

MODERN AUTOMOTIVE TECHNOLOGY ONLINE COURSE

The **Modern Automotive Technology Online Course** provides online instruction in the construction, operation, service, and repair of automobiles and light trucks and helps students prepare for ASE certification. The extensive multimedia content provides learners with all the benefits of classroom instruction, but with the convenience of online learning.

The course begins by presenting foundations of vehicle construction and operation and progresses gradually to complex diagnostic and repair procedures. It provides the educational tools needed to ensure your students' success.

- Intuitive navigation system allows students to access desired content quickly and easily.
- Review questions, ASE-type questions, animations, simulations, and DVOM activities reinforce important concepts and provide students with various learning opportunities.
- Notes, Warnings, Cautions, and Tech Tips are highlighted throughout the course material.
- Assessment tools allow for the administration of pre-built tests or the creation of the custom tests using the provided question pools.
- Organized around the 2013 edition of the **Modern Automotive Technology** textbook, it contains one lesson for each textbook chapter.
- Instructor's tools include a gradebook, scheduling tools, and communication tools, allowing one to concentrate on teaching.
- Audio for technical terms and definitions help students master the "language" of the automotive technician.

HIGHLIGHTS

- Includes Online Textbook
- Narrative Animations
- Hands-On DVOM Activities
- NATEF Standard Job Sheets



ONLINE INSTRUCTOR CENTER

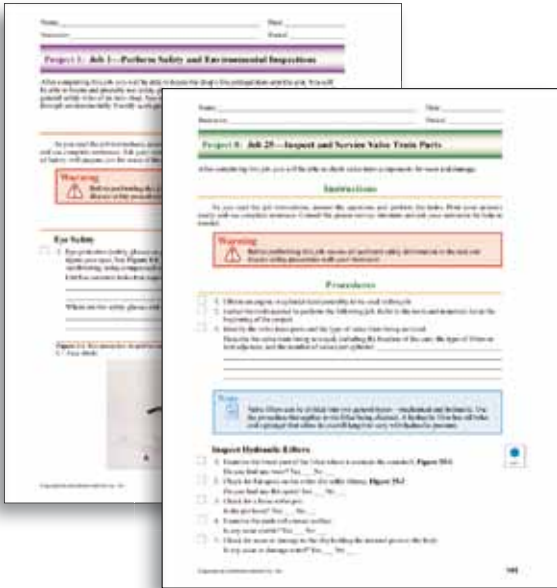
- A complete instructor package with access to all supporting materials.
- Stay connected and up-to-date on all related reprint changes, new releases, and announcements.
- Provides a community for instructors to interact, share, and learn from one another in a collaborative manner.

Modern Automotive Technology	ISBN	SCHOOL PRICE
Online Student Center, 360-Day License	9781619603851	\$63.95
Online Course	9781619603844	\$7.95
Online Instructor Center, 360-Day License	9781619603868	\$336.95

(Prices subject to change without notice.)

Includes engaging student activities.





NATEF Standards Job Sheets help students gain the hands-on skills needed to succeed in the field. The job sheets cover all the tasks on the 2012 NATEF Task List, making them ideal for performance-based instruction.

A variety of graphics, including detailed illustrations and high-resolution photographs, supplement the course content.



Narrated animations provide a depth of understanding not possible through static illustrations.

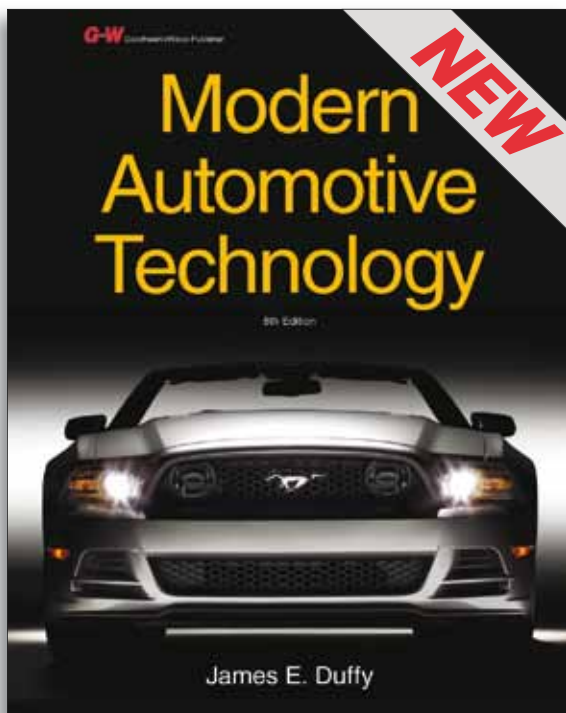


A variety of drill-and-practice activities reinforce important concepts.



Check Out All of Our Online Courses at
www.g-wonline.com

AVAILABLE SPRING



MODERN AUTOMOTIVE TECHNOLOGY

by James E. Duffy, ©2014, 8th Edition

Suggested Grade Levels 9–12

Modern Automotive Technology details the construction, operation, diagnosis, service, and repair of late-model automobiles and light trucks. This comprehensive textbook uses a building-block approach that starts with the fundamental principles of system operation and progresses gradually to complex diagnostic and service procedures. Short sentences, concise definitions, and thousands of color illustrations help students learn quickly and easily. The new edition of **Modern Automotive Technology** provides coverage of the latest developments in the automotive field and is correlated to the 2012 NATEF Task List. A new Fundamentals of Electricity and Electronics section provides students with the background needed to troubleshoot and repair the complex electrical/electronic systems found on today's vehicles. Updated information on hybrid drive systems has been integrated throughout the textbook, and a new hybrid drive system service chapter details the diagnosis and repair of these important systems.

Organized around the ASE automobile test areas, **Modern Automotive Technology** is a valuable resource for students preparing for a career in automotive technology, as well as experienced technicians preparing for the ASE certification tests.

www.g-w.com/modern-automotive-technology-2014



CONTENTS

Section 1—Introduction to Automotive Technology

1. The Automobile
2. Automotive Careers and ASE Certification
3. Basic Hand Tools
4. Power Tools and Equipment
5. Auto Shop Safety
6. Automotive Measurement and Math
7. Service Information and Work Orders
8. Fasteners, Gaskets, Seals, and Sealants
9. Vehicle Maintenance, Fluid Service, and Recycling
10. Career Success

Section 2—Engine Technology

11. Engine Fundamentals
12. Engine Design Classifications
13. Engine Top End Construction
14. Engine Bottom End Construction
15. Engine Front End Construction
16. Engine Size and Performance Measurements

Section 3—Fundamentals of Electricity and Electronics

17. Electrical Principles
18. Circuit Types and Ohm's Law
19. Electrical and Electronic Components
20. Electrical Tools and Test Equipment
21. Wiring Diagrams and Wiring Repairs
22. Basic Electrical Tests

Section 4—Computer Control Technology

23. Computer System Fundamentals
24. On-Board Diagnostics and Scan Tools
25. Computer System Service

Section 5—Electrical and Electronic Systems Technology

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27. Hybrid Drive Systems Diagnosis and Repair
28. 12-Volt and HV Battery Technology
29. 12-Volt and HV Battery Service
30. Starting System Technology
31. Starting System Diagnosis, Testing, and Repair
32. Charging System Technology
33. Charging System Diagnosis, Testing, and Repair
34. Ignition System Technology
35. Ignition System Diagnosis, Testing, and Repair
36. Lights, Instrumentation, Wipers, and Horns—Operation and Service
37. Sound Systems and Power Accessories—Operation and Service
38. Security and Navigation Systems—Operation and Service

Section 6—Fuel, Exhaust, and Induction System Technology

39. Automotive Fuels, Combustion Efficiency
40. Fuel Tanks, Pumps, Lines, and Filters
41. Gasoline Injection Fundamentals
42. Gasoline Injection Diagnosis, Testing, and Repair
43. Diesel Injection Fundamentals
44. Diesel Injection Diagnosis, Testing, and Repair
45. Exhaust Systems—Construction, Operation, and Repair
46. Turbochargers And Superchargers—Construction, Operation, and Repair

Section 7—Cooling and Lubrication System Technology

47. Cooling System Technology
48. Cooling System Diagnosis, Testing, and Repair

49. Lubrication System Technology
50. Lubrication System Diagnosis, Testing, and Repair

Section 8—Emission Control System Technology

51. Emission Control System Technology
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Section 9—Engine Troubleshooting and Performance

53. Engine Performance and Driveability
54. Advanced Diagnostics
55. Engine Tune-Up

Section 10—Engine Service and Repair

56. Engine Mechanical Problems
57. Engine Removal, Disassembly, and Cleaning
58. Engine Short Block Rebuilding
59. Engine Top End Rebuilding
60. Engine Front End Service
61. Engine Reassembly, Installation, and Break-In

Section 11—Drive Train and Axle Technology

62. Clutch Technology
63. Clutch Diagnosis, Service, and Repair
64. Manual Transmission Technology
65. Manual Transmission Diagnosis, Service, and Repair
66. Automatic Transmission Technology
67. Automatic Transmission Diagnosis, Service, and Repair
68. Drive Shaft and Transfer Case Technology
69. Drive Shaft and Transfer Case Diagnosis, Service, and Repair
70. Differential and Rear Drive Axle Technology

71. Differential and Rear Drive Axle Diagnosis, Service, and Repair
72. Transaxle and CV-Axle Technology
73. Transaxle and CV-Axle Diagnosis, Service, and Repair
74. Hybrid Transmission—Construction, Operation, and Repair

Section 12—Suspension and Steering Technology

75. Tire, Wheel, and Wheel Bearing Fundamentals
76. Tire, Wheel, and Wheel Bearing Diagnosis, Service, and Repair
77. Suspension System Technology
78. Suspension System Diagnosis, Service, and Repair
79. Steering System Technology
80. Steering System Diagnosis, Service, and Repair
81. Wheel Alignment

Section 13—Brake System Technology

82. Brake System Fundamentals
83. Brake System Diagnosis, Service, and Repair
84. Anti-Lock Brakes, Traction, and Stability Control—Operation and Repair

Section 14—Heating and Air Conditioning Technology

85. Heating and Air Conditioning Fundamentals
86. Heating and Air Conditioning Diagnosis, Service, and Repair

Section 15—Safety Systems and Future Technology

87. Restraint System Fundamentals
88. Restraint System Diagnosis and Repair
89. New and Future Technologies



DIAGNOSTIC CASE STUDY

Concern: Ms. Figueroa says that a light is glowing in the dash of her 2010 GMC pickup truck.

Cause: Duff questions Ms. Figueroa as to the nature of the problem, but she says she has noticed nothing wrong other than the glowing light. Duff starts the vehicle and notes that the malfunction indicator light in the dash is glowing. He test-drives the vehicle to try to find

Duff's Garage Diagnostic Case Studies present students with common problems, detail the procedure for pinpointing the source, and provide an overview of necessary repairs.

Green Tech

Fluorescent Shop Lights

To keep your shop energy efficient, one step you can take is to replace any high-power lights with fluorescent lights. There are varying levels of efficiency in fluorescent lights as well. The T system designates the tube diameter for fluorescent lamps. Older fluorescent lights may be T12 lights. To be more efficient, these should be replaced with T8 lights. The lights with smaller diameters will give off more light and use less power.

Green Tech features identify environmentally safe shop practices.

Modern Automotive Technology	ISBN	SCHOOL PRICE
Hardcover Text	9781619603707	\$102.95
Online Text, 6 yr. Classroom Subscription (min. qty. 15)	9781619603738	\$102.95
Bundle, Text + Online 6 yr Classroom Subscription (min. qty. 15)	9781619603745	\$133.95
Workbook	9781619603752	\$26.95
NATEF Standards Job Sheets	9781619603776	\$48.95
Bundle, Text + Job Sheets	9781619603783	\$142.95
Bundle, Text, Workbook, and Job Sheets	9781619603790	\$159.95
Instructor's Annotated Workbook	9781619603769	\$76.95
Instructor's Resource CD (Win/Mac)	9781619603806	\$249.95
EXAMVIEW® Assessment Suite (Win/Mac)	9781619603813	\$238.95
Instructor's Presentations for PowerPoint: (Win/Mac)		
Individual License	9781619603820	\$249.95
Site License	9781619603837	\$748.95
Online Student Center, 360-Day License	9781619603851	\$63.95
Online Course	9781619603844	\$7.95
Online Instructor Center, 360-Day License	9781619603868	\$336.95



Modern Automotive Technology Supports STEM

- Math and measurement
- Force, work, and power
- Basic electricity and electronics
- Hydraulics and pneumatics
- Problem solving

HYBRID VEHICLE DVDs ©2007

The **Hybrid Vehicle DVD Series** provides a thorough overview of hybrid technologies. This exciting six-part series provides dynamic visual instruction to improve understanding of hybrid vehicle design, operation, safety, and service.

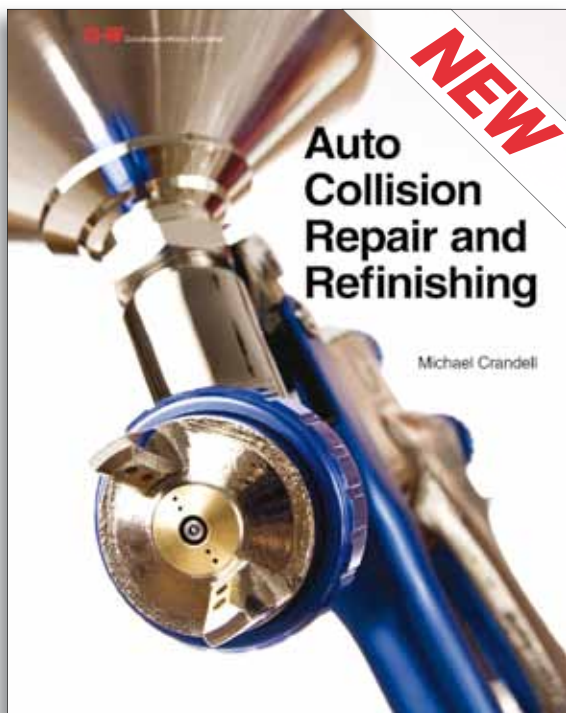
Hybrid Vehicle DVD	Hybrid Vehicle DVDs	ISBN	SCHOOL PRICE
CC	The History of Hybrids	9781590708002	\$94.95
CC	Common Hybrid Components	9781590708019	\$94.95
CC	Hybrid Safety Issues	9781590708026	\$94.95
CC	Hybrid Automotive Series I DVDs	9781590708095	\$282.95
CC	Battery and Safety	9781605257082	\$94.95
CC	Brakes and Service	9781605257099	\$94.95
CC	Computers and Cooling Systems	9781605257105	\$94.95
CC	Hybrid Auto Repair Series II DVDs	9781605257112	\$403.95
CC	Hybrid Automotive Series DVDs	9781590708095	\$282.95

(Prices subject to change without notice.)



G-W DVD

Visit www.g-w.com to view samples of these DVDs.



AUTO COLLISION REPAIR AND REFINISHING

by Michael Crandell, ©2014

Suggested Grade Levels 9–12

Auto Collision Repair and Refinishing details the latest collision repair and refinishing techniques, as well as more traditional repair procedures. It presents both the theoretical and practical aspects of collision repair and refinishing, preparing students for a fast-paced workplace that is becoming increasingly technical.

Organized around the NATEF Collision Repair and Refinish Task List, this comprehensive textbook includes information on MIG welding, HVLP spray painting, paintless dent repair, low-VOC finishes, paint matching, structural frame repair, detailing, and flexible plastic component repair, and estimating. Detailed chapters on mechanical systems, such as brake systems, cooling systems, and restraint systems, allow students to recognize and repair common types of mechanical damage. An extensive estimating chapter provides unsurpassed instruction on this vital task, walking students through the steps required to estimate specific types of damage.

Auto Collision Repair and Refinishing is an indispensable resource for students preparing for a career in collision repair and refinishing, as well as experienced technicians preparing for the ASE collision repair and refinish certification tests.



PRINTED
TEXT



ONLINE
TEXT

www.g-w.com/auto-collision-repair-refinishing-2014

HIGHLIGHTS

- In-depth coverage of latest in collision repair technologies
- Extensive damage analysis and estimating sections

CONTENTS

Section 1—Introduction to Collision Repair

1. Introduction to Collision Repair
2. Safety
3. Vehicle Construction
4. Fundamentals of Collision Damage
5. Welding and Cutting
6. General-Purpose Tools and Equipment, Service Information

Section 2—Nonstructural Repairs

7. Nonstructural Repair Tools, Equipment, and Materials
8. Nonstructural Panel Repair
9. Bolted Nonstructural Part Replacement
10. Welded and Bonded Nonstructural Panel Replacement
11. Plastic Repair
12. Glass

Section 3—Structural Repairs

13. Unibody/Frame Straightening Equipment
14. Measurements

15. Unibody Straightening
16. Full-Frame Repair
17. Structural Component Replacement

Section 4—Mechanical and Electrical Repairs

18. Steering and Suspension
19. Electrical System
20. Brakes
21. Cooling, Heating, and Air Conditioning Systems
22. Power Train
23. Restraint Systems

Section 5—Refinishing

24. Refinishing Tools and Equipment
25. Refinish Materials
26. Paint Mixing and Reducing
27. Spray Technique
28. Surface Preparation
29. Color Matching
30. Paint Application
31. Specialty Painting
32. Detailing

Section 6—Estimating and Certification

33. Estimating
34. ASE Certification
35. Employment Strategies

Auto Collision Repair and Refinishing	ISBN	SCHOOL PRICE
Hardcover Text	9781619603875	\$95.95
Online Text	9781619603905	\$95.95
Bundle, Text + Online 6 yr Classroom Subscription (min. qty. 15)	9781619603912	\$126.95
Workbook	9781619603929	\$26.95
Bundle, Text + Workbook	9781619603943	\$116.95
Instructor's Annotated Workbook	9781619603936	\$76.95
Instructor's Resource CD (Win/Mac)	9781619603950	\$249.95
EXAMVIEW® Assessment Suite (Win/Mac)	9781619603967	\$238.95
Instructor's Presentations for PowerPoint: (Win/Mac)		
Individual License	9781619603974	\$249.95
Site License	9781619603981	\$748.95

(Prices subject to change without notice.)



AUTO BODY REPAIR DVDs

©2004

Suggested Grade Levels 9–12

See Page 15 for more information



MACHINING FUNDAMENTALS

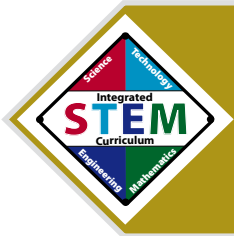
by John R. Walker, ©2014, 9th Edition

Suggested Grade Levels 9–12

Machining Fundamentals is a comprehensive text that provides an introduction to the various machining operations, setups, and procedures. This colorful and detailed textbook covers all traditional machining methods, as well as newer and nontraditional methods. This edition includes expanded coverage of CNC machining and updated illustrations.

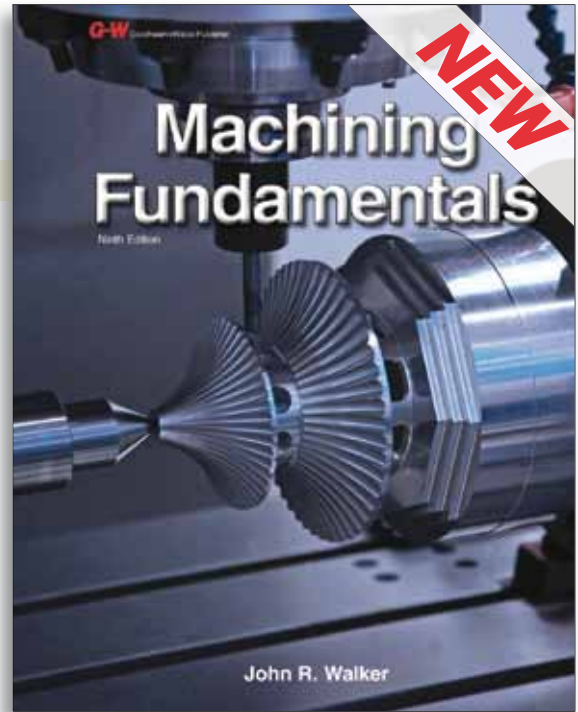
- Clear, easy-to-understand introduction to machining.
- Strong emphasis on safety throughout the textbook.
- Heavily illustrated with well-designed, color-coded artwork to help students understand concepts quickly.
- Updated and expanded coverage of CNC machining.
- Clear and simple organization of content makes the textbook easy to use.

www.g-w.com/machining-fundamentals-2014



Machining Fundamentals Supports STEM

- Measurement tools and related math
- Design and manufacturing processes
- Reading engineering drawings
- CNC and automated systems
- Material properties and heat treatment



AVAILABLE SUMMER



PRINTED TEXT



ONLINE TEXT

Machining Fundamentals	ISBN	SCHOOL PRICE
Hardcover Text	9781619602090	\$95.95
Online Text + 6 yr Classroom Subscription (min. qty. 15)	9781619602120	\$95.95
Bundle, Text + Online 6 yr Classroom Subscription (min. qty. 15)	9781619602137	\$126.95
Workbook	9781619602144	\$26.95
Instructor's Annotated Workbook	9781619602168	\$76.95
Instructor's Resource CD	9781619602151	\$249.95
EXAMVIEW® Assessment Suite	9781619602175	\$238.95

CONTENTS

- | | |
|---|---|
| 1. An Introduction to Machining Technology | 16. Broaching Operations |
| 2. Shop Safety | 17. The Milling Machine |
| 3. Understanding Drawings | 18. Milling Machine Operations |
| 4. Measurement | 19. Precision Grinding |
| 5. Layout Work | 20. Band Machining |
| 6. Hand Tools | 21. Computer Numerical Control |
| 7. Fasteners | 22. Automated Manufacturing |
| 8. Jigs and Fixtures | 23. Quality Control |
| 9. Cutting Fluids | 24. Metal Characteristics |
| 10. Drills and Drilling Machines | 25. Heat Treatment of Metals |
| 11. Offhand Grinding | 26. Metal Finishing |
| 12. Sawing and Cutoff Machines | 27. Electromachining Processes |
| 13. The Lathe | 28. Nontraditional Machining Techniques |
| 14. Cutting Tapers and Screw Threads on the Lathe | 29. Other Processes |
| 15. Other Lathe Operations | 30. Occupations in Machining Technology |

MACHINING PROJECTS



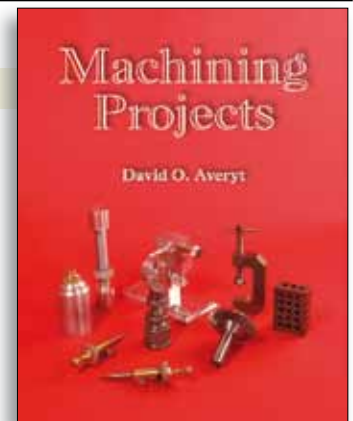
by David O. Averyt, ©2007

Suggested Grade Levels 9–12

Machining Projects includes 46 projects, grouped in four categories: benchwork, lathe competency, vertical mill competency, and advanced projects. Each project includes a step-by-step listing of the tasks to be performed in completing the project. Tasks are correlated to applicable sections in the **Machining Fundamentals** textbook for reference. Each project is correlated to the NIMS Level 1 Credentials duties.

www.g-w.com/machining-projects-2007

Machining Projects	ISBN	SCHOOL PRICE
Softcover Text	9781590707791	\$38.95



(Prices subject to change without notice.)



PRINTED TEXT

MODERN REFRIGERATION AND AIR CONDITIONING

by A. D. Althouse, C. H. Turnquist, Suggested Grade Levels 11–12
A. F. Bracciano, D. C. Bracciano, and G. M. Bracciano, ©2014, 19th Edition

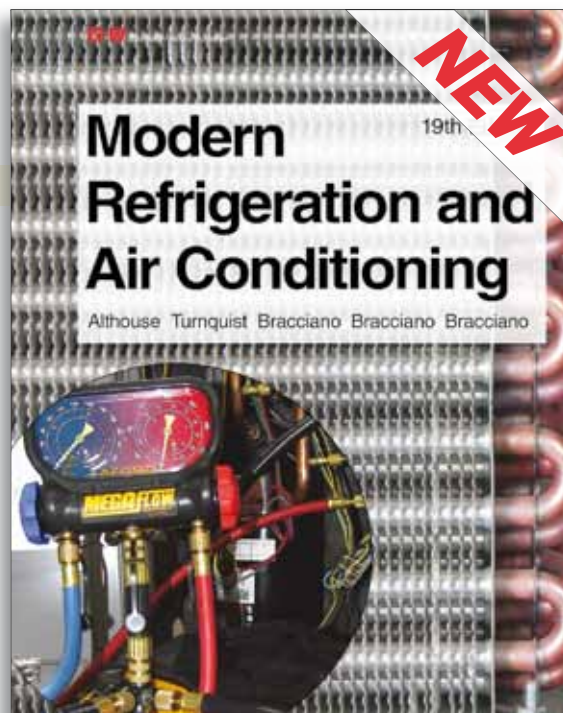
Modern Refrigeration and Air Conditioning provides an excellent blend of theory, skill development, and service information, making it a leader in the refrigeration and air conditioning field. This comprehensive text teaches both fundamental principles and the service techniques needed to diagnose and remedy refrigeration and HVAC problems.

Modern Refrigeration and Air Conditioning has been extensively updated to improve readability and address recent developments in the HVAC-R field. This new edition includes information about the latest equipment, refrigerants, and environmentally responsible service procedures. An all new layout and revised text make the book easier to read and comprehend.

www.g-w.com/modern-refrigeration-air-conditioning-2014

CONTENTS

1. Fundamentals of Refrigeration	20. Service and Repair of Domestic Refrigerators and Freezers	39. Solar Power and Thermal Storage
2. Basic Refrigeration Systems	21. Air Movement and Measurement	40. Energy Management
3. Tools and Supplies	22. Air Quality	41. Energy Conservation
4. Working with Tubing and Piping	23. Air Distribution	42. Overview of Commercial Refrigeration Systems
5. Service Calls	24. Ventilation System Service	43. Special Refrigeration Systems and Applications
6. Introduction to Refrigerants	25. Ductless Air Conditioning Systems	44. Commercial Refrigeration—System Configurations
7. Equipment and Instruments for Refrigerant Handling and Service	26. Central Air Conditioning Systems	45. Commercial Refrigeration Systems—High-Side Components
8. Working with Refrigerants	27. Absorption Cooling Systems	46. Commercial Refrigeration Systems—Low-Side Components
9. Basic Electricity	28. Humidification	47. Commercial Refrigeration Systems—Piping
10. Electrical Power	29. Thermostats	48. Understanding Heat Loads and System Thermodynamics
11. Basic Electronics	30. Heating and Cooling Loads	49. Selecting Components Based on Heat Load
12. Electric Motors	31. Air Conditioning Installation, Troubleshooting, and Service	50. Installing Commercial Systems
13. Electric Control Systems	32. Forced Air Heating Fundamentals	51. Troubleshooting Commercial Systems
14. Servicing Electric Motors and Controls	33. Hydronic Heating Fundamentals	52. Servicing Commercial Systems
15. Compressors	34. Heat Pumps	53. Technician Certification
16. Valves and Metering Devices	35. Gas-Fired Heating Systems	
17. Overview of Domestic Refrigerators and Freezers	36. Oil-Fired Heating Systems	
18. Systems and Components of Domestic Refrigerators and Freezers	37. Electric Heating Systems	
19. Installation and Troubleshooting of Domestic Refrigerators and Freezers	38. Heating System Installation and Service	



NEW

AVAILABLE SUMMER



PRINTED TEXT

NEW FOR THIS EDITION

- Improved organization
- Additional pedagogical features
- Expanded service information

Pro Tip

Electronic Leak Detectors and Urethane

Electronic leak detectors are difficult to use on urethane insulation because urethane uses an expander. When an electronic leak

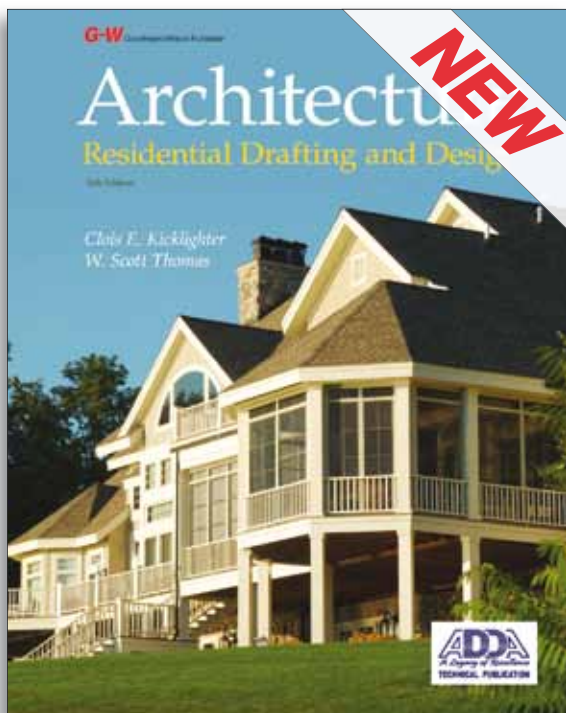
Pro Tips provide students with additional information that they will find useful on the job.



Modern Refrigeration and Air Conditioning	ISBN	SCHOOL PRICE
Hardcover Text	9781619601994	\$102.95
Workbook	9781619602021	\$28.95
Laboratory Manual	9781619602038	\$28.95
Instructor's Annotated Workbook	9781619602052	\$76.95
Instructor's Resource CD (Win/Mac)	9781619602045	\$249.95
EXAMVIEW® Assessment Suite (Win/Mac)	9781619602069	\$238.95
Instructor's Presentation for PowerPoint: (Win/Mac)		
Individual License	9781619602076	\$187.95
Site License	9781619602083	\$561.95

(Prices subject to change without notice.)

AVAILABLE SUMMER



PRINTED
TEXT



ONLINE
TEXT



COMPANION
WEBSITE

NEW FOR THIS EDITION

- Sustainable design coverage
- End-of-chapter features address problem solving, ADDA certification exam preparation, and STEM topics
- New illustrations throughout the text

CONTENTS

Architectural Drafting Fundamentals

1. Architectural Styles
2. Basic House Designs
3. Preparing for a Career in Architecture
4. Drawing Instruments and Technical Sketching
5. Introduction to Computer-Aided Drafting and Design

Architectural Planning

6. Primary Residential Design Considerations
7. Planning the Living Area
8. Planning the Sleeping Area
9. Planning the Service Area
10. Designing for Health and Safety
11. Designing for Sustainability
12. Planning for Remodeling and Renovation

Plan Development

13. Floor Plans
14. The Foundation Plan
15. Plot Plans
16. Roof Designs

Supplemental Details and Schedules

17. Footings, Foundations, and Concrete
18. Sill and Floor Construction
19. Wall and Ceiling Construction
20. Doors and Windows
21. Building Sections
22. Elevations
23. Stair Details
24. Fireplace, Chimney, and Stove Details

Presentation Methods

25. Perspective Drawings
26. Presentation Drawings
27. Architectural Models

Electrical, Plumbing, and Climate Control

28. Residential Electrical
29. Electrical Plans
30. Residential Plumbing
31. Plumbing Plans
32. Residential Climate Control
33. Climate Control Plans

Specifications and Estimating Costs

34. Material Specifications
35. Estimating Building Costs

ARCHITECTURE

RESIDENTIAL DRAFTING AND DESIGN

by Clois E. Kicklighter and W. Scott Thomas,
©2014, 11th Edition

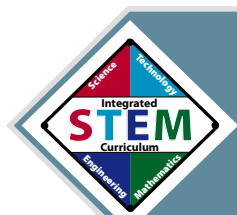
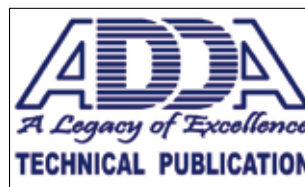
Suggested Grade Levels 9–12

Architecture: Residential Drafting and Design provides comprehensive instruction for preparing architectural working drawings using traditional and computer-based methods. The text also serves as a reference for design and construction principles and methods. Its highly effective format organizes content around the design-building process, making the text easy to understand and appealing to students.

The new edition of this text has been extensively revised and features new chapters covering sustainable design and building sections. New chapter features include Green Architecture, Employability, Problem Solving Case Study, and Curricular Connections to expand on chapter topics, explain current trends, and promote student interest. Each chapter contains sample test questions for the American Design Drafting Association (ADDA) Drafter Certification Test to help students work toward earning professional certification.

The text has been enhanced with a new, colorful design and includes many new detailed illustrations to explain topics. Each chapter includes objectives, key terms, Internet resources, review questions, and suggested activities for individuals or small groups. Many of the chapter-end activities are designed to give students experience working with computer-aided drafting and design (CADD) systems.

www.g-w.com/architecture-2014



Architecture: Residential Drafting and Design Supports STEM

- Curricular Connections features
- Basic math and geometry principles
- Measurement and precision
- Estimating building cost
- Problem solving

(Prices subject to change without notice.)

Architecture: Residential Drafting and Design	ISBN	SCHOOL PRICE
Hardcover Text	9781619601840	\$102.95
Online Text, 6 yr Classroom Subscription (min. qty. 15)	9781619601871	\$102.95
Bundle, Text + Online 6 yr Classroom Subscription (min. qty. 15)	9781619601888	\$133.95
Workbook	9781619601895	\$26.95
Instructor's Annotated Workbook	9781619601918	\$76.95
Instructor's Resource CD	9781619601901	\$249.95
EXAMVIEW® Assessment Suite (Win/Mac)	9781619601925	\$238.95
Instructor's Presentations for PowerPoint: (Win/Mac)		
Individual License	9781619601932	\$249.95
Site License	9781619601949	\$748.95
Companion Website: www.g-wlearning.com/CAD		FREE



Green Architecture

Containerized Housing

One efficient type of green housing is the *container house*, which is made from a shipping container, also known as an *Intermodal Steel Building Unit (ISBU)*. See **Figure A**. ISBU construction is a good option for affordable housing, emergency housing, and storage. The trend started from a “grass roots” movement to re-use salvaged or surplus metal shipping containers from land and sea transportation of goods. There is no longer a surplus, however, and



Figure A. These student apartments were made from recycled steel shipping containers. (Hansenn/Shutterstock.com)

Green Architecture features address sustainable design methods and practices focused on building environmentally friendly structures.



Employability

Keeping Up with Architectural Trends

The field of architecture is constantly changing. New materials become available, and new processes are established to increase quality or

Employability features cover key skills needed to prepare for a career and achieve success in the workplace.



Problem Solving

Case Study

A new client has come to your architectural office in Denver, Colorado, to discuss ideas for her family’s new residence. She is moving to Colorado from a rural area in southern Georgia to take a new job. She has not yet decided whether to build a home or buy an existing one. The client is about 35 years old and has three children, ages 9, 5, and 2.

When you ask about her family’s priorities,

Problem Solving Case Study features address working with clients and navigating challenges on the job.



Curricular Connections

1. **Social Science.** Historically, culture has played an important part in architectural design. For example, one type of ancient Chinese architecture reflects the cultural belief that people are an integral part of nature. Its distinguishing features include simplicity and honesty in design. Research cultural influences on each of the following types of architecture.
 - Ancient Greek architecture

Curricular Connections focus on applications addressing math, science, engineering, technology, social science, and language arts topics.

ADDA Certification Prep

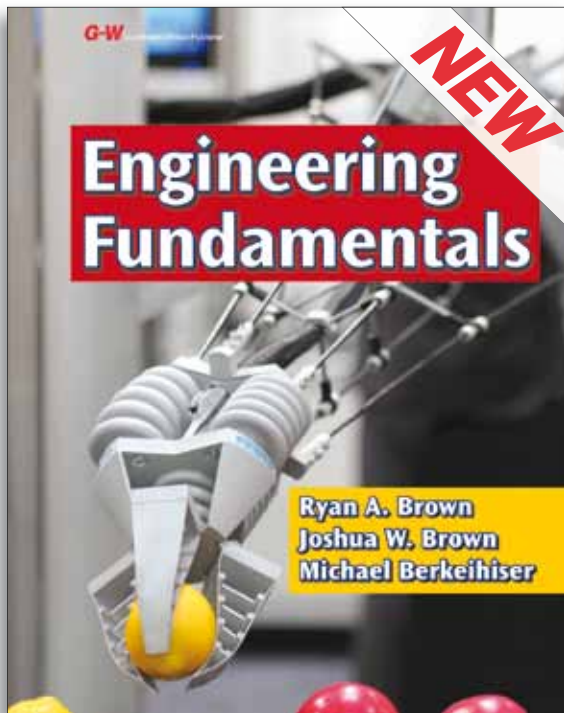
The following questions are presented in the style used in the *American Design Drafting Association (ADDA) Drafter Certification Test*. Write your answers on a separate sheet of paper.

1. Which of the following are traditional architectural styles?
 - A. Adam
 - B. Contemporary
 - C. Spanish Eclectic
 - D. Saltbox

ADDA Certification Prep questions help students prepare for taking an *ADDA Drafter Certification Test*.



AVAILABLE SUMMER



ENGINEERING FUNDAMENTALS

by Ryan A. Brown, Joshua W. Brown, and Michael Berkeihiser, ©2014

Suggested Grade Levels 9–12

Engineering Fundamentals is designed to help students understand the definition and basic concepts of engineering, as well as to introduce them to some of the most common fields.

This text first defines engineering, explaining how engineering steps and ideas relate to real-world examples. Students are also introduced to the idea that engineered solutions are the results of specific steps, rather than being happened upon by chance. To help students understand the importance of the engineering design process, multiple chapters then discuss details of the various steps. Content discussing the steps of the design process covers such topics as identifying problems, brainstorming, and sketching solutions.

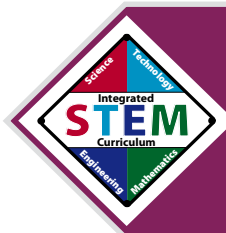
Several chapters showcase some of the more prevalent disciplines of engineering, explaining the principles of the fields as well as the theory and major concepts associated with each. Career information is also given throughout these chapters. One chapter in the text is dedicated to discussing the engineering profession and analyzing its impacts on society.

Several features are included to help students relate engineering to other academic areas. Other basic concepts, such as math, are also highlighted to help students better understand chapter content.

www.g-w.com/engineering-fundamentals-2014

HIGHLIGHTS

- Introduction to major engineering topics
- Focus on engineering design, disciplines, and concepts
- Features related chapter concepts to other areas



Engineering Fundamentals Supports STEM

- Engineering defined
- Engineering-related science
- Math features related to engineering
- Engineering design process
- Problem solving

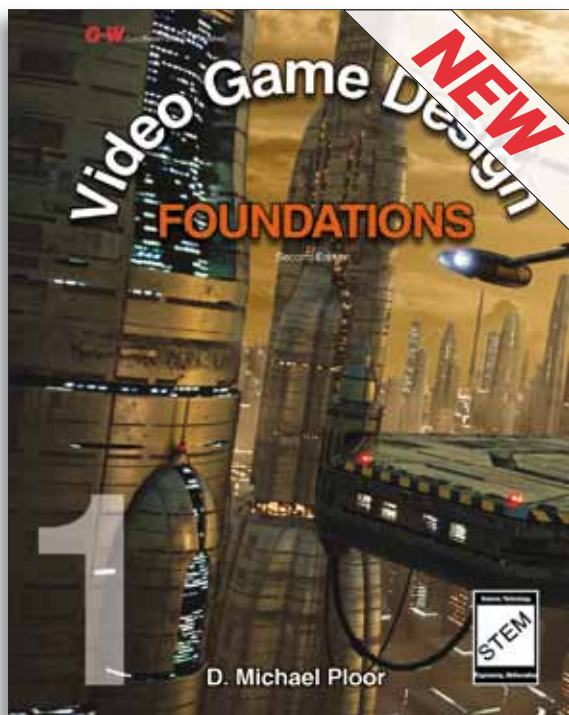
(Prices subject to change without notice.)



CONTENTS

- | | |
|---|---|
| 1. What Is Engineering? | 10. Mechanical Engineering |
| 2. Engineering Design | 11. Biological and Biomedical Engineering |
| 3. Identifying Engineering Problems | 12. Computer Engineering |
| 4. Researching Designs | 13. Aerospace Engineering |
| 5. Designing Solutions | 14. Manufacturing Engineering |
| 6. Modeling, Testing, and Final Outputs | 15. Chemical Engineering |
| 7. Electrical Engineering | 16. Engineering as a Profession |
| 8. Civil Engineering | |
| 9. Materials Engineering | |

Engineering Fundamentals	ISBN	SCHOOL PRICE
Hardcover Text	9781619602205	\$89.95
Online Text, 6 yr Classroom Subscription (min. qty. 15)	9781619602236	\$89.95
Bundle, Text + Online 6 yr Classroom Subscription (min. qty. 15)	9781619602243	\$120.95
Workbook	9781619602250	\$23.95
Instructor's Annotated Workbook	9781619602274	\$76.95
Instructor's Resource CD (Win/Mac)	9781619602267	\$249.95
EXAMVIEW® Assessment Suite (Win/Mac)	9781619602281	\$238.95
Instructor's Presentations for PowerPoint: (Win/Mac)		
Individual License	9781619602298	\$230.95
Site License	9781619602304	\$576.95
Companion Website: www.g-wlearning.com/technologyeducation		FREE
Mobile Companion Website: www.m.g-wlearning.com		FREE



VIDEO GAME DESIGN FOUNDATIONS

by D. Michael Floor, ©2014, 2nd Edition

Suggested Grade Levels 8–11

Video Game Design Foundations provides students a complete overview of video game design in a first-year curriculum. The teaching package provides curriculum “in a box”—all of the resources needed to teach a video game design class are included. This turnkey curriculum is a complete guide to immersion in the field, from beginning each game build project through completion, integration, and marketing.

- Fully functional game engine free to schools.
- Each chapter includes STEM, portfolio, teamwork, Common Core, and event prep activities.
- Aligns with the International Game Developers Association (IGDA)–recommended educational framework.
- Detailed scope and sequence chart outlines each day’s activities for student and instructor.
- Full-year curriculum.
- First course in sequence.

Video Game Design Foundations is specifically designed for a high school first-year video game design class. Content and game builds are age appropriate, and learning is focused on the skills students need to prepare for college and career.

www.g-w.com/video-game-design-foundations-2014



PRINTED TEXT



ONLINE TEXT



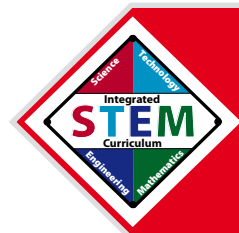
COMPANION WEBSITE



MOBILE WEBSITE



Now **FREE** to Schools!



Video Game Design Foundations Supports STEM

- Problem solving
- Design process
- Basic math principles
- Application of computers
- Sociological research

(Prices subject to change without notice.)

NEW TO THIS EDITION

- QR codes for chapter pretests and posttests*
- Portfolio activities
- Common Core activities

*Note: data rates may apply; features accessed by QR codes or on the mobile site can also be accessed without a smartphone via the G-W Learning companion website.

CONTENTS

- | | |
|---|---|
| 1. My Role on the Team | 6. Game Systems, Personal Computers, and Hardware |
| 2. Computerized Entertainment and Classification | 7. Play and Game Culture |
| 3. Evolution of the Game | 8. Reverse Engineering and Professional Reviews |
| 4. Perspective, Scene Design, and Basic Animation | 9. Large-Scale Design Process |
| 5. Collision Theory and Logic | 10. Global Economy and Supply Chain |

Video Game Design Foundations	ISBN	SCHOOL PRICE
Hardcover Text	9781619602786	\$76.95
Online Text, 6 yr Classroom Subscription (min. qty. 15)	9781619602816	\$76.95
Bundle, Text + Online 6 yr Classroom Subscription (min. qty. 15)	9781619602830	\$107.95
Software Design Guide	9781619602823	\$25.95
Bundle, Text + Software Design Guide	9781619602847	\$97.95
The Games Factory 2 Software, Access Key Code	9781619604001	\$0.40
Instructor's Resource CD (Win/Mac)	9781619602861	\$249.95
EXAMVIEW® Assessment Suite (Win/Mac)	9781619602878	\$238.95
Instructor's Presentations for PowerPoint: (Win/Mac)		
Individual License	9781619602885	\$230.95
Site License	9781619602892	\$576.95
Companion Website: www.g-wlearning.com/videogamedesign		FREE
Mobile Companion Website: www.m.g-wlearning.com		FREE

VIDEO GAME DESIGN COMPOSITION

by D. Michael Floor, ©2014

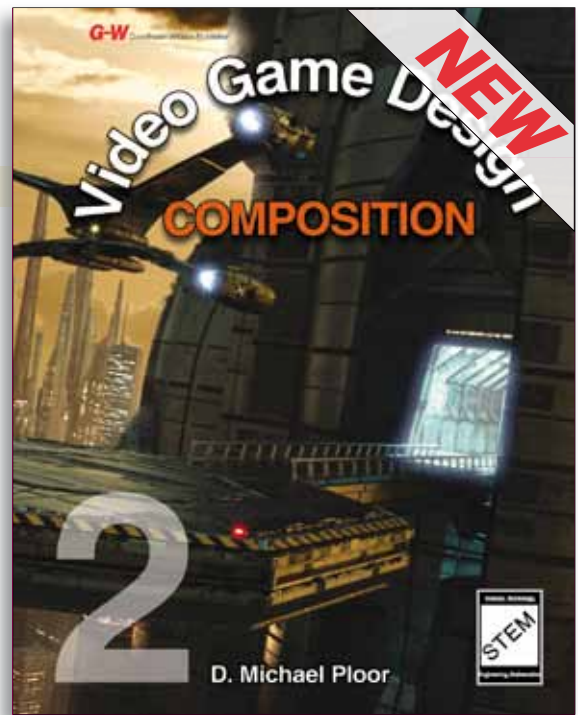
Suggested Grade Levels 9–12

Video Game Design Composition provides students specific coverage of video game design in a second-year curriculum. The teaching package provides curriculum “in a box”—all of the resources needed to teach a video game design class are included. This turnkey curriculum is a complete guide to immersion in the field, from beginning each game build project through completion, integration, and marketing.

- Full-year curriculum.
- Integrated second-year curriculum: theory and application.
- Each chapter includes STEM, portfolio, teamwork, Common Core, and event prep activities.
- Fully functional game engine provided in the software design guide.
- Aligns with the International Game Developers Association (IGDA)—recommended educational framework.
- Detailed scope and sequence chart outlines each day’s activities for student and instructor.

Video Game Design Composition is specifically designed for a high school second-year video game design class. Content and game builds are age appropriate, and learning is focused on the skills students need to prepare for college and career.

www.g-w.com/video-game-design-composition-2014



AVAILABLE SPRING



PRINTED TEXT



ONLINE TEXT



COMPANION WEBSITE



MOBILE WEBSITE



Chapter opens outline the objectives and provide pretests.



HIGHLIGHTS

- Drills down to specific coverage
- Second course in sequence
- QR codes for chapter pretests and posttests*

*Note: data rates may apply; features accessed by QR codes or on the mobile site can also be accessed without a smartphone via the G-W Learning companion website.

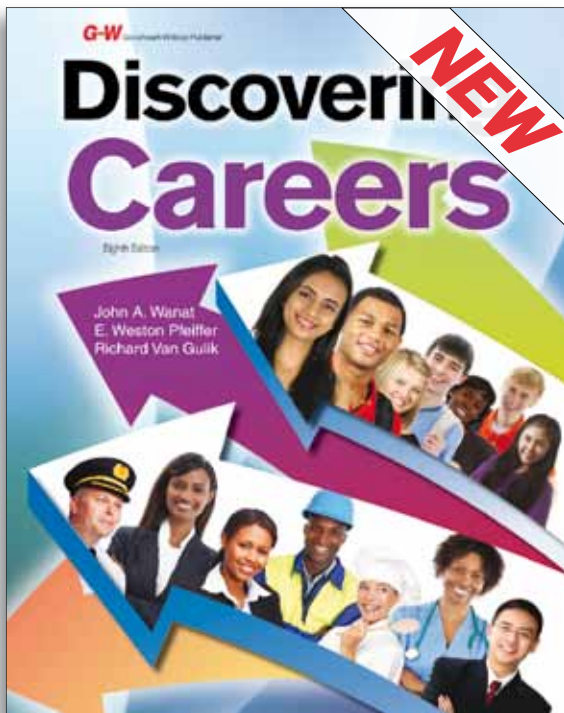


(Prices subject to change without notice.)

Video Game Design Composition	ISBN	SCHOOL PRICE
Hardcover Text	9781605257693	\$76.95
Online Text, 6 yr Classroom Subscription (min. qty. 15)	9781619602922	\$76.95
Bundle, Text + Online 6 yr Classroom Subscription (min. qty. 15)	9781619602939	\$107.95
Software Design Guide	9781605257719	In Work
Bundle, Text + Software Design Guide	9781619602946	In Work
Instructor's Resource CD (Win/Mac)	9781605257709	\$249.95
EXAMVIEW® Assessment Suite (Win/Mac)	9781605257730	\$238.95
Instructor's Presentations for PowerPoint: (Win/Mac)		
Individual License	9781619602953	\$230.95
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Mobile Companion Website: www.m.g-wlearning.com		FREE

CONTENTS

- | | |
|--------------------------|---------------------------------------|
| 1. Design Composition | 8. Art Composition |
| 2. Character Composition | 9. Sound FX and Animation Composition |
| 3. Story Composition | 10. Programming Composition |
| 4. Interface Composition | 11. Simulation Composition |
| 5. Immersion Composition | |
| 6. Strategy Composition | |
| 7. Puzzle Composition | |



DISCOVERING CAREERS

by John A. Wanat, E. Weston Pfeiffer,
and Richard Van Gulik, ©2014, 8th Edition

Suggested Grade Levels 6–9

Discovering Careers is designed to introduce students to the skills they will need to succeed in school, on the job, and on their own. By studying this text, students will be able to explore personal goals, interests, and aptitudes that will influence future life decisions. Through exploration of the career clusters and pathways, students will learn about the training and skills required to pursue their post-high school plans. This text helps students take their first steps toward making the most of their education while preparing for the future.

- An emphasis is placed on planning a personal program of future study that students can carry into high school and beyond.
- Career clusters are featured to provide awareness of the multitude of career choices available after high school.
- Cross-curricular opportunities and connections are fostered throughout the text to provide realistic applications.

www.g-w.com/discovering-careers-2014



PRINTED
TEXT



ONLINE
TEXT



COMPANION
WEBSITE



MOBILE
WEBSITE

NEW FOR THIS EDITION

- College and Career Readiness Portfolio activities
- Common Core activities
- Free G-W Learning mobile site*

*Note: data rates may apply; features accessed by QR codes or on the mobile site can also be accessed without a smartphone via the G-W Learning companion website.



**College
and Career
Readiness**

The College and Career Readiness icon indicates student activities aligned to specific Common Core State Standards. These activities are designed to help students use higher-level thinking skills to engage with the content.



(Prices subject to change without notice.)

CONTENTS

Unit 1 Exploring the World of Careers

1. Importance of Careers
2. Changing Workplace
3. Law in the Workplace

Unit 2 Exploring Career Options

4. Learning About Careers
5. Business of Your Own

Unit 3 Making Plans for Career Success

6. Learning About Yourself
7. Making Decisions
8. Options for Education and Training
9. Making a Career Plan

Unit 4 Acquiring Workplace Skills

10. Job Search Skills
11. Interviewing Skills
12. Good Employee Skills
13. Being a Team Player
14. Keeping Safety First
15. Handling Changes in Job Status

Unit 5 Developing Personal Skills for Job Success

16. Basic Skills for Job Success
17. Time Management and Study Skills
18. Communication Skills
19. Your Appearance
20. Good Health and Job Success
21. Developing Leadership Skills

Unit 6 Managing Your Money

22. Paychecks and Taxes
23. Budgets
24. Checking Accounts
25. Savings
26. Credit
27. Insurance

Unit 7 Growing Toward Independence

28. A Place to Live
29. Transportation
30. Being a Responsible Citizen

Discovering Careers	ISBN	SCHOOL PRICE
Harcover Text	9781619603165	\$79.95
Online Text, 6 yr Classroom Subscription (min. qty. 15)	9781619603196	\$79.95
Bundle, Text + Online 6 yr Classroom Subscription (min. qty. 15)	9781619603288	\$110.95
Student Workbook	9781619603219	\$21.95
Teacher's Edition	9781619603202	\$101.95
Teacher's Annotated Workbook	9781619603226	\$48.95
Teacher's Resource Guide	9781619603233	\$99.95
Teacher's Resource CD (Win/ Mac)	9781619603240	\$249.95
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Mobile Companion Website: www.m.g-wlearning.com		FREE

SCHOOL TO CAREER

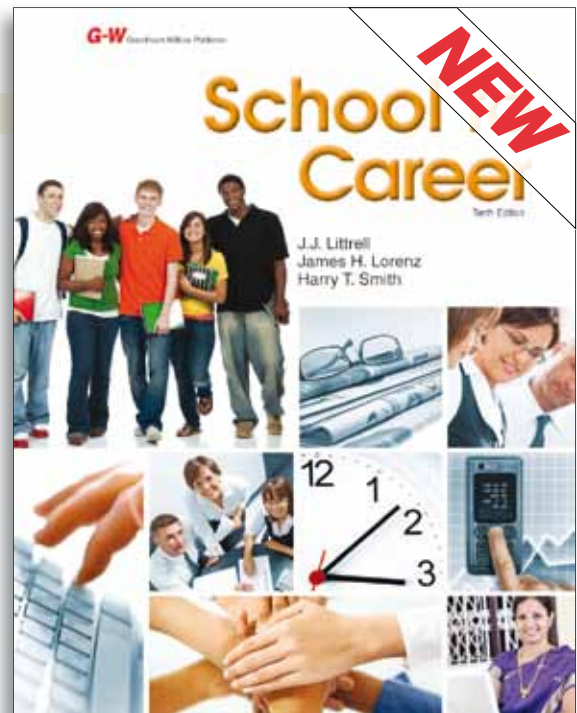
by J. J. Littrell, James H. Lorenz,
and Harry T. Smith, ©2014, 10th Edition

Suggested Grade Levels 9–12

The 10th edition of **School to Career** builds on what made the previous editions so successful. Students explore careers using the career clusters and pathways framework; understand workplace expectations; develop career-readiness skills; and plan for life beyond graduation. **School to Career** provides students with the “how to” needed for preparing a résumé, searching for a job, taking on a work-based learning experience, exceeding employer expectations, managing personal finances, and funding postsecondary training and education. Case studies are used to examine challenges students may encounter in the world of work.

- Communication, math, and technology skills are developed through activities and useful examples.
- Each chapter provides insights on ethics and on using natural resources wisely.
- Self-assessment opportunities help focus attention on the acquisition of key concepts.

www.g-w.com/school-to-career-2014



(Prices subject to change without notice.)



NEW FOR THIS EDITION

- College and Career Readiness Portfolio activities
- Common Core activities
- Picture Success profiles of young adults in Career and Technical Student Organizations

School to Career	ISBN	SCHOOL PRICE
Hardcover Text	9781619603042	\$86.94
Online Text, 6 yr Classroom Subscription (min. qty. 15)	9781619603073	\$86.94
Bundle, Text + Online 6 yr Classroom Subscription (min. qty. 15)	9781619603295	\$117.95
Student Workbook	9781619603097	\$21.95
Instructor's Edition	9781619603080	\$105.95
Instructor's Annotated Workbook	9781619603103	\$48.95
Instructor's Resource Guide	9781619603110	\$99.95
Instructor's Resource CD (Win/ Mac)	9781619603127	\$249.95
EXAMVIEW® Assessment Suite (Win/Mac)	9781619603134	\$238.95
Instructor's Presentations for PowerPoint: (Win/Mac)		
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Site License	9781619603158	\$576.95
Companion Website: www.g-wlearning.com/careereducation		FREE
Mobile Companion Website: www.m.g-wlearning.com		FREE

CONTENTS

Unit 1 Career Exploration	Unit 4 Career Planning
1. Making the Transition from School to Career	15. Learning About Yourself
2. Understanding Work-Based Learning	16. Researching Careers
3. What Your Employer Expects	17. Making Career Decisions
Unit 2 Job Hunt	Unit 5 Job Satisfaction
4. Applying for Jobs	18. Succeeding on the Job
5. Taking Preemployment Tests	19. Diversity in the Workplace
6. Interviewing for Jobs	20. Succeeding in Our Economic System
Unit 3 Skills for Success	21. Entrepreneurship: A Business of Your Own
7. Teamwork and Problem-Solving Skills	Unit 6 Managing Your Income
8. Communication on the Job	22. Understanding Income Taxes
9. Math in the Workplace	23. Managing Spending
10. Using Technology	24. Using Credit
11. Looking Good on the Job	25. Banking, Saving, and Investing
12. Safety on the Job	26. Insurance
13. Leadership and Group Dynamics	27. Managing Family, Work, and Citizenship Roles
14. Participating in Meetings	