical systems, finishing work, and how construction technology affects the world around us. Includes color photos and illustrations, plus chapter summaries, key words, questions, and activities. The author is professor of industry and technology emeritus at Ball State University. IL, Goodheart-Wilcox, 2000.

---

T&I 14.0500 L 28

**Why Buildings Fall Down**

*Matthys Levy, Mario Salvadori*  
BOOK ---- Journey through the history of architectural and structural disasters, from the Parthenon and Coliseum through the 20th Century. This book is a feast of architectural flops and flummoxes, caused by natural disaster and human error. New York, NY, WW Norton & Co, Inc, 2001.

---

---

T&I 14.0500 S 14

**Why Buildings Stand Up**

*Mario Salvadori*  
BOOK ---- Between a nomad's tent and the Sears Tower lies a revolution in the technology and materials of building as well as the way buildings look. This book outlines the alliance between architecture and structure. New York, NY, WW Norton & Co, Inc, 2002.

---

T&I 14.0500 S 14.1

**Architecture and Engineering**

*Mario Salvadori, Michael Tempel*  
BOOK ---- An illustrated teacher's manual on why buildings stand up. Explore basic architectural and engineering principles with your students. Includes 70 lessons organized into 10 units. Covers forces, equilibrium, tension and compression, columns and beams, cables, trusses, arches, and inflated membrane roofs in stadiums. New York, NY, The New York Academy of Sciences, 1983.

---

T&I 14.0500 S 14.11

**Paper Bridges, Strength Through Form**

*Mario Salvadori*  
BOOK ---- Strength Through Form. Clear instructions on how to construct seven different kinds of bridges - beam, draw, lift, stayed, suspension, swing - using only paper, scotch tape, scissors, and included templates. Learn about tension, compression, bending and buckling, and mathematical concepts of length, area, volume, and scale. New York, NY, Salvadori Center, 1997.

---

T&I 21.0102 C G945

**Residential Plumbing: Teacher Edition, 3rd Edition**

*MAVCC*  
BOOK ---- Units covered: 1) Occupational orientation; 2) Tools and Equipment; 3) Blueprints, measurements and calculations; 4) Systems Rough-In; 5) Residential Systems; 6) Fixture and Appliance Rough-In; 7) System Maintenance and Repair. Teacher's Edition. Stillwater, OK, MAVCC, 1999.

---

---

T&I 21.0105 E F829

**Electricity: Principles & Applications, Fifth Edition**

*Richard J. Fowler*  
BOOK ---- Includes basic concepts, quantities & units, laws & measurements, AC/DC, magnetism & electromagnetism, transformers, motors. Columbus, OH, Glencoe/McGraw-Hill, 1999.

---

T&I 21.0105 E G321

**Electricity and Electronics**

*Howard H. Gerrish*  
BOOK ---- Teaches principles and theory accompanied by hands-on learning. Provides a thorough grounding in electrical principles, circuitry, and components. Additional topics include electronic communication and data systems and career opportunities in electronics. Tinley Park, IL, Goodheart-Wilcox Company Inc, 1999.

---

T&I 21.0105 E R183

**Understanding Electricity**

*Joyce Rasdall*  
BOOK ---- Electrical terms: current, energy, power. Emerging technology in electric products: voice recognition and synthesis, robots, vehicles. Generation of electrical power and how it is transformed, transmitted and distributed. Environmental protection. Winterville, GA, AAVIM, 1998.

---

T&I 21.0105 E S65

**Basic Wiring - Teacher and Student Edition Combined, 3rd Edition**

*Stan Kaltwasser*  
BOOK ---- Units include: Occupational introduction; safety & first aid; related math and measuring; hand tools; power/specialty tools and equipment; AC and DC circuits; wiring methods; conductors; low voltage wiring; overcurrent protection; load centers and safety switches and more. Stillwater, OK, MAVCC, 1999.

---

T&I 21.0105 E S66

**Commercial and Industrial Wiring, Third Edition**

*MAVCC*  
BOOK ---- Provides students with advanced technical knowledge and applications for job entry in the commercial and industrial wiring trade. Stillwater, OK, MAVCC, 2000.

---

---

T&I 21.0105 E S68

**Modern Commercial Wiring**

*Harvey N. Holzman*

BOOK ---- Complex wiring requirements of commercial installations based on the 1999 National Electrical Code. Includes thorough coverage of specialized areas such as motor control, emergency power systems, installations in hazardous locations, and pool and fountain installations. Tinley Park, IL, Goodheart-Willcox Company Inc, 1999.

---

T&I 21.0105 E S70

**Residential Wiring, Third Edition**

*Mark Taylor*

BOOK ---- Units include: blueprint reading and load calculations; rough in; service; trim out and trouble shooting; low voltage wiring; home automation. Prepares student for entry-level employment in the residential wiring trade. Stillwater, OK, MAVCC, 2000.

---

T&I 21.0105 E S71

**Understanding Electricity and Wiring Diagrams for HVAC/R**

*Robert Chatenever*

BOOK ---- Covers general electricity and electrical circuits briefly and wiring diagrams. Upper Saddle River, NJ, Prentice Hall, 2000.

---

T&I 46.0201 W125

**Modern Carpentry**

*Wagner, Willis H*

BOOK ---- Provides detailed coverage of all aspects of light frame construction. Included are site clearing, site layout, foundations, framing, insulating, sheathing, roofing, windows and doors, exterior and interior finish, and mechanical systems. Tinley Park, IL, Goodheart-Willcox Company Inc, 2000.

---

---

T&I DVD ROM 8

**Building Construction: Basic Masonry**

*CEV Multimedia*

DVD ROM ---- An experienced agricultural education instructor teaches equipment identification, safety and masonry techniques as he demonstrates how to build a brick wall and a block wall. Follow along as he selects the building material, sets up guide lines, mixes mortar, "butters" the bricks and blocks, lays rows and explains clean-up procedures for building these standard construction structures. He points out the consequences of poor workmanship and gives tips on how create professional-looking masonry structures. A supplement is included. 46 minutes. Lubbock, TX, CEV Multimedia.

---

T&I DVD ROM 9

**Residential Electrical Wiring**

*Shopware*

DVD ROM ---- This program follows an apprentice electrician through the specific steps of wiring a house as he works with a professional electrician. The video covers wiring diagrams, breaker panels, circuit breakers, switches, and outlet wiring. A quick but instructive look at the basics of wiring. 12 minutes. Lawrenceville, NJ, Films Media Group, 2000.

---

T&I DVD ROM 10

**Building Construction: Fundamentals**

*CEV Multimedia*

DVD ROM ---- This presentation includes how to layout plates, make corners and tees, construct wall units, partitions, window and door units and headers. Step-by-step instructions are provided for cutting ceiling joists and rafters with demonstrations on proper techniques for some of the more exacting procedures ("lipping" a joist, cutting a "birdsmouth," marking a ridgeboard and assembling the rafters) necessary for beginning builders. During completion of the 16' X 10' portable building, you will learn proper techniques for laying a roof with discussions and demonstrations of the following roof construction steps: laying the roof deck, attaching metal flashing along the edges, rolling out and laying the roofing felt, marking the felt to prepare it... Lubbock, TX, CEV Multimedia, 2003.

---

---

T&I DVD ROM 10.1

**Basic Career Math Skills: Construction**

*The School Company*

DVD ROM ---- This program demonstrates how basic math, algebra, decimals, fractions, and geometry are used in the career world of construction. Length: 25-27 minutes. Vancouver, WA, The School Company, 2005.

---

T&I DVD ROM 10.2

**Basic Career Communication Skills: Construction**

*The School Company*

DVD ROM ---- This program begins with an orientation to construction with an emphasis on why communication skills are important to that career. 15 to 20 minutes. Vancouver, WA, The School Company, 2005.

---

T&I DVD ROM 11

**Building Construction: Site Surveying & Development**

*CEV Multimedia*

DVD ROM ---- Computer-generated visual effects help illustrate surveying concepts often difficult to teach in a classroom setting, such as differential leveling and profile leveling. As the featured expert illustrates route surveying and the setting of property boundaries, he also discusses equipment, field notes, other data collection and data analysis techniques. 101 minutes, 3 sections. Lubbock, TX, CEV Multimedia, 2003.

---

T&I DVD ROM 12

**Building Construction: Concrete & Masonry**

*CEV Multimedia*

DVD ROM ---- Join an educational instructor in a lesson in safety and masonry techniques as students follow in selecting building materials and setting up guidelines. He stresses the consequences of poor workmanship and provides tips to create professional quality projects. This DVD also demonstrates the uses of concrete finishing tools to help in construction. A concrete expert shows how to use building techniques to form simple constructions, like a concrete slab. The course also includes informational steps for working with concrete. 144 min, 4 sections, 4 printable resources and 17 web resources. Lubbock, TX, CEV Multimedia, 2003.

---

---

T&I DVD ROM 12.1

**Green Architecture: Environmentally Friendly Housing**

*Films for the Humanities & Sciences*  
DVD ROM ---- This program tracks the teams from the University of Maryland, MIT, The University of Texas at Austin, and Lawrence Technological University as they seek out corporate sponsors, research available materials, and hone their construction skills to create appealing living spaces that require zero energy. 31 minutes. Hamilton, NJ, Films for the Humanities & Sciences, 2008.

---

T&I VIDEO 14

**Sustainability in Construction**

*Einstein Network Ltd*  
VIDEO ---- Sustainability is one of the most important issues challenging the construction industry today. This program looks at how being sustainable involves a commitment to economic, environmental, and social sustainability. It introduces the concept of sustainability in construction and examines the key drivers. 18 minutes. Peterborough, UK, Einstein Network Ltd, 2003.

---

T&I VIDEO 112

**Bricklaying: Master the Craft and Make Your Mark**

*Brick Institute of America*  
VIDEO ---- Learn about bricklaying. 9 minutes. Herndon, VA, Brick Institute of America, No copyright date available.

---

T&I VIDEO 154

**Footing Forms**

*The Associated General Contractors of America and CIMC*  
VIDEO ---- Common practices in setting footing and slab forms on grade; constructing and setting forms for a pile cap; constructing and setting forms for a pier footing. 27 min. Washington, DC 20006, The Associated General Contractors of America and CIMC.

---

T&I VIDEO 155

**Edge Forms On-Grade**

*The Associated General Contractors of America and CIMC*  
VIDEO ---- On-grade setting screeds with stakes and screed chairs; setting edge forms for a slab on-grade with foundation; setting forms with a radius. 18 min. Washington, D.C., General Contractors of American, CIMC.

---

---

T&I VIDEO 156

**Vertical Piers and Columns**

*The Associated General Contractors of America and CIMC*  
VIDEO ---- Constructing forms for a round fluted column. 11 minutes. Washington, D.C., General Contractors of America & CIMC.

---

T&I VIDEO 157

**Wall Forms**

*General Contractors of America & CIMC*  
VIDEO ---- Constructing circular wall forms (built in place). 19 min. Washington, D.C., CIMC & General Contractors of America & CIMC.

---

T&I VIDEO 158

**On-Grade Curb Forms**

*General Contractors of America & CIMC*  
VIDEO ---- Constructing straight curb forms, setting metal curb & gutter forms with a radius, constructing curb and gutter forms. 21 minutes. Washington, D.C., General Contractors of America & CIMC.

---

T&I VIDEO 159

**Horizontal Beam Forms**

*General Contractors of America & CIMC*  
VIDEO ---- Constructing an interior beam form; constructing a spandrel beam form; constructing a post-tensioned inverted beam form. 29 minutes. Washington, D.C., General Contractors of America & CIMC.

---

T&I VIDEO 160

**Above-Grade Slab Systems**

*General Contractors of America & CIMC*  
VIDEO ---- Constructing forms for a two-way joist system; constructing forms for a one-way joist system. 14 minutes. Washington, D.C., General Contractors of America & CIMC.

---

T&I VIDEO 161

**Preparing the Site for Form Building**

*General Contractors of America & CIMC*  
VIDEO ---- Covers site preparation for form building. 8 minutes. Washington, D.C., General Contractors of America & CIMC.

---

---

T&I VIDEO 163

**Residential Construction: Masonry**

*Meridian Education Corporation*  
VIDEO ---- In this video an apprentice tackles residential masonry. Working alongside a professional, he and the viewers learn basic skills in forming block wall foundations, different types of cement, and forming, pouring, and finishing concrete. We also learns skills in using mortar and bricklaying. 11 minutes. Bloomington, IL, Meridian Education Corporation, 2000.

---

T&I VIDEO 165

**Residential Construction: Plumbing**

*Meridian Education Corporation*  
VIDEO ---- Professional plumber shows how to design the plumbing service, install pipes, faucets, drains, sinks, bathtubs and showers. How to rough in pipes, cut holes in the floor, sweat copper pipes and bond PCV pipes. 14 minutes. Bloomington, IL, Meridian Education Corporation, 2000.

---

T&I VIDEO 166

**Building Construction: Basic Site Evaluation**

*CEV Multimedia*  
VIDEO ---- An experienced instructor explains the step-by-step processes involved in developing land for a home or business. Graphics and visual effects help illustrate the concepts as you travel to various sites. You will observe pre-construction practices, such as preparing public roads, providing for drainage, leveling the site and installing utility lines. You will briefly view various stages of residential construction: pouring the slab, framing, roofing, completing the walls, bricking the outside and landscaping. In addition, you will examine developmental issues, such as zoning classifications, urban sprawl and land usage. A supplement is included. 34 minutes. Lubbock, TX, CEV Multimedia.

---

**Drafting and CAD Technology**

---

T&I 21.0103 DS33

**Basic Technical Drawing, Seventh Edition**

*Henry Cecil Spencer*  
BOOK ---- Classroom text and reference book for the beginning student of technical drawing. Peoria, IL, Glencoe/McGraw-Hill, 2000.

---

T&I 21.0103 D S92B

**AutoCAD and its Applications Basics**

*Terence M. Shumaker*

BOOK ---- Comprehensive coverage of introductory and two-dimensional AutoCAD drafting. In-depth discussions of every major new and existing AutoCAD feature, command, and option are provided. Hundreds of exercises, questions, and drawing problems assist learning. Tinley Park, IL, Goodheart-Willcox Company Inc, 1998.

---

T&I 21.0103 D S92c

**AutoCAD and its Applications Advanced**

*Terence M. Shumaker*

BOOK ---- Covers three-dimensional and other advanced functions. In-depth discussions of every major new and existing AutoCAD feature, command, and option are provided. Hundreds of exercises, questions and drawing problems assist learning. Tinley Park, IL, Goodheart-Willcox Company Inc, 1998.

---

T&I 21.0103 D W151

**Exploring Drafting: Fundamentals of Drafting Technology**

*John R. Walker*

BOOK ---- Designed to teach drafting fundamentals and basic drafting techniques. Includes learning objectives, drafting vocabulary, review questions, outside activities, a comprehensive glossary and a study of basic computer-aided drafting. Tinley Park, IL, Goodheart-Willcox Company Inc, 2000.

---

T&I CD ROM 10

**CAD Fundamentals**

*Shopware*

CD ROM ---- This CD-ROM: Defines CAD concepts, Describes the advantages of CAD, Identifies typical components of 2-D and 3-D CAD drawings. Reveals key concepts common to every CAD program, and Provides career information. Viewable/printable teacher's guide containing learning objectives, a program summary, educational standards, fast facts, vocabulary terms, discussion and assessment questions, student activities, and other resources. System requirements: PC platform: All Windows versions. Macintosh platform: All Macintosh operating systems. Lawrenceville, NJ, Shopware, 2005.

---

---

T&I DVD ROM 13

**Inspirational CAD**

*Classroom Video*

DVD ROM ---- This program explores the applications of CAD (computer-aided design) software, showing how it enables companies to model, assemble, detail, verify tool paths, and manufacture. It features case studies from the aircraft and motor industry, looking at the space rocket Stargazer. 20 minutes. Coquitlam, British Columbia, Classroom Video, 2002.

---

T&I DVD ROM 14

**CAD: Creative Design**

*Classroom Video*

DVD ROM ---- Computer-aided design (CAD) and computer-aided manufacture (CAM) are the keystones of modern design and manufacture. This video explores how this new technology enables more creative product designs that also save money and time and reduce risk. It looks at the creative applications of CAD software in the jewelry industry. 20 minutes. Coquitlam, British Columbia, Classroom Video, 2002.

---

T&I DVD ROM 14.1

**Basic Career Math Skills: Drafting**

*The School Company*

DVD ROM ---- This program presents an introduction to CAD and CAM. It demonstrates how basic math, algebra, decimals, fractions, and geometry are used in the career world of drafting. Length: 15-20 minutes. Vancouver, WA, The School Company, 2005.

---

T&I VIDEO 70

**CAD: Creative Design**

*Classroom Video*

VIDEO ---- Computer-aided design (CAD) and computer-aided manufacture (CAM) are the keystones of modern design and manufacture. This video explores how this new technology enables more creative product designs that also save money and time and reduce risk. It looks at the creative applications of CAD software in the jewelry industry. 20 minutes. Coquitlam, British Columbia, Classroom Video, 2002.

---

---

T&I VIDEO 71

**Inspirational CAD**

*Classroom Video*

VIDEO ---- This video explores the applications of CAD (computer-aided design) software, showing how it enables companies to model, assemble, detail, verify tool paths, and manufacture. It features case studies from the aircraft and motor industry, looking at the space rocket Stargazer. 20 minutes. Coquitlam, British Columbia, Classroom Video, 2002.

---

**Electronics**

---

T&I 21.0105 E R733

**Practical TV & Video Systems Repair**

*John Ross*

BOOK ---- Comprehensive book for electronic repair technicians who want to enhance their understanding of theoretical design and practical service techniques that may be applied to video electronics, e.g. TVs, VCRs, and satellite TV receivers. Albany, NY, Delmar, 2000.

---

T&I 21.0105 W P242A

**Electrical Motor Control Systems: Electronic & Digital Controls, Fundamentals and Applications**

*Dale R. Patrick*

BOOK ---- Provides overview of electric motor control for industrial automation. Tinley Park, IL, Goodheart-Willcox Co., 2000.

---

T&I DVD ROM 23

**Basic Career Communication Skills: Electronics**

*The School Company*

DVD ROM ---- This program begins with an orientation to the career area of electronics with an emphasis on why communication skills are important to that field. 15 to 20 minutes. Vancouver, WA, The School Company, 2005.

---

**Health Science**

---

T&I 13.1309 A M283

**Elements of Ergonomics Programs: A Primer Based on Workplace Evaluations of Musculoskeletal Disorders**

*Alexander L. Cohen*

BOOK ---- How to identify, evaluate and control risk factors for work-related musculoskeletal disorders. Cincinnati, OH, NIOSH (National Institute for Occupational Safety and Health), 1997.

---

---

T&I VIDEO 12

**Ergonomics and Design**

*Classroom Video*

VIDEO ---- Ergonomics examines how well products, workspaces, and environments suit the people who use them. A usable design promotes productivity, safety, and comfort. This video examines such ergonomic issues as understandability, physical fit, and anthropometry. 20 minutes. Coquitlam, British Columbia, Canada, Classroom Video, 2002.

---

T&I VIDEO 100

**A Bit About Backs - Module 1: Back Basics**

*Comprehensive Loss Management, Inc.*

VIDEO ---- Learn how the back functions through simple and practical demonstration. 13 minutes. Minneapolis, MN, Comprehensive Loss Management, Inc., 1993.

---

T&I VIDEO 101

**A Bit About Backs - Module 2: Risk Factors**

*Comprehensive Loss Management, Inc.*

VIDEO ---- Learn about the variety of factors that increase the risk of experiencing a back disorders. 14 minutes. Minneapolis, MN, Comprehensive Loss Management, Inc., 1993.

---

T&I VIDEO 102

**A Bit About Backs - Module 3: Prevention Strategies**

*Comprehensive Loss Management, Inc.*

VIDEO ---- Learn practical methods for maintaining a healthy back. 15 minutes. Minneapolis, MN, Comprehensive Loss Management, Inc., 1993.

---

T&I VIDEO 103

**Ergo Safe-Ergonomic Task Analysis - Module 1: Survey & Analyze**

*Comprehensive Loss Management, Inc.*

VIDEO ---- Learn to recognize, prioritize and change job tasks with potential to cause cumulative trauma and back related injuries. 14 minutes. Minneapolis, MN, Comprehensive Loss Management, Inc., 1992.

---

---

T&I VIDEO 104

**Ergo Safe-Ergonomic Task Analysis - Module 2: Focus & Eliminate**

*Comprehensive Loss Management, Inc.*

VIDEO ---- Helps to identify changes which should eliminate actions or activities which might effect a worker adversely. 14 minutes. Minneapolis, MN, Comprehensive Loss Management, Inc., 1992.

---

**Heating and Cooling**

---

T&I 13.1314 C788

**Warm Air Heating for Climate Control: Fourth Edition**

*William B. Cooper*

BOOK ---- Covers the fundamentals of furnace operation, the theory of basic electricity to meter usage. Covers furnace wiring, control circuits and high-efficiency and oil-fired furnaces. Other types of heating are also discussed. Upper Saddle River, NJ, Prentice Hall, 2000.

---

T&I 13.1314 H78

**Electrical Fundamentals and Systems for HVAC/R**

*Thomas Horan*

BOOK ---- A comprehensive source of applicable information for a person to become proficient in electrical troubleshooting and circuit analysis. Written to enhance a student's capabilities and self-confidence to build a future as a technically competent service technician. Refrigeration systems; heating and air conditioning systems, ventilation. Upper Saddle River, NJ, Prentice Hall, 2000.

---

T&I 13.1314 K558

**Heating and Cooling Essentials**

*Jerry Killinger*

BOOK ---- Explains the operation of refrigeration, air conditioning, and heating systems; provides instructions for trouble-shooting and servicing HVAC equipment; covers the correct methods of refrigerant handling; and includes information on EPA Technician Certification. Emphasis is on techniques needed to properly perform installation, service and repair. Tinley Park, IL, Goodheart-Willcox Company Inc, 1999.

---

---

T&I 13.1314 K643

**Electricity, Electronics, and Control Systems for HVAC, Second Edition**

*Thomas E. Kissell*

BOOK ---- To help understand electrical circuits and controls of air-conditioning, heating and refrigeration systems. Basic theory and operation of motors and controls. Detailed diagrams, theory of operation, and troubleshooting of complete systems. Upper Saddle River, NJ, Prentice Hall, 2000.

---

T&I 13.1314 M278

**Electricity for Air Conditioning and Refrigeration Technicians, Fifth Edition**

*Edward F. Mahoney*

BOOK ---- Basic electricity for air-conditioning and refrigeration technicians. Some of the topics include: electron theory, magnetism, ohm's law and the electric circuit, series circuits, parallel and series parallel circuits, meters, batteries, safety and more. Upper Saddle River, NJ, Prentice Hall, 2000.

---

T&I VIDEO 2

**Air Conditioning Service One**

*Energy Controls, Inc.*

VIDEO ---- Explains how to read air conditioning system wiring diagrams and how to troubleshoot electrical problems. Covers a simple air conditioning unit, a heat pump, and a two compressor chilled water unit. 35 minutes. Shorewood, MN, Energy Controls, Inc., 1992.

---

T&I VIDEO 3

**Air Conditioning Service Two**

*Energy Controls, Inc.*

VIDEO ---- Covers soldering and brazing techniques. How to cut and prepare tubing, fluxing, and proper method of applying heat and solder. Shows what happens to an incorrectly soldered joint. Brazing aluminum and steel; how to make single and double flares. 31 minutes. Shorewood, MN, Energy Controls, Inc., 1993.

---

---

T&I VIDEO 140

**Careers in the HVAC Industry**

*CEV Multimedia*

VIDEO ---- A career in the HVAC industry involves many professionals. From service technicians to engineers, there are many potential career choices within the HVAC field. The program allows you to hear first-hand from employees in these areas and what you can expect from the HVAC industry. Learn how service technicians, engineers, draftspersons and other professionals spend their days on the job. A supplement is included. 19 minutes. Lubbock, TX, CEV Multimedia.

---

T&I VIDEO 141

**HVAC: The Refrigeration Cycle**

*CEV Multimedia*

VIDEO ---- With computer animation and an actual air conditioning system, students view and understand the purpose of the four major HVAC components (compressor, condenser, evaporator and metering device) as they relate to the refrigeration cycle. The function of the refrigeration cycle is to absorb heat at one location and dispose of it in another location. Proper understanding of the vapor compression refrigeration cycle is necessary for anyone entering the field of air conditioning or refrigeration. The pressure-temperature relationship of the refrigerant as it flows through the cycle will be explained, along with brief discussions on refrigerants and basic terminology. A supplement is included. 30 minutes. Lubbock, TX, CEV Multimedia.

---

T&I VIDEO 142

**HVAC: Service and Installation Tools**

*CEV Multimedia*

VIDEO ---- The first step to working in the HVAC industry is learning about the most widely used tools and materials and how to properly handle them. The presentation is designed to educate students on service and installation tools, such as reamers, tube benders and tube cutters. An air conditioning and refrigeration technology professor demonstrates 15 tools. A supplement is included. 27 minutes. Lubbock, TX, CEV Multimedia.

---

---

T&I VIDEO 143

**HVAC: Equipment and Test Instruments**

*CEV Multimedia*

VIDEO ---- This presentation provides education for students interested in the HVAC industry. The expert demonstrates equipment and test instruments, such as an electronic charging scale, a sling psychrometer and ammeters. Almost 20 different pieces of equipment and test instruments are covered in the presentation. A supplement is included. 25 minutes. Lubbock, TX, CEV Multimedia.

---

T&I VIDEO 144

**HVAC: Sheet Metal Tools and Materials**

*CEV Multimedia*

VIDEO ---- This program is designed to demonstrate sheet metal tools and materials most frequently used in the HVAC industry. Our experts educate students on the operation and handling of approximately 20 different types of sheet metal tools and materials. Items covered include aviation snips, double cut shears, open mesh cloth and many more. A supplement is included. 27 minutes. Lubbock, TX, CEV Multimedia.

---

## Manufacturing

---

T&I 13.1310 W153

**Machining Fundamentals**

*John R. Walker*

BOOK ---- Provides an introduction to the various machining operations, setups, and procedures. Details all traditional machining methods, as well as newer and nontraditional methods. Tinley Park, IL, Goodheart-Willcox Company Inc, 1998.

---

T&I 21.0102 M M832

**Modern Metalworking**

*John R. Walker*

BOOK ---- Tinley Park, IL, Goodheart-Willcox, 2000.

---

T&I 21.0102 M M833

**Metallurgy Fundamentals**

*Daniel A. Brandt*

BOOK ---- Comprehensive content provides instruction and information on the basic properties and characteristics of the major metal families. Includes six chapters devoted to nonferrous metals. Tinley Park, IL, Goodheart-Willcox Company Inc, 1999.

---

---

T&I 21.0102 M W935E

**Exploring Manufacturing**

*Thomas Wright*

BOOK ---- IL, Goodheart-Willcox, 2000.

---

T&I CD ROM 4

**Fluid Power Two**

*Cambridge Research Group Ltd.*

CD ROM ---- Fluid Power Two looks at the language of hydraulics and pneumatics. Using a simple device similar to the hydraulic press employed by Pascal in the mid-1700s, the program examines the basic scientific and mathematical concepts related to fluid power. Users can use the on-screen calculator and formulas to solve problems involving pressure and measurement of work, power, and energy. Other areas explore fluid storage techniques, cleaning and conditioning methods, lubrication, and the use of switches, gauges, and flow meters. Advances in fluid power technology are also covered along with an examination of its advantages and disadvantages. One Windows CD-ROM. Charleston, WV, Shopware, 2000.

---

T&I DVD ROM 30

**Hydraulics Troubleshooting I**

*Visual Education Productions*

DVD ROM ---- Technicians explain and demonstrate how hydraulic components are integrated into operating systems that can then perform time-saving work. Watch how 3-D animation helps clarify how circuits and components function as a unit. Then, each major component is discussed in relation to industry-accepted practices for diagnostics and troubleshooting. Students watch technicians work on equipment from major manufacturers. 44 minutes. Lubbock, TX, CEV Multimedia.

---

T&I DVD ROM 31

**Hydraulics Troubleshooting II**

*Visual Education Productions*

DVD ROM ---- This program offers an advanced overview of the process professional technicians face when troubleshooting common service calls concerning hydraulic equipment. Students are presented with four case studies. They watch the service call, see common mistakes technicians make, then have the opportunity to diagnose each problem before the program shows what the technicians should have done. 53 minutes. Lubbock, TX, CEV Multimedia.

---

---

T&I DVD ROM 32

**Hydraulics Troubleshooting III**

*Visual Education Productions*

DVD ROM ---- This program teaches the technician and student how to read hydraulic schematics. Viewers see hydraulic circuits illustrated in both line art and engineering drawings. Detailed cutaway-view drawings help viewers make the transition from drawing to actual hydraulic part. Students soon see how the use of symbols in circuit schematics greatly simplifies the task of visualizing those circuits, thereby making the circuits much more understandable. 22 minutes. Lubbock, TX, CEV Multimedia.

---

T&I VIDEO 24

**Advances In Industrial Robotics**

*Meridian*

VIDEO ---- Shows the many different types of industrial robots in different jobs. Provides information on current development as well as future applications. Demonstrates how invaluable robots have become in the manufacturing workplace. 17 minutes. Bloomington, IL, Meridian, 1999.

---

T&I VIDEO 125

**Industrial Motor Controls**

VIDEO ---- How motor starters work, how they interface with motor windings, how a control transformer is used, how to troubleshoot a motor control system, and how a reversing control system works. 1:29 minutes. Martin Marietta Energy Systems, Inc, no publication date available.

---

**Safety**

---

T&I DVD ROM 1

**Shop Safety**

*Meridian Education Corporation*

DVD ROM ---- This program demonstrates the types of dangers present in any industrial or manufacturing atmosphere and then explains how to prevent accidents. Actual industrial accidents (cranes collapsing, foundry explosions) are used to stress the importance of using proper methods when in a general shop. 22 minutes. Lawrenceville, NJ, Meridian Education Corporation, 1993.

---

---

T&I DVD ROM 1.2

**Safety Doesn't Happen By Chance**

*Meridian Education Corporation*

DVD ROM ---- This program provides a guide to basic construction safety concerns and practices. Topics include: Personal protective equipment, including hardhats, protective glasses and goggles, clothing, and boots; Tool safety rules and tips; Electrical safety practices, including use of ground-fault circuit interruptors (GFCIs); Hazard communication, such as material safety data sheets (MSDS); Ladder and scaffold safety. A summary of the main points concludes the program. 12 minutes. Princeton, NJ, Meridian Education Corporation, 2001.

---

T&I DVD ROM 2

**Metal Shop Safety**

*Meridian Education Corporation*

DVD ROM ---- This program is a fast-paced, informative program that demonstrates the kind of precautions that should be taken when working with metals. Sheet metal work, soldering, welding, foundry work, forging, along with general safety are summarized. Footage of actual fatal accidents is used to strengthen the importance of safety in the metals lab. Watch what happens when molten metal is spilled on water, when it explodes, and when molten aluminum is spilled on a non-protective tennis shoe. This metal-working safety video should be viewed by anyone studying technology or any metal-working trade. 19 minutes. Lawrenceville, NJ, Meridian Education Corporation, 1993.

---

T&I DVD ROM 3

**Electrical Safety**

*Meridian Education Corporation*

DVD ROM ---- Gives a basic explanation of electricity, what it is and how it affects us. Also covers the color coding of wire and what each color means, the role of circuits and circuit breakers, and fuses and how to replace them. Examines insulation and how it works, the various hand tools used in electrical work, and what gauge wire to use in certain applications. Covers preventing electrical shock and how to treat a person who has received an electrical shock. 30 minutes. Lawrenceville, NJ, Meridian Education Corporation, 1995.

---

---

T&I DVD ROM 4

**Woodworking Safety**

*Cambridge Educational*

DVD ROM ---- Covers the most common hand tools and their proper applications. The importance of a clean working environment, preventive maintenance on machinery, and using the correct tool for each job is covered in detail. Also covered are how to check power cords for defects, sharpening and replacing saw blades, and correct body position when using equipment. 30 minutes. Lawrenceville, NJ, Cambridge Educational, 1995.

---

T&I DVD ROM 5

**Safety First: Welding Shop Safety**

*Cambridge Educational*

DVD ROM ---- Specific protective gear for welders is examined in detail. The necessity of having a good attitude and concentrating on the task you are performing are also discussed. Shows the proper way to store tanks, hoses, gauges, and cutting/brazing torches. Also covers the basics of testing lines for leaks, attaching gauges to tanks, and adjusting pressure settings to proper levels. Covers a variety of welding processes including MIG, TIG, and oxyacetylene. The most common concerns of welders are discussed including proper grounding of the machine and the work piece, correct applications of commercial gases, and maintaining weld tips. 30 minutes. Lawrenceville, NJ, Cambridge Educational, 1995.

---

T&I DVD ROM 6

**Safety in Technology Workshops: Working with Wood, Metal and Plastic**

*VEA*

DVD ROM ---- Concentrates on those areas in which students can make a significant contribution to their own safety, such as the use of personal protective equipment. Many potential hazards are discussed, from keeping the floor free of obstacles to the dangers of excessive noise, electrical tools and airborne dust. Grades 9 - 12. 23 minutes. White Plains, NY, VEA, 2001.

---

---

T&I DVD ROM 7

**Basic Shop Safety**

*CEV Multimedia*

DVD ROM ---- This program combines live action with section quizzes as it emphasizes the importance of wearing personal protective equipment; safety precautions to follow to prevent fire, chemical and electrical hazards; and emergency guidelines, including first aid steps and procedures. 41 minutes. Lubbock, TX, CEV Multimedia.

---

T&I KIT 2

**Safe Work/Safe Workers: A Guide for Teaching High School Students about Occupational Safety and Health**

*The Occupational Health Surveillance Program and The Children's Safety Network*

KIT ---- Working to provide improvements for worksite-specific health and safety training. To raise awareness in communities about issues related to teen employment. Includes Teacher's Guide. 13 minutes. Sewickley, PA, Education Development Center, Inc, 1997.

---

T&I KIT 3

**Working Safely With Electricity**

*Bergwall Productions, Inc*

KIT ---- 4 video tapes: Part 1) Electricity Can Kill 18 minutes; Part 2) The Shock Emergency 19 minutes; Part 3) The Importance Of Grounding 16 minutes; Part 4) Emergency Response. 17 minutes. Chadds Ford, PA 19317, Bergwall Productions, Inc., 1997.

---

T&I KIT 4

**Safety Series**

*Bergwall Productions, Inc*

KIT ---- OSHA compliance safety training program. Set of 3 video tapes: Tape 1 - Hazardous Communication: Right-to-Know. 12 min.; Tape 2 - Personal Protective Equipment. 13 min.; Tape 3 - Electrical Safety. 14 minutes. Presenters guides included. Chaddus Ford, PA, Bergwell Productions Inc., 1992.

---

---

T&I VIDEO 30

**Auto Shop Safety**

*Meridian*

VIDEO ---- This live-action video is designed to give viewers a basic understanding of the aspects of safety in an automotive repair shop. Students will learn safety procedures for the shop area, work stall, grease rack, front end rack, tool room, and alignment rack. 22 minutes. Bloomington, IL, Meridian, 1999.

---

T&I VIDEO 31

**Hand and Power Tool Safety**

*The Training Network*

VIDEO ---- A good safety attitude is the key to injury-free use of hand and power tools. This video covers: Inspecting tools before beginning work; Proper use of wrenches; Safety hazards of power drills & hand saws; Preventing shock from electric tools. Durham, NC, Long Island Productions, Inc., 1996.

---

T&I VIDEO 32

**Personal Protective Equipment**

*Comprehensive Loss Management, Inc.*

VIDEO ---- Includes eye protection; hearing conservation; head to foot protection; protective clothing information. 9 minutes. Minneapolis, MN, Comprehensive Loss Management, Inc., 1995.

---

T&I VIDEO 33

**Forklift Safety: Operating Safely**

*Tel-A-Train*

VIDEO ---- Excellent for the initial training of new operators or for retraining your experienced personnel. This program addresses safe forklift operation as a way of avoiding product and equipment damage and personal injury. Potential hazards are also shown and the rules of safe operation are demonstrated. Complies with OSHA 29 CFR 1910.178. 20 minutes. Chattanooga, TN 37405, Tel-A-Train, 1996.

---

---

T&I VIDEO 34

**Minimizing Back Strain on the Job**

*Tel-A-Train*

VIDEO ---- This in-depth program looks at back care from the health, safety and ergonomic perspective. It emphasizes both the day-to-day strains of lifting, sitting, and bending, as well as the dangers of improper lifting. Explanations of the ways in which back injuries can occur are given, as well as techniques for reducing back injuries. 21 minutes. Chattanooga, TN 37405, Tel-A-Train, 1995.

---

**Science, Technology, Engineering and Math**

---

T&I 13.1310 M128

**The New Way Things Work: From Levers to Lasers, Windmills, to Web Sites - A Visual Guide to the World of Machines**

*David Macaulay*

BOOK ---- Comprehensive and award-winning guide to the principles and workings of hundreds of machines. Excellent illustrations with fascinating information! Learn how things work! (Ages 10+) Boston, MA, Houghton Mifflin Co., 1998.

---

T&I 21.0102 G76

**Building Bots**

*William Gustelle*

BOOK ---- This definitive guide will walk you through the entire process to create the perfect BOT for your budget and experience. Chicago, IL, Chicago Review Press, Inc, 2003.

---

T&I 21.0103 D L326

**Practical Problems in Mathematics: For Drafting & CAD, Second Edition**

*John C. Larkin*

BOOK ---- Provides practical problem solving experiences and realistic math problems encountered in several drafting fields. Albany, NY, Delmar, 1996.

---

---

T&I DVD ROM 1.1  
**Designing a Shop Project**

*Classroom Media*  
DVD ROM ---- This program explores the design process. It follows two students as they plan and produce different versions of a CD holder: one creating a wooden rotating rack and the other building a small shelf unit using plastics. The DVD shows how to create a design brief, develop ideas, model, draw blueprints, make a cutting list, construct, test, and evaluate. 17 minutes. Morris Plains, NJ, Classroom Media, 2002.

---

T&I DVD ROM 40  
**Hackers: Outlaws and Angels**

*Discovery Channel*  
DVD ROM ---- This program reveals the daily battle between the Internet's outlaws and the hackers who oppose them by warding off system attacks, training IT professionals and police officers, and watching cyberspace for signs of imminent infowar. Through interviews with frontline personnel from the Department of Defense, NYPD's computer crime squad, private detective firm Kroll Associates, X-Force Threat Analysis Service, and several notorious crackers, the program provides insights into the millions of hack attacks that occur annually in the U.S.-including one that affected the phone bills of millions and another that left confidential details of the B-1 stealth bomber in the hands of teenagers. The liabilities of wireless networks, the Code Red worm,... Princeton, NJ, Films for the Humanities & Sciences, 2002.

---

T&I DVD ROM 41  
**Computer Worms & Viruses**

*Films for the Humanities & Sciences*  
DVD ROM ---- Computer bugs are no mere prank. A disruption of global communications networks by today's sophisticated worms and viruses is costing companies billions and can do lasting damage to the world's economic health. This NewsHour program begins by defining these binary invaders and then examines the escalating security challenges of keeping networks free of infection. Members of the Computer Emergency Response Team at Carnegie Mellon University and other white hats discuss proactive ways to detect and then block electronic intruders through single-user protocols and enterprise-wide defenses. 10 minutes. Princeton, NJ, Films for the Humanities & Sciences, 2003.

---

---

T&I DVD ROM 42  
**Lifting the Lid: How Computers Work**

*Cambridge Educational*  
DVD ROM ---- Most computer users are familiar with terms such as chips, hard drives, and RAM, but what exactly is a chip and what does it do? What does a hard drive look like and how does it work? This program goes inside today's typical computer to look at the functions of its main components. Close-up visuals show the inner workings of the hard disc drive, and demonstrations make concepts such as memory, binary coding, and RAM easy to understand. 31 minutes. Lawrenceville, NJ, Cambridge Educational, 2002.

---

T&I DVD ROM 43  
**The History of Computers**

*Cambridge Educational*  
DVD ROM ---- Initially designed as large-scale calculators, computers have quickly become indispensable tools in every field of endeavor. This program traces the course of technological innovations leading up to today's computers, from Charles Babbage and his analytical engine of the 1860s to the latest laptops. This program shows how ideas such as Boolean logic, the binary system, magnetic/iron core memory, and microprocessors have dramatically increased the capacity of computers while drastically reducing their size, a phenomenon known as Moore's Law. 26 minutes. Lawrenceville, NJ, Cambridge Educational, 2001.

---

T&I VIDEO 11  
**Modern Marvels: Engineering Disasters 5**

*A&E Television Networks*  
VIDEO ---- This program shows how shoddy workmanship, bad planning and poor research combine to create examples of engineering gone wrong. 50 minutes. South Burlington, VT, A&E Home Video, 2001.

---

T&I VIDEO 13  
**The Twin Towers: A History**

*Filmmakers Library*  
VIDEO ---- This film describes the technical problems that were overcome building the Twin Towers, including the challenge to the ironworkers. It also recounts the daredevil stunts that the buildings attracted. Paul Goldberger, renowned architecture critic, and others contemplate the future of the site. 48 minutes. New York, NY, Filmmakers Library, 2001.

---

---

T&I VIDEO 17  
**Driving Design**

*Films for the Humanities & Sciences*  
VIDEO ---- This program explores how art and science merge as designers team with cinematic computer programmers and engineers, developing and using new and merging technologies to build tomorrow's cars . . . today. Dr. Reef Karim, from the UCLA Neuropsychiatric Institute, examines how recently designed cars act as "beauty stimuli," tapping into the brain's rewards circuit pathway. Interviews with Professor Geoff Wardel, from the Art Center College of Design, and Greg Bernas, program manager at Toyota, are featured. 51 minutes. Princeton, NJ, Films for the Humanities & Sciences, 2004.

---

T&I VIDEO 18  
**Robos and Forensics**

*Discovery Communications, Inc.*  
VIDEO ---- See how robotics is finding new ways to intrigue us, and see how forensics never ceases to amaze: A fiery crash; robotic surgery-underwater; Web guide; Blood spatters 101; Dance to the beat; High flying forest fire fighting. Grade levels 6-12. 37:47 minutes. Florence, KY, Discovery School, 2005.

---

T&I VIDEO 19  
**People and the Environment**

*Discovery Communication, Inc.*  
VIDEO ---- What are the effects of human industry on our planet, and how can we change our ways of life to improve its health? Segments cover the causes and effects of air and water pollution and hazardous waste and the impact of recycling and other conservation efforts. Grade levels 3-6. 25 minutes. Florence, KY, Discovery School, 2005.

---

---

T&I VIDEO 20

**The Ups and Downs of Technology**

*Discovery Communication, Inc.*

VIDEO ---- Physics is the science of motion and energy. Four segments use familiar examples to show the laws of physics at work in our everyday lives. Roller Coaster Physics-Shows how roller coasters rely on the laws of physics to entertain people. Preventing Disaster-Investigates how engineering practices can cause or prevent fires, sinking ships and collapsing buildings. The Planet Electric-Explores how electricity is generated. Constant Motion-Examines how gravity and friction affect moving objects. Grade level: 6-12. 54 minutes. Florence, KY, Discovery School, 2005.

---

**SkillsUSA**

---

T&I 11.0112 D75

**Parliamentary Procedure Made Easy**

*Shane D Dunbar*

BOOK ---- Based on Robert's Rules of Order, Newly Revised, these instructional materials are ideal for teaching a complete unit, training a SkillsUSA team or conducting chapter meetings. Everett, WA, Parliamentary Procedure Instructional Center Materials Center, 2001.

---

T&I 11.0112 S43A

**SkillsUSA VICA Leadership Handbook (Revised)**

*SkillsUSA Inc*

BOOK ---- This comprehensive guide helps members run successful chapters and includes sections on leadership development, goal setting, professional dress, etiquette and communications. It describes programs such as the new Professional Development Program and total Quality Curriculum and provides constitutions and SkillsUSA history. Leesburg, VA, SkillsUSA VICA Inc, 1999.

---

T&I 11.0112 S43B

**SkillsUSA VICA Leadership Handbook (Revised)**

*SkillsUSA Inc*

BOOK ---- This comprehensive guide helps members run successful chapters and includes sections on leadership development, goal setting, professional dress, etiquette and communications. It describes programs such as the new Professional Development Program and total Quality Curriculum and provides constitutions and SkillsUSA history. Leesburg, VA, SkillsUSA VICA Inc, 1999.

---

T&I 11.0112 S43C

**SkillsUSA VICA Leadership Handbook (Revised)**

*SkillsUSA Inc*

BOOK ---- This comprehensive guide helps members run successful chapters and includes sections on leadership development, goal setting, professional dress, etiquette and communications. It describes programs such as the new Professional Development Program and total Quality Curriculum and provides constitutions and SkillsUSA history. Leesburg, VA, SkillsUSA VICA Inc, 1999.

---

T&I 11.0112 S43D

**SkillsUSA VICA Leadership Handbook (Revised)**

*SkillsUSA Inc*

BOOK ---- This comprehensive guide helps members run successful chapters and includes sections on leadership development, goal setting, professional dress, etiquette and communications. It describes programs such as the new Professional Development Program and total Quality Curriculum and provides constitutions and SkillsUSA history. Leesburg, VA, SkillsUSA VICA Inc, 1999.

---

T&I 11.0112 S43E

**SkillsUSA VICA Leadership Handbook (Revised)**

*SkillsUSA Inc*

BOOK ---- This comprehensive guide helps members run successful chapters and includes sections on leadership development, goal setting, professional dress, etiquette and communications. It describes programs such as the new Professional Development Program and total Quality Curriculum and provides constitutions and SkillsUSA history. Leesburg, VA, SkillsUSA VICA Inc, 1999.

---

T&I 11.0112 S434.1A

**Professional Development Program-Starter Kit: Enhancing Your Career Skills**

*SkillsUSA*

BOOK ---- Starter Kit-Student Workbook introduces an activity-based approach to transitional skills necessary for the world of work. Leesburg, VA, Skills USA-VICA, 1999.

---

T&I 11.0112 S434.1B

**Professional Development Program-Level 1: Enhancing Your Career Skills**

*SkillsUSA*

BOOK ---- Activities to complete self-assessment, identify your learning style, self-motivation, goals. Cultures and life styles. Prepare for professional employment. Leesburg, VA, Skills USA-VICA, 1999.

---

T&I 11.0112 S434.1C

**Professional Development Program-Level 2: Enhancing Your Career Skills**

*SkillsUSA*

BOOK ---- Work on short term goals; identify and deal with stress, team skills, meeting skills, speaking/presentation skills, positive image and rules of social etiquette. Leesburg, VA, Skills USA-VICA, 1999.

---

T&I 11.0112 S434.1D

**Professional Development Program-Level 3: Enhancing Your Career Skills**

*SkillsUSA*

BOOK ---- Covers establishment of career goals and preparation for a job in the field. Leadership potential and enhancement as a team player, leader and professional. Community activity, write a resume, cover letter and more. Leesburg, VA, Skills USA-VICA, 1999.

---

T&I 11.0112 S434.1E

**Professional Development Program-Level 4: Enhancing Your Career Skills**

*SkillsUSA*

BOOK ---- Review goals and establish long-term career goals. Also employment trends, risk of changing employment, ethical and unethical behavior, and entrepreneurships. Learn how to conduct a job search and more. Leesburg, VA, Skills USA-VICA, 1999.

---

T&I 11.0112 S434.1F

**Professional Development Program-  
Level 5: Enhancing Your Career  
Skills**

*SkillsUSA*

BOOK ---- Preparation for the transition from school-to-work or advanced education. Topics cover being an individual team player, leader and professional in the workplace. Learn about entry-level job skills & employment portfolio. Leesburg, VA, SkillsUSA VICA, 1999.

---

T&I 11.0112 S4344

**Professional Development Program:  
SkillsUSA Instructor's Manual**

*SkillsUSA*

BOOK ---- Manual features the 20 SkillsUSA-related competencies, plus the guidelines for the American Degree. Includes tips, optional activities and evaluation methods. Leesburg, VA, SkillsUSA, 2008.

---

T&I 11.0112 V51A

**Total Quality Curriculum**

*Vocational Industrial Clubs of America*

BOOK ---- Federal legislation emphasizes that programs have school-based learning activities, work-based learning activities and school-to-career connecting activities. With SkillsUSA-VICA's Total Quality Curriculum, you can give your students school-based learning activities that they can apply directly to their work-based training: the principles of total quality management. Leesburg, VA, National VICA, 1993.

---

T&I CD ROM 1A

**SkillsUSA: Advisor's Success Kit**

*SkillsUSA*

CD ROM ---- This electronic encyclopedia includes a search feature to help you find what you need to keep your SkillsUSA chapter running smoothly. ASK features transparency masters, forms, sample media releases and more! With the contents formatted as a PDF file, the CD includes Adobe Acrobat Reader 4.0. Copy data into your word processing files to customize. CD is Windows/Macintosh compatible. Leesburg, VA, SkillsUSA, 2000.

---

---

T&ICD ROM 1B

**SkillsUSA: Advisor's Success Kit**

*SkillsUSA*

CD ROM ---- This electronic encyclopedia includes a search feature to help you find what you need to keep your SkillsUSA chapter running smoothly. ASK features transparency masters, forms, sample media releases and more! With the contents formatted as a PDF file, the CD includes Adobe Acrobat Reader 4.0. Copy data into your word processing files to customize. CD is Windows/Macintosh compatible. Leesburg, VA, SkillsUSA, 2000.

---

T&I CD ROM 1C

**SkillsUSA: Advisor's Success Kit**

*SkillsUSA*

CD ROM ---- This electronic encyclopedia includes a search feature to help you find what you need to keep your SkillsUSA chapter running smoothly. ASK features transparency masters, forms, sample media releases and more! With the contents formatted as a PDF file, the CD includes Adobe Acrobat Reader 4.0. Copy data into your word processing files to customize. CD is Windows/Macintosh compatible. Leesburg, VA, SkillsUSA, 2000.

---

T&I CD ROM 1D

**SkillsUSA: Advisor's Success Kit**

*SkillsUSA*

CD ROM ---- This electronic encyclopedia includes a search feature to help you find what you need to keep your SkillsUSA chapter running smoothly. ASK features transparency masters, forms, sample media releases and more! With the contents formatted as a PDF file, the CD includes Adobe Acrobat Reader 4.0. Copy data into your word processing files to customize. CD is Windows/Macintosh compatible. Leesburg, VA, SkillsUSA, 2000.

---

T&I CD ROM 1E

**SkillsUSA: Advisor's Success Kit**

*SkillsUSA*

CD ROM ---- This electronic encyclopedia includes a search feature to help you find what you need to keep your SkillsUSA chapter running smoothly. ASK features transparency masters, forms, sample media releases and more! With the contents formatted as a PDF file, the CD includes Adobe Acrobat Reader 4.0. Copy data into your word processing files to customize. CD is Windows/Macintosh compatible. Leesburg, VA, SkillsUSA, 2000.

---

---

T&I CD ROM 2A

**SkillsUSA: Opening & Closing Ceremonies**

*SkillsUSA*

CD ROM ---- Use this animated PowerPoint version of the official opening and closing ceremonies for official meetings and assemblies. Or, to help students learn the ceremony, show the video performance that is also included on this CD ROM. In addition, the CD includes presentation scripts, meeting room setups and official attire information in Adobe Acrobat PDF format, as well as links to the SkillsUSA web site. CD is Windows/Macintosh compatible. Leesburg, VA, SkillsUSA, 2002.

---

T&I CD ROM 2B

**SkillsUSA: Opening & Closing Ceremonies**

*SkillsUSA*

CD ROM ---- Use this animated PowerPoint version of the official opening and closing ceremonies for official meetings and assemblies. Or, to help students learn the ceremony, show the video performance that is also included on this CD ROM. In addition, the CD includes presentation scripts, meeting room setups and official attire information in Adobe Acrobat PDF format, as well as links to the SkillsUSA web site. CD is Windows/Macintosh compatible. Leesburg, VA, SkillsUSA, 2002.

---

T&I CD ROM 2C

**SkillsUSA: Opening & Closing Ceremonies**

*SkillsUSA*

CD ROM ---- Use this animated PowerPoint version of the official opening and closing ceremonies for official meetings and assemblies. Or, to help students learn the ceremony, show the video performance that is also included on this CD ROM. In addition, the CD includes presentation scripts, meeting room setups and official attire information in Adobe Acrobat PDF format, as well as links to the SkillsUSA web site. CD is Windows/Macintosh compatible. Leesburg, VA, SkillsUSA, 2002.

---

---

T&I CD ROM 2D

**SkillsUSA: Opening & Closing Ceremonies**

*SkillsUSA*

CD ROM ---- Use this animated PowerPoint version of the official opening and closing ceremonies for official meetings and assemblies. Or, to help students learn the ceremony, show the video performance that is also included on this CD ROM. In addition, the CD includes presentation scripts, meeting room setups and official attire information in Adobe Acrobat PDF format, as well as links to the SkillsUSA web site. CD is Windows/Macintosh compatible. Leesburg, VA, SkillsUSA, 2002.

---

T&I CD ROM 2E

**SkillsUSA: Opening & Closing Ceremonies**

*SkillsUSA*

CD ROM ---- Use this animated PowerPoint version of the official opening and closing ceremonies for official meetings and assemblies. Or, to help students learn the ceremony, show the video performance that is also included on this CD ROM. In addition, the CD includes presentation scripts, meeting room setups and official attire information in Adobe Acrobat PDF format, as well as links to the SkillsUSA web site. CD is Windows/Macintosh compatible. Leesburg, VA, SkillsUSA, 2002.

---

T&I CD ROM 3A

**Employability Skills Series: Communication Skills**

*SkillsUSA*

CD ROM ---- This first-in-a-series, mini CD ROM contains an Instructor's Guide and downloadable, interactive Student Workbooks. Featuring 10 communications skills competencies, the curriculum is suitable for secondary and postsecondary students. The Instructor's Guide includes teaching strategies, a timeline, evaluation, a class-size student progress chart and more! Containing PDF files, the CD includes Adobe Acrobat Reader 5.0. Copy data into your own word processing files to customize. Every CD includes Windows/Macintosh formats. Leesburg, VA, SkillsUSA, 2002.

---

---

T&I CD ROM 3B

**Employability Skills Series: Communication Skills**

*SkillsUSA*

CD ROM ---- This first-in-a-series, mini CD ROM contains an Instructor's Guide and downloadable, interactive Student Workbooks. Featuring 10 communications skills competencies, the curriculum is suitable for secondary and postsecondary students. The Instructor's Guide includes teaching strategies, a timeline, evaluation, a class-size student progress chart and more! Containing PDF files, the CD includes Adobe Acrobat Reader 5.0. Copy data into your own word processing files to customize. Every CD includes Windows/Macintosh formats. Leesburg, VA, SkillsUSA, 2002.

---

T&I CD ROM 3C

**Employability Skills Series: Communication Skills**

*SkillsUSA*

CD ROM ---- This first-in-a-series, mini CD ROM contains an Instructor's Guide and downloadable, interactive Student Workbooks. Featuring 10 communications skills competencies, the curriculum is suitable for secondary and postsecondary students. The Instructor's Guide includes teaching strategies, a timeline, evaluation, a class-size student progress chart and more! Containing PDF files, the CD includes Adobe Acrobat Reader 5.0. Copy data into your own word processing files to customize. Every CD includes Windows/Macintosh formats. Leesburg, VA, SkillsUSA, 2002.

---

T&I CD ROM 3D

**Employability Skills Series: Communication Skills**

*SkillsUSA*

CD ROM ---- This first-in-a-series, mini CD ROM contains an Instructor's Guide and downloadable, interactive Student Workbooks. Featuring 10 communications skills competencies, the curriculum is suitable for secondary and postsecondary students. The Instructor's Guide includes teaching strategies, a timeline, evaluation, a class-size student progress chart and more! Containing PDF files, the CD includes Adobe Acrobat Reader 5.0. Copy data into your own word processing files to customize. Every CD includes Windows/Macintosh formats. Leesburg, VA, SkillsUSA, 2002.

---

---

T&I CD ROM 3E

**Employability Skills Series: Communication Skills**

*SkillsUSA*

CD ROM ---- This first-in-a-series, mini CD ROM contains an Instructor's Guide and downloadable, interactive Student Workbooks. Featuring 10 communications skills competencies, the curriculum is suitable for secondary and postsecondary students. The Instructor's Guide includes teaching strategies, a timeline, evaluation, a class-size student progress chart and more! Containing PDF files, the CD includes Adobe Acrobat Reader 5.0. Copy data into your own word processing files to customize. Every CD includes Windows/Macintosh formats. Leesburg, VA, SkillsUSA, 2002.

---

T&I CD ROM 31

**Employment Skills Series: Communications**

*SkillsUSA*

CD ROM ---- This CD-ROM contains an Instructor's Guide and Student Workbooks. Featuring 10 communications skills competencies, the curriculum is suitable for high school and college students. Leesburg, VA, SkillsUSA, 2005.

---

T&I CD ROM 32

**Employment Skills Series: Government and Civic Awareness**

*SkillsUSA*

CD ROM ---- This curriculum will help students understand how to work with their local, state and national government leaders, and how to become advocates for career and technical education. The CD includes teaching strategies, a timeline, evaluations, a class-size student progress chart, SkillsUSA Week materials, sample news releases and public service announcements. Leesburg, VA, SkillsUSA, 2005.

---

T&I CD ROM 40

**Advisor's Success Kit**

*SkillsUSA*

CD ROM ---- An encyclopedia for SkillsUSA Chapter Management features 22 easy-to-follow chapters that will help you understand and manage an effective SkillsUSA chapter. Leesburg, VA, SkillsUSA, 2004.

---

---

T&I CD ROM 41

**Professional Development Program: Instructor's Guide**

*SkillsUSA*

CD ROM ---- Includes companion materials for the Starter Kit, Level 1, Level 2, Level 3, Level 4, Level 5 and special needs adaptations. CD is formatted for both Macintosh and Windows platforms. Leesburg, VA, SkillsUSA, 2008.

---

T&I DVD ROM 50

**History of the American Worker and Emerging Technologies**

*SkillsUSA*

DVD ROM ---- The History of the American Worker depicts the struggles and successes of American workers from the arrival of craftsmen on the Mayflower to the present. In Emerging Technologies, learn how the skills of the work force have changed since the time of the covered wagon, and see how today's high-tech industries demand well-trained workers with top-notch skills. Both are included on one DVD and each runs approximately four minutes. Leesburg, VA, SkillsUSA, 2006.

---

T&I DVD ROM 55

**SkillsUSA Chapter Management Basics**

*SkillsUSA*

DVD ROM ---- SkillsUSA's new Chapter Management Basics DVD is designed to help enhance chapters and increase opportunities for all students in a program. Through nearly 40 minutes of interviews with advisors, students and industry (as well as footage showing local chapters in action), the viewer will learn how to make SkillsUSA's Program of Work an integral part of the classroom, how to secure industry support, how to secure administrator support and more. Approximately 40 minutes. Leesburg, VA, SkillsUSA, 2006.

---

---

T&I DVD ROM 56

**What does It Take To Be a Champion? SkillsUSA**

DVD ROM ---- This 15-minute documentary features actual members talking about their experiences, and what they've gained from participation in the program. The video also includes endorsements from industry partners, plus a special message for students and instructors from SkillsUSA Executive Director Tim Lawrence. Instructors can use this motivational DVD to recruit non-SkillsUSA students or to inspire current members to get the most out of their SkillsUSA experience. The basics of organizing a new SkillsUSA chapter are also covered. 15 minutes. Leesburg, VA, SkillsUSA.

---

T&I KIT 1

**Parliamentary Procedure Classroom Package (PC)**

*Shane D. Dunbar*

KIT ---- A kit designed to teach a complete unit, it contains 12 copies of Parliamentary Procedure Made Easy and the Post Test masters; one copy of Dunbar's Manual of Parliamentary Procedure Test Questions; one Parliamentary Procedure Test Questions computer program; one set of Skill Sheets for Handling Motions; and one copy of Parliamentary Procedure True and False Test Questions. Mill Creek, WA, The Parliamentary Procedure Instructional Materials Center, 2001.

---

T&I VIDEO 207

**SkillsUSA VICA: A Week of Champions 2002**

*SkillsUSA VICA*

VIDEO ---- Videotaped on location at the 2002 SkillsUSA National Leadership and Skills Conference in Kansas City, MO, in just under 10 minutes this video captures the excitement and fun experienced by students, educators and business and industry representatives. 11 minutes. Leesburg, VA, SkillsUSA VICA, Inc., 2002.

---

---

T&I VIDEO 209

**SkillsUSA: The Partnership SkillsUSA**

VIDEO ---- For anyone who wants to build partnerships with business and industry to improve their education programs, this video features the benefits of partnerships with our organization. Geared specifically for employers and business and industry audiences, this show opens with a humorous look at the top ten qualities employers want to see in a job applicant. This video won the nationally recognized and respected ASAE Award in the video category. 10 minutes. Leesburg, VA, SkillsUSA, 2002.

---

**Transportation, Distribution and Logistics**

---

T&I 13.14 TRU

**Straight Talk - Driver Handbook / Workbook**

*Career Publishing Inc.*

BOOK ---- Includes an introduction to trucking; understanding the vehicle controls; hours of service; truck inspections; vehicle systems; controlling the truck; gears; backing; truck speed; night driving; weather conditions; hazards; emergencies; skids; communication; preventive maintenance and servicing plus other topics. Orange, CA, Career Publishing Inc., 1999.

---

T&I 14.1100 T 1

**Diesel Technology: Brakes (Teacher/Student Combined Edition)**

*Robert Hilley*

BOOK ---- This resource aligns with the medium/heavy duty truck task list developed by the National Automotive Technicians Education Foundation (NATEF) and used by the National Institute for Automotive Service Excellence (ASE) in the certification of medium/heavy duty truck technicians. This is the Teacher/Student combined edition that covers BRAKES for diesel technology. Stillwater, OK, MAVCC, 2000.

---

---

T&I 14.1109 OK  
**Diesel Technology: Workplace Skills - Teacher's Guide**  
*MAVCC*  
BOOK ---- Aligns with medium/heavy duty truck task list developed by the NATEF and used by the ASE in the certification of technicians. Includes introductory, workplace communication and customer service, as well as job application sections. OK, MAVCC, 2001.

---

T&I 14.1109 OKA  
**Diesel Technology: Safety Skills Instructor & Student Guide**  
*Mary Kellum*  
BOOK ---- This portion of the Diesel Technology series (ASE) Certification - will be useful to any student pursuing a career in the diesel industry. Today, safety skills are mandatory to be successful in the workplace. Stillwater, Ok, MAVCC, 2001.

---

T&I 14.1112 F 1  
**Automotive Excellence, Volume 2**  
*Glencoe/McGraw-Hill*  
BOOK ---- Focuses on engine repair, heating and air conditioning, automatic transmission and transaxle, manual drive train and axles. Peoria, IL, Glencoe/McGraw-Hill, 2000.

---

T&I 15.0001 CHAS1  
**Automotive Chassis Systems**  
*Thomas W. Birch*  
BOOK ---- Written by an experienced author, teacher and ASE certified technician, this resource provides a comprehensive, up-to-date study of automotive chassis systems operation, inspection, troubleshooting, and repair for the complex autos (including braking, suspension and steering systems) of today and the future. NY, Delmar Publishers, 2000.

---

---

T&I CD ROM 20  
**Fundamentals of Engine Operation**  
*Shopware*  
CD ROM ---- This CD-ROM explains the internal combustion process and the four-stroke cycle in detail. Each major component of the engine is clearly identified and its operation described, as well as the support systems of the engine, the oil system, and the cooling system. The program focuses on how all these components work together to produce power. Recommended minimum system requirements are: 200 MHz processor; 32 MB RAM; 4X CD-ROM drive; 800x600 display with 256 colors; sound card and speakers or headphones; keyboard; mouse; QuickTime 4 or higher; Adobe Acrobat Reader 4 or higher. Supported operating systems are: windows 95, 98, ME, NT4 or 2000; Mac OS 8.1 or higher. Monmouth Junction, NJ, Shopware, 2004.

---

T&I DVD ROM 60  
**Hybrid Auto Repair Series-Hybrid Engines: History and Development**  
*Shopware*  
DVD ROM ---- This program surveys the historical background of hybrid cars, introduces students to hybrid configurations currently on the road or in development, and explains the basic principles of hybrid system propulsion. 15 minutes. Lawrenceville, NJ, Shopware, 2007.

---

T&I DVD ROM 61  
**Hybrid Auto Repair Series-Common Hybrid Components**  
*Shopware*  
DVD ROM ---- This program guides viewers through the system components common to hybrid automobiles, including the battery pack, the electric motor, the internal combustion engine, the transmission, and the generator. 17 minutes. Lawrenceville, NJ, Shopware, 2007.

---

T&I DVD ROM 62  
**Hybrid Auto Repair Series-Hybrid Safety Issues**  
*Shopware*  
DVD ROM ---- This program enables students to understand and follow the unique safety requirements of hybrid system maintenance and repair, focusing on precautions and procedures necessary to prevent electric shock. 18 minutes. Lawrenceville, NJ, Shopware, 2007.

---

---

T&I DVD ROM 68  
**Basic Career Communication Skills: Auto Repair**  
*The School Company*  
DVD ROM ---- This program begins with an orientation to auto repair with an emphasis on why communication skills are important to that career. 15 to 20 minutes. Vancouver, WA, The School Company, 2005.

---

T&I DVD ROM 69  
**Basic Career Math Skills: Auto Mechanics**  
*The School Company*  
DVD ROM ---- This program demonstrates how basic math, algebra, decimals, fractions, and geometry are used in the career world of auto mechanics. Length: 25-27 minutes. Vancouver, WA, The School Company, 2005.

---

T&I VIDEO 89  
**Computer System Operation**  
*Meridian*  
VIDEO ---- Explains how and why electronics and computer technology are used to control almost every major system on an automobile. Shows how the computer system and active and passive sensors operate. Discusses cybernetics and other valuable topics for those interested in becoming an automobile technician. 27 minutes. Bloomington, IL, Meridian, 1999.

---

T&I VIDEO 91  
**Computer On-Board Diagnostic**  
*Meridian*  
VIDEO ---- Explains the basic operation of modern on-board automobile computer diagnostics. Takes a look at how a modern automobile computer along with a scan tool and the vehicles' diagnostic connector can detect, retrieve, denote, and store computer trouble codes on an early model Ford, GM, and Chrysler vehicles. 18 minutes. Bloomington, IL, Meridian, 1999.

---

---

T&I VIDEO 92

**Scanning Computer Problems**

*Meridian*

VIDEO ---- Demonstrates how to quickly find the source of electrical, electronic, or computer related problems with a scan tool. How to connect the tool to the vehicle and set-up a scan tool for the specific make and model vehicle. Summarizes how to retrieve stored trouble codes, do engine off and engine running tests, actuator tests, as well as several other test. Shows how to use a trouble shoot cartridge and much more. 22 minutes. Bloomington, IL, Meridian, 1999.

---

**Welding**

---

T&I 21.0100 B439

**Blueprint Reading for Welders, Sixth Edition**

*A. E. Bennett*

BOOK ---- Complete, hands-on practice in reading and interpreting blueprints. Step-by-step, students will develop the necessary skills to interpret all types of working sketches and prints-from the simplest to the most complex. The spiral binding makes it easier to use this book side-by-side with blueprints! Completely updated to American Welding Society and ANSI standards and now features new chapters on CAD and ISO standards. NY, Delmar, 1999.

---

T&I 21.0100 B674

**Oxyfuel Gas Welding**

*Kevin E. & Mark A. Bowdich*

BOOK ---- Presents fundamentals of oxyfuel welding. Tinley Park, IL, Goodheart-Willcox, 1999.

---

T&I 21.0100 M666

**Flux Cored Arc Welding Handbook**

*William H. Minnick*

BOOK ---- Covers principles, equipment, techniques, modes of operation, and safety in a straightforward manner. Tinley Park, IL, Goodheart-Willcox, 1999.

---

---

T&I 21.0100 M666A

**Gas Tungsten Arc Welding Handbook**

*William Minnick*

BOOK ---- Provides complete coverage of the gas tungsten arc welding field. Theory, fundamentals, equipment, and safety are addressed as well as basic skill and proper procedures for a successful weld. An introduction to all of the major areas. IL, Goodheart-Willcox, 2000.

---

T&I VIDEO 50

**Introduction To Oxyfuel Welding: Introduction to Welding Video Series**

*Meridian*

VIDEO ---- This video explains and demonstrates the careful and safe method of using the combination of acetylene and oxygen gas cylinders. Pressure regulators, check valves, and hoses and fittings are demonstrated as well as torch tubes and tips. Clear instructions on ignition, use of the outfit, and shutting down are provided along with tips on flame adjustment and methods to direct it to the work area. Also demonstrated are various welding techniques and types of welds. 14 minutes. Bloomington, IL, Meridian, 1998.

---

T&I VIDEO 51

**Introduction To Shielded Metal Arc Welding: Introduction to Welding Video Series**

*Meridian*

VIDEO ---- This video explains the differences between alternating current and direct current arc welding machines and shows how an electrical current melts electrodes to supply filler metal. Also demonstrated are electrode leads, workpiece leads, and electrode holders. Electrode sizing and its importance are explained. Set-up and shut-off instructions are shown step-by-step as well as how to use equipment safely. Uses of Shielded Metal Arc Welding are discussed and demonstrated. 12 minutes. Bloomington, IL, Meridian, 1998.

---

---

T&I VIDEO 52

**Introduction To Gas Tungsten Arc Welding: Introduction to Welding Video Series**

*Meridian*

VIDEO ---- Gas Tungsten Arc Welding or TIG welding presents special safety concerns. Viewers are warned of the suffocation hazards present when working with inert gases and why good ventilation is required. The video also provides an explanation of how TIG welding differs from other types of welding, in particular, the use of non-consumable electrodes. Electrode leads, hoses, regulators, and collets are demonstrated and explained as well as the use of the post flow timer to protect the weld from contamination. Also discussed are using the correct collet set and electrode size and type needed for the job. 11 minutes. Bloomington, IL, Meridian, 1998.

---

T&I VIDEO 53

**Introduction to Gas Metal Arc and Flux Core Welding: Introduction to Welding Video Series**

*Meridian*

VIDEO ---- There are a lot of similarities between Gas Metal Arc Welding (MIG) and Flux Core Arc Welding, including the use of direct current to provide constant voltage. Viewers will also learn about the different types of electrodes wires used in each outfit. Wire feeders are demonstrated along with the spools containing several hundred feet of electrode wire allowing welders to make long continuous welds. Students see how to position the electrode and how to establish a good weld pool. As in all of the welding videos, safety practices are clearly demonstrated and explained. 11 minutes. Bloomington, IL, Meridian, 1998.

---