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### Table of Contents

**Unit 1: Preparing to Build**

#### Chapter 1: The Construction Industry

- Section 1.1 Careers in Construction .................................................... 6
- Section 1.2 Finding a Job ................................................................. 13

#### Chapter 2: Building Codes & Planning

- Section 2.1 Codes & Zoning ........................................................... 34
- Estimating and Planning: Construction Costs ....................................... 39
- Section 2.2 Architectural Drawing .................................................. 41
- Section 2.3 Reading Architectural Plans ........................................... 49
- Section 2.4 Estimating & Scheduling ............................................. 59

#### Chapter 3: Construction Safety & Health

- Section 3.1 Job Site Safety ............................................................ 78
- Section 3.2 Personal Safety & Health ............................................. 83
- Step-by-Step Application: Determining the Size of Extension Cord .... 89
- Estimating and Planning: Clothing Costs ........................................ 98

**Unit 1 Hands-On Math Project: Green Construction in the Community** 102
UNIT 3 BUILDING FOUNDATIONS .......................... 214

CHAPTER 8 Concrete as a Building Material .......................................................... 216
Section 8.1 Concrete Basics .................................................................................. 218
Section 8.2 Working with Concrete ...................................................................... 223

CHAPTER 9 Locating the House on the Building Site ......................................... 234
Section 9.1 Basic Site Layout ............................................................................... 236
Step-by-Step Application: Leveling a Transit Head ............................................ 239
Step-by-Step Application: Staking Out the Site .................................................. 242
Section 9.2 Establishing Lines & Grades .............................................................. 243
Step-by-Step Application: Setting Up Batter Boards ........................................... 244
Estimating and Planning: Excavation Volume ..................................................... 250

CHAPTER 10 Foundation Walls ............................................................................ 254
Section 10.1 Footings .......................................................................................... 256
Estimating and Planning: Reinforcing Bar for Footings ...................................... 259
Estimating and Planning: Concrete and Labor for Footings ............................... 261
Section 10.2 Concrete Foundation Walls ................................................................ 264
Estimating and Planning: Concrete Foundation Walls ......................................... 272
Section 10.3 Concrete Block Walls ...................................................................... 275
Estimating and Planning: Block Walls ................................................................. 284

CHAPTER 11 Concrete Flatwork .......................................................................... 292
Section 11.1 Foundation Slabs ............................................................................. 294
Estimating and Planning: Concrete for Flatwork ................................................. 303
Section 11.2 Finishing Flatwork .......................................................................... 304

Unit 3 Hands-On Math Project: Checking for Square ......................................... 312
UNIT 4 WOOD FRAME CONSTRUCTION .......... 314

CHAPTER 12 Wood as a Building Material ..........................................................316
Section 12.1 Wood Basics ................................................................................... 318
Section 12.2 Protecting Wood ........................................................................... 328

CHAPTER 13 Engineered Wood ..........................................................................336
Section 13.1 Plywood ......................................................................................... 338
Section 13.2 Composite Panels, Laminated Veneer, & I-Joists ......................... 347
Section 13.3 Other Types of Engineered Lumber ............................................... 360

CHAPTER 14 Structural Systems .......................................................................368
Section 14.1 Framing Systems & Structural Design ............................................ 370
Step-by-Step Application: Reading a Span Table ............................................... 383
Section 14.2 Nails & Connectors ....................................................................... 384

CHAPTER 15 Floor Framing .............................................................................394
Section 15.1 Floor Framing Basics ..................................................................... 396
Section 15.2 Floor Framing with Joists & Girders .............................................. 402
Step-by-Step Application: Installing Sill Plates ............................................... 404
Step-by-Step Application: Installing Lumber Joists .......................................... 408
Step-by-Step Application: Framing an Opening ................................................ 415
Estimating and Planning: Floor Framing ............................................................ 419
Section 15.3 Subfloors ....................................................................................... 421
Step-by-Step Application: Laying a Panel Subfloor ......................................... 423

CHAPTER 16 Wall Framing & Sheathing .......................................................428
Section 16.1 Wall-Framing Materials ................................................................. 430
Step-by-Step Application: Framing a Wall ......................................................... 433
Section 16.2 Wall Layout .................................................................................. 438
Section 16.3 Assembling & Erecting Walls ......................................................... 445
Step-by-Step Application: Making a Story Pole ............................................... 446
Step-by-Step Application: Assembling and Erecting Interior Walls ................. 454
Section 16.4 Special Framing Details ................................................................. 455
Step-by-Step Application: Blocking for Plumbing Fixtures ............................ 458
### Basic Roof Framing

Section 17.1 Planning a Roof .................................................................466
Section 17.2 Roof Framing with Common Rafters .........................................474
Section 17.3 Ceiling Framing ........................................................................486
Step-by-Step Application: Installing Ceiling Joists ......................................489
Section 17.4 Roof Trusses ...........................................................................492

### Hip, Valley, & Jack Rafters

Section 18.1 Hip Rafters ............................................................................504
Step-by-Step Application: Making Hip Rafter Side Cuts ..........................511
Step-by-Step Application: Determining the Overhang ...............................513
Section 18.2 Valley Rafters .........................................................................516
Section 18.3 Jack Rafters ...........................................................................522
Step-by-Step Application: Cutting a Jack Rafter Pattern .........................525

### Roof Assembly & Sheathing

Section 19.1 Ridges ..................................................................................530
Section 19.2 Roof Assembly .......................................................................534
Estimating and Planning: Roofing Framing Materials .................................540
Section 19.3 Special Framing Details ..........................................................542
Step-by-Step Application: Figuring the Common Difference Using a Framing Square ................................................................546
Section 19.4 Rakes & Cornices .................................................................551
Step-by-Step Application: Building a Box Cornice ....................................556
Section 19.5 Roof Sheathing .................................................................562
Step-by-Step Application: Installing Panel Sheathing ...............................564
Estimating and Planning: Sheathing Panels ................................................566

### Hands-On Math Project: Construction Calculations

Unit 4 Hands-On Math Project: Construction Calculations ..........................570

### Completing the Structure

### Windows & Skylights

Section 20.1 Types of Windows & Skylights ...............................................576
Section 20.2 Installing Windows & Skylights ............................................585
Step-by-Step Application: Installing a Flanged Window ............................589
### Table of Contents

**CHAPTER 21 Residential Doors** ................................................................. 594

- Section 21.1 Door Basics ........................................................................... 596
- Section 21.2 Exterior Doors & Frames .......................................................... 598
- Step-by-Step Application: Installing a Bored-Hole Lockset .......................... 612
- Section 21.3 Interior Doors & Frames ............................................................ 615

**CHAPTER 22 Roofing & Gutters** ............................................................... 624

- Section 22.1 Roofing Basics ....................................................................... 626
- Section 22.2 Strip Shingles ......................................................................... 635
- Estimating and Planning: Strip Shingles and Underlayment .......................... 643
- Section 22.3 Wood Shingles & Shakes ......................................................... 645
- Section 22.4 Gutter Systems ....................................................................... 651

**CHAPTER 23 Siding** .................................................................................. 656

- Section 23.1 Siding Basics .......................................................................... 658
- Section 23.2 Wood Bevel Siding ................................................................. 663
- Step-by-Step Application: Installing Plain-Bevel Siding ............................... 666
- Estimating and Planning: Beveled Siding Materials ...................................... 668
- Section 23.3 Wood Shingle & Plywood Siding ............................................. 670
- Section 23.4 Other Types of Siding .............................................................. 674
- Step-by-Step Application: Installing Vinyl Siding ....................................... 677

**CHAPTER 24 Brick and Masonry Siding** ..................................................... 686

- Section 24.1 Tools & Materials ................................................................. 688
- Section 24.2 Building Brick-Veneer Walls .................................................. 696
- Step-by-Step Application: Laying a Brick ................................................... 700
- Section 24.3 Fireplaces & Chimneys ............................................................. 704
- Unit 5 Hands-On Math Project: Assembling Resources .............................. 718

**FINISH CARPENTRY** .................................... 720

**CHAPTER 25 Stairways** ............................................................................. 722

- Section 25.1 Stair Basics ............................................................................. 724
- Section 25.2 Stair Construction ................................................................. 732
- Step-by-Step Application: Calculating Unit Rise and Unit Run .................... 734
- Estimating and Planning: Stairway Materials and Labor ............................ 742
- Step-by-Step Application: Installing a Cleat-Stringer Stairway ................... 743
# Table of Contents

## CHAPTER 26 Molding & Trim ........................................................................................................748
- **Section 26.1** Molding & Trim Basics ..........................................................................................750
- **Section 26.2** Interior Door & Window Details ...........................................................................758
- **Section 26.3** Baseboard, Ceiling, & Other Molding ...............................................................764
- **Step-by-Step Application: Scribing a Joint** .............................................................................766
- **Step-by-Step Application: Cutting Crown Molding** ..............................................................772
- **Estimating and Planning: Molding and Trim** ...........................................................................774

## CHAPTER 27 Cabinets & Countertops .....................................................................................778
- **Section 27.1** Planning for Cabinets .........................................................................................780
- **Estimating and Planning: Cabinetry** .......................................................................................786
- **Section 27.2** Choosing & Installing Cabinets ..........................................................................788
- **Section 27.3** Countertops .........................................................................................................798

## CHAPTER 28 Wall Paneling .....................................................................................................806
- **Section 28.1** Sheet Paneling .....................................................................................................808
- **Step-by-Step Application: Positioning the First Panel** .........................................................812
- **Estimating and Planning: Sheet Paneling** ...............................................................................815
- **Section 28.2** Board Paneling ....................................................................................................816
- **Estimating and Planning: Board Paneling** .............................................................................822

### Unit 6 Hands-On Math Project: Presenting a Professional Estimate ....................................826

## UNIT 7 CONSTRUCTION SPECIALTIES .......................... 828

## CHAPTER 29 Steel Framing Basics .........................................................................................830
- **Section 29.1** Steel as Building Material ..................................................................................832
- **Section 29.2** Steel Framing Tools ............................................................................................836
- **Section 29.3** Steel Framing Methods .......................................................................................844
- **Step-by-Step Application: Wall Stud Assembly** ....................................................................855

## CHAPTER 30 Mechanicals .....................................................................................................866
- **Section 30.1** The Plumbing System .........................................................................................868
- **Step-by-Step Application: Soldering Copper Pipe** .................................................................874
- **Section 30.2** The Electrical System ..........................................................................................876
- **Section 30.3** HVAC Systems ...................................................................................................882
# Table of Contents

## Chapter 31: Thermal & Acoustical Insulation

- Section 31.1 Thermal Insulation ........................................ 894
- Estimating and Planning: Batt Insulation ......................... 907
- Section 31.2 Acoustical Insulation .................................. 908

## Chapter 32: Wall & Ceiling Surfaces

- Section 32.1 Drywall ........................................................................................................ 916
- Step-by-Step Application: Finishing Drywall .................. 931
- Section 32.2 Plaster ............................................................................................................. 933
- Estimating and Planning: Gypsum Lath, Nails, and Labor .... 936
- Section 32.3 Suspended & Acoustical Ceilings .................. 937
- Step-by-Step Application: Installing a Suspended Ceiling .... 938

## Chapter 33: Exterior & Interior Paint

- Section 33.1 Finishing Basics ............................................. 946
- Section 33.2 Exterior Painting ............................................. 950
- Step-by-Step Application: Basic Painting Technique ........ 954
- Estimating and Planning: Exterior Painting ..................... 956
- Section 33.3 Interior Painting ............................................. 960
- Estimating and Planning: Interior Painting ...................... 964

## Chapter 34: Finish Flooring

- Section 34.1 Wood Flooring Basics .................................. 972
- Section 34.2 Installing Hardwood Flooring ...................... 977
- Step-by-Step Application: Installing Strip Flooring over Sleepers .. 983
- Estimating and Planning: Strip Flooring Materials and Labor .... 987
- Section 34.3 Vinyl, Tile, & Carpet Flooring ...................... 988

## Chapter 35: Decks & Porches

- Section 35.1 Deck Materials ............................................. 1002
- Section 35.2 Planning & Construction .................. 1008
- Step-by-Step Application: Application: Plumbing a Post ...... 1013

## Unit 7: Hands-On Math Project: Professional Green Painting

- READY REFERENCE APPENDIX ........................................ 1024
- MATH SKILLS HANDBOOK ............................................... 1032
- GLOSSARIES ................................................................. 1054
- INDEX ................................................................. 1086
- CREDITS ......................................................... 1103
Preparing to Build

In this Unit:
Chapter 1 The Construction Industry
Chapter 2 Codes and Planning
Chapter 3 Construction Safety and Health

Profile
A general contractor coordinates and supervises the construction process of a structure from the original idea to the completion of construction. The contractor is responsible for keeping the project on time and within budget.

Academic Skills and Abilities

Career Path

Go to glencoe.com for this book’s OLC to find interviews with different types of Construction in the Community.

After completing this unit, you will research an organization offering community development in your area. You will also prepare cost estimates and schedules for a project designed for the organization.

Project Checklist

As you read the chapters in this unit, use this checklist to prepare for the unit project.

1. Describe the scheduling responsibilities of a general contractor.
2. Identify the different methods for estimating materials and cost.
3. Think about the communication skills an entrepreneur will need to be successful.
4. Go to glencoe.com for this book’s OLC. Find the WebQuest activity for Unit 1 called “Construction in the Community.”

General Contractor
• mathematics
• interpersonal skills
• presentation skills
• general business management skills
• verbal and written communication skills
• organizing and planning skills
• on-the-job training
• apprenticeship programs
• state certification
• community college courses
• bachelor’s degree in construction science
• bachelor’s degree in construction management

Construction Careers
This feature introduces you to a career opportunity in construction. Learn the typical profile for this career, including the academic skills, professional training, and experience you will need to succeed.

Unit Photo
Units open with a photo to visually illustrate unit content. The caption is followed by a question designed to help you start thinking about what you will read in the following chapters.

Hands-On Math Project Preview
This activity will introduce you to the Hands-On Project that concludes each unit. Use the Project Checklist to help you keep track of the skills and concepts you will need to successfully complete the project.
Unit Close – The Hands-On Math Project

Each unit concludes with a hands-on project that explores an important aspect of carpentry. To complete each project, you will evaluate and plan your resources, conduct research, complete the project steps as outlined, and present your findings to your teacher or to your class. These projects show you what it is like to be an entrepreneur, organizing a task from start to finish.

Build It Green  Challenge your environmental awareness by investigating ways to use eco-friendly materials and approaches to building.

Presentation Checklist  Use this checklist to make sure you have completed the project accurately and have met your objectives.

Math Standards  Review these important math standards before you tackle the math behind the project.

McGraw-Hill Construction Connection  Learn more about your project by reading a related article from one of the top construction industry information resources in the world, McGraw-Hill Construction.
Chapters—Set Your Learning Goals

The chapters of *Carpentry & Building Construction* are organized around the topics and processes that help you discover, learn about, and apply the essential skills of construction. The chapters are divided logically into sections and offer many learning strategies that will help you get the most out of your studies.

**Chapter Objectives** These objectives will help you preview what you will learn in the chapter.

**Reading Guide** Each chapter begins with a reading guide to give you a preview of content and academic vocabulary as well as the industry and academic standards you will cover.

**Before You Read** A pre-reading question or statement will help you connect with what you read in the chapter.

**Academic and Industry Standards** *Carpentry & Building Construction* helps you gain proficiency in English Language Arts, Mathematics, and Science. The chapter reading guides list the academic standards that the chapter will cover. Industry standards let you know which important national standards are covered in the chapter.

**Graphic Organizer** A graphic organizer gives you a visual tool to help you organize and remember new content.
In-Chapter Features—Apply Your Carpentry Skills

The features in each chapter help you check your understanding of what you are reading and extend your knowledge of carpentry concepts.

Estimating and Planning  Practice using formulas to prepare material and labor estimates using this feature.

Step-by-Step Application  Follow the step-by-step instructions to complete specific carpentry and construction tasks.

Mathematics and Science  Math and science knowledge and application will be critical to your success in carpentry and construction. Work through these quick activities to practice your academic skills.

Job Safety  Make safety a habit and review these job site safety practices carefully.

Builder’s Tip  Use this advice to save time or labor without sacrificing safety, accuracy, or quality.

Regional Concerns  Building practices can vary due to weather or local codes. This feature highlights some of the different techniques or issues you might come across in various regions around the country.
Assessments—Check Your Understanding

Assessing what you have learned is part of the learning process. Review and check your understanding, apply this new knowledge, and get ready for your tests.

Section Assessments

After You Read  Reviewing your reading is a powerful study skill. After You Read will help you organize and process your understanding of what you have read.

Academic Integration  Academic Integration will connect the section content to academics.

Academic Integration: Mathematics

5. Calculate Area  You have been given the following plan for the foundation of a two-story rectangular house. Calculate the surface area of the floor.

Step 1: The foundation is made up of two rectangles. A rectangle is a four-sided figure in which all four of its angles are right angles. This means that the sides opposite one another are of equal length. Draw a dotted line between point A and point B to help you see the two rectangles more clearly.

Step 2: Multiply length by height to calculate the area of the larger rectangle (30 \times 30) and the smaller rectangle (14 \times 25). Add both areas to find the total area of the foundation.
Chapter Review and Assessment

Use end-of-chapter activities to assess your learning and reach your goals.

Review Content and Academic Vocabulary
Practice your vocabulary by using these words in a sentence or illustrating them in a diagram.

Review Key Concepts
Take time to determine how well you have met the chapter objectives by completing the activities outlined here.

Academic and Workplace Applications
Develop your skills for the 21st century by sharpening your workplace skills and focusing on key applications in Science, Technology, Engineering, and Math (STEM).

Academic and Workplace Applications

Review Content and Academic Vocabulary

Practice your vocabulary by using these words in a sentence or illustrating them in a diagram.

Review Key Concepts

Take time to determine how well you have met the chapter objectives by completing the activities outlined here.

Academic and Workplace Applications

Develop your skills for the 21st century by sharpening your workplace skills and focusing on key applications in Science, Technology, Engineering, and Math (STEM).

Standardized Test Practice

These activities give you an opportunity to sharpen your test-taking skills and practice for professional certification in carpentry. The activities also include a valuable Test-Taking Tip.

To The Student
**What Are Standards?**

Being prepared for your career includes developing a wide range of skills that you will need to meet future employers’ needs and expectations. Standards are an established and agreed upon set of measures or guidelines for the knowledge, processes, and practices that you as a student should know or be able to do to succeed in your academic and professional career.

*Carpentry & Building Construction* meets these key academic and professional standards. At the beginning of each chapter in the Reading Guide is a list of the standards that are covered in that chapter. With these standards as your foundation, you will have a better understanding of basic carpentry and construction principles, and you will continue to develop your academic skills, too.

**Academic Standards**

Take note of the English Language Arts, Mathematics, and Science standards at the beginning of each chapter in the Reading Guide. You will practice these specific academic skills as you move through the chapter.

**Industry Standards**

The chapter’s Reading Guide highlights the sections’ content in relation to meeting important professional standards in carpentry. Knowing these standards will help you prepare for professional certification.

---

Before You Read Preview
Building codes and architectural plans guide the construction of a new house. Choose a content vocabulary or academic vocabulary word that is new to you. When you find it in the text, write down the definition.

---

Content Vocabulary
- building code
- building permit
- stock plan
- floor plans
- mortgage
- architect's scale
- plan view
- elevation
- schedule
- specifications
- bid
- quantity takeoff
- bond form
- indirect cost
- exceeds
- scale
- derived
- allocation

**Graphic Organizer**

As you read, use a chart like the one shown to organize information about content vocabulary words and their definitions, adding rows as needed.

---

Chapter 2 Reading Guide

---

Content Vocabulary
- building code
- building permit
- stock plan
- floor plans
- mortgage
- architect's scale
- plan view
- elevation
- schedule
- specifications

Academic Vocabulary
- exceed
- scale
- derive

---

Academic Standards

- English Language Arts
- Mathematics
- Science

Industry Standards

- Reading Plans and Blueprints
What if English is Not Your First Language?

The English Language Learner

Today’s diverse classrooms offer wonderful opportunities for you as a student to learn and enhance a variety of skills, including your language skills. You could be a part of a classroom in which ten or more countries are represented. You and your classmates may actually speak different native languages. You can use this multicultural environment to practice your speaking, writing, and listening skills with your teacher and your classmates. Practicing these skills will help you to communicate effectively in your academic and future professional career.

Use these tips as you read and learn from this textbook:

Highlight Vocabulary
Scan the chapter Reading Guide for vocabulary terms that are not familiar to you. Write these words down and look them up in the glossary at the back of the book or in a dictionary.

Learn Through Pictures
Look at chapter photos and pictures carefully, trying to make a connection between what you have seen in the real world and how it relates to the picture. If something in the picture is not familiar to you, ask your instructor to explain what it is.

Practice Communication
Study with a classmate. At the end of each chapter, you can review together what you have learned in that chapter. Start by selecting two vocabulary words from the list. Who can define or describe what they mean?

Connect to Your World
You will have the chance to show what you have learned by working on projects such as the Unit Hands-On Math Project. When choosing a topic, think of your culture, experiences, and skills and select an idea or activity that is already of interest to you.
What Is Certification?

Certain professions require you to become certified in the technical aspects of the job before you can begin to work. Much of a carpenter’s knowledge comes from experience on the job, but construction careers often benefit from getting professional certification. Many states require state-level certification.

Union carpenters in the United States are required to pass a skills test to be granted official journey-level status, but uncertified professional carpenters may have journey-level status based on their skill level, years of experience, or simply because they support themselves in the trade. After working at a journey-level status for a specified period, a carpenter may go to study or test as a master carpenter.

Plan your career path now by knowing what certification might be required of you to succeed in your trade.
Carpentry Competitive Events

Have you imagined your future? Competition in the real world is fierce, so you need to be prepared. One of the best ways to gain experience and develop leadership skills is to participate in local, state, and nationwide competitive events. Competitive events for high school students come in all shapes and sizes, but a few of the most notable ones in carpentry and construction are sponsored by SkillsUSA and the National Association of Home Builders (NAHB) Student Chapters.

SkillsUSA

SkillsUSA is a national organization serving teachers and high school and college students, who are preparing for careers in technical, skilled, and service occupations. More than 285,000 students and instructors join SkillsUSA annually. SkillsUSA has served more than 9.3 million members since 1965.

One of the most visible programs of SkillsUSA is the annual SkillsUSA Championships. This competition program serves as a showcase for some of the best career and technical students in the nation. Contests begin locally and continue through the state and national levels.

National Association of Home Builders – Student Chapters

Founded in 1942, The National Association of Home Builders (NAHB) is a federation of more than 800 state and local associations. About one third of NAHB’s members are home builders and/or remodelers. The remaining members are associates working in closely related fields within the housing industry.

The NAHB Student Chapters Residential Construction competition was established to offer residential construction students a real-life residential construction experience. Students work on a management proposal for a real project by completing working drawings, labor and materials estimates, and/or a construction schedule.

SkillsUSA Estimating and Planning

One competition featured in SkillsUSA involves estimating and planning. Working through the Estimating and Planning features in your chapters can help prepare you for participation in SkillsUSA.

NAHB Student Chapters

Competitive events sponsored by NAHB student chapters include estimating and planning projects.
Welcome to the World of STEM

Science, Technology, Engineering, and Mathematics are the subjects in STEM. STEM is a nationwide initiative directed toward high school students just like you to promote learning in these areas and prepare you to succeed in tomorrow’s workforce. STEM applies to virtually every career field today—from aircraft engineers, forensic scientists, and architects to firefighters, game developers, general contractors, and automotive mechanics. That is why even important organizations such as NASA are supporting STEM learning.

Critical Thinking

8. Explain How does laminated-veneer differ from plywood in terms parallel lamination?

Academic and Workplace Applications

9. Estimate Sheathing Engineered panel products are usually purchased in 4\(\times\)8 panels, but are also available in 4\(\times\)10 and 4\(\times\)12 panels. A 4\(\times\)8 panel covers 32 sq. ft. (4\(\times\)8\(\times\)4). A 4\(\times\)10 panel covers 40 sq. ft. A 4\(\times\)12 panel covers 48 sq. ft. Determine how many 4\(\times\)8 panels of plywood are actually needed for the walls of a room that measures 10’x12’ and has 8’ high ceilings.

Estimation

Step 1: Calculate the perimeter of the rectangular room.

Step 2: Multiply the perimeter times the wall height to determine the area of the walls to be covered.

Step 3: Determine the square footage (area) of one panel of plywood.

Step 4: Divide the number of square feet to be covered by the area of one sheet of plywood to determine the actual number of sheets needed.

Expansion and Contraction

When a floor is framed with conventional lumber, the ends of the floor joists are connected with solid lumber of the same size. This lumber is called a rim joist. Solid lumber rim joists do not work with flooring systems framed with I-joists. This is because the two products expand and shrink differently. Do you know why they expand and shrink differently? Find out more about expansion and contraction of wood products. Then write a few sentences describing why various wood products expand and contract.

Initiative and Self-Direction Skills

It is increasingly difficult to find framing lumber of the consistent quality that was once available. This is partly due to the heavy demand for wood products, but is also a result of decreasing forest resources. This decrease in resources is an alarming issue to many people within the United States and around the world. You have been hired by a lumber manufacturing company to work with their public relations department. Your first task is to write an informational pamphlet about the recently developed finger-jointed lumber. Detail how it can meet the demand for framing lumber, while helping to save wood resources. Be sure to articulate your thoughts clearly and effectively.

Multiple Choice

Directions Choose the term or phrase that best completes the following statements.

12. Which can be used to fasten plywood to other materials?
   a. ropes
   c. screws
   b. staples
   d. stakes

13. Which is the moisture content of laminated-veneer products after they are dried?
   a. 20%
   c. 15%
   b. 8%
   d. 35%

14. Excessive exposure to direct sunlight can cause the wood in a glulam beam to
   a. break down.
   c. shrink.
   b. fade in color.
   d. expand.

For more information about STEM and exciting STEM-related careers, visit www.stemedcoalition.org.
Reading: What’s in it for You?

What role does reading play in your life? The possibilities are countless. Are you on a sports team? Perhaps you like to read about the latest news and sports. Are you enrolled in an English class, an algebra class, or a science or technology class? Then your assignments require a lot of reading.

Improving or Fine-Tuning Your Reading Skills Will:

- Improve your grades
- Allow you to read faster and more efficiently
- Improve your study skills
- Help you remember more information accurately
- Improve your writing

The Reading Process

Good reading skills build on one another, overlap, and spiral around in much the same way that a winding staircase goes around and around while leading you to a higher place. This handbook is designed to help you find and use the tools you will need before, during, and after reading.

Strategies You Can Use

- Identify, understand, and learn new words.
- Understand why you read.
- Take a quick look at the whole text.
- Try to predict what you are about to read.
- Take breaks while you read and ask yourself questions about the text.
- Take notes.
- Keep thinking about what will come next.
- Summarize.

Vocabulary Development

Word identification and vocabulary skills are the building blocks of the reading and the writing process. By learning to use a variety of strategies to build your word skills and vocabulary, you will become a stronger reader.

Use Context to Determine Meaning

The best way to expand and extend your vocabulary is to read widely, listen carefully, and participate in a rich variety of discussions. When reading on your own, though, you can often figure out the meanings of new words by looking at their context, the other words and sentences that surround them.
Predict a Possible Meaning

Another way to find the meaning of a word is to take the word apart. If you understand the meaning of the base, or root, part of a word, and also know the meanings of key syllables added either to the beginning or end of the base word, then you can usually figure out what the word means.

Word Origins Since Latin, Greek, and Anglo-Saxon roots are the basis for much of our English vocabulary, having some background in languages can be a useful vocabulary tool. For example, astronomy comes from the Greek root astro, which means “relating to the stars.” Stellar also refers to stars, but its origin is Latin. Knowing root words in other languages can help you determine meanings, derivations, and spellings in English.

Prefixes and Suffixes A prefix is a word part that can be added to the beginning of a word. For example, the prefix semi means “half” or “partial,” so semicircle means “half a circle.” A suffix is a word part added to the end of a word. Adding a suffix can change a word’s part of speech.

Using Dictionaries A dictionary provides the meaning or meanings of a word. Look at a dictionary entry to see what other information it provides.

Thesauruses and Specialized Reference Books A thesaurus provides synonyms and often antonyms. A synonym is a word that means the same thing as the word you are using. Check the exact definition of the listed words in a print or online dictionary before you use a thesaurus.

Glossaries Many textbooks contain condensed dictionaries that provide an alphabetical listing of words used in the text and their definitions.

Recognize Word Meanings across Subjects Have you learned a new word in one class, and then noticed it in your reading for other subjects? The word might not mean exactly the same thing in each class, but you can use the meaning you already know to help you understand what it means in another subject area. For example:

Math After multiplying the two numbers, explain how you found the product.

Science One product of photosynthesis is oxygen.

Economics The Gross National Product (GNP) is the total dollar value of goods and services produced by a nation.
Understanding What You Read

Reading comprehension means understanding—deriving meaning from—what you have read. Using a variety of strategies can help you improve your comprehension and make reading more interesting and more fun.

Read for a Reason

To get the greatest benefit from what you read, you should establish a purpose for reading. In school, you have many reasons for reading. Some of them are:

- To learn and understand new information
- To find specific information
- To review before a test
- To complete an assignment
- To prepare (research) before you write

As your reading skills improve, you will notice that you apply different strategies to fit the different purposes for reading. For example, if you are reading for entertainment, you might read quickly, but if you read to gather information or follow directions, you might read more slowly, take notes, construct a graphic organizer, or reread sections of text.

Draw on Personal Background

Drawing on personal background may also be called activating prior knowledge. Before you start reading a text, ask yourself questions like these:

- What have I heard or read about this topic?
- Do I have any personal experience relating to this topic?

Using a KWL Chart

A KWL chart is a good device for organizing information you gather before, during, and after reading. In the first column, list what you already know, then list what you want to know in the middle column. Use the third column when you review and you assess what you learned. You can also add more columns to record places where you found information and places where you can look for more information.

<table>
<thead>
<tr>
<th>K</th>
<th>W</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td>(What I already know)</td>
<td>(What I want to know)</td>
<td>(What I have learned)</td>
</tr>
</tbody>
</table>

Adjust Your Reading Speed

Your reading speed is a key factor in how well you understand what you are reading. You will need to adjust your speed depending on your reading purpose.

Scanning means running your eyes quickly over the material to look for words or phrases. Scan when you need a specific piece of information.
Skimming means reading a passage quickly to find its main idea or to get an overview. Skim a text when you preview to determine what the material is about.

Reading for detail involves careful reading while paying attention to text structure and monitoring your understanding. Read for detail when you are learning concepts, following complicated directions, or preparing to analyze a text.

**Techniques to Understand and Remember What You Read**

**Preview**

Before beginning a selection, it is helpful to **preview** what you are about to read.

**Previewing Strategies**

- Read the title, headings, and subheadings of the selection.
- Look at the illustrations and notice how the text is organized.
- Skim the selection: Take a glance at the whole thing.
- Decide what the main idea might be.
- Predict what a selection will be about.

**Predict**

Have you ever read a mystery, decided who committed the crime, and then changed your mind as more clues were revealed? You were adjusting your predictions. Did you smile when you found out you guessed the murderer? You were verifying your predictions.

As you read, take educated guesses about story events and outcomes; that is, **make predictions** before and during reading. This will help you focus your attention on the text, and it will improve your understanding.

**Determine the Main Idea**

When you look for the **main idea**, you are looking for the most important statement in a text. Depending on what kind of text you are reading, the main idea can be located at the very beginning (news stories in newspaper or a magazine) or at the end (scientific research document). Ask yourself:

- What is each sentence about?
- Is there one sentence that is more important than all the others?
- What idea do details support or point out?
Taking Notes

**Cornell Note-Taking System** There are many methods for note taking. The Cornell Note-Taking System is a well-known method that can help you organize what you read. To the right is a note-taking chart based on the Cornell Note-Taking System.

**Graphic organizers** Using a graphic organizer to retell content in a visual representation will help you remember and retain content. You might make a chart or diagram, organizing what you have read. Here are some examples of graphic organizers:

**Venn diagrams:** When mapping out a comparison-and-contrast text structure, you can use a Venn diagram. The outer portions of the circles will show how two characters, ideas, or items contrast, or are different, and the overlapping part will compare two things, or show how they are similar.

**Flow charts:** To help you track the sequence of events, or cause and effect, use a flow chart. Arrange ideas or events in their logical, sequential order. Then draw arrows between your ideas to indicate how one idea or event flows into another.

**Visualize**

Try to form a mental picture of scenes, characters, and events as you read. Use the details and descriptions the author gives you. If you can visualize what you read, it will be more interesting, and you will remember it better.

**Question**

Ask yourself questions about the text while you read. Ask yourself about the importance of the sentences, how they relate to one another, if you understand what you just read, and what you think is going to come next.
Clarify

If you feel you do not understand meaning (through questioning), try these techniques:

What to Do When You Do Not Understand

- Reread confusing parts of the text.
- Diagram (chart) relationships between chunks of text, ideas, and sentences.
- Look up unfamiliar words.
- Talk out the text to yourself.
- Read the passage once more.

Review

Take time to stop and review what you have read. Use your note-taking tools (graphic organizers or Cornell notes charts). Also, review and consider your KWL chart.

Monitor Your Comprehension

Continue to check your understanding by using the following two strategies:

Summarize  Pause and tell yourself the main ideas of the text and the key supporting details. Try to answer the following questions: Who? What? When? Where? Why? How?

Paraphrase  Pause, close the book, and try to retell what you have just read in your own words. It might help to pretend you are explaining the text to someone who has not read it and does not know the material.

Understanding Text Structure

Good writers do not just put together sentences and paragraphs, they organize their writing with a specific purpose in mind. That organization is called “text structure.” When you understand and follow the structure of a text, it is easier to remember the information you are reading. There are many ways text may be structured. Watch for signal words. They will help you follow the text’s organization (also, remember to use these techniques when you write).

Compare and Contrast

This structure shows similarities and differences between people, things, and ideas. This is often used to demonstrate that things that seem alike are really different, or vice versa.

Signal words: similarly, more, less, on the one hand / on the other hand, in contrast, but, however
Cause and Effect

Writers use the cause-and-effect structure to explore the reasons for something happening and to examine the results or consequences of events.

**Signal words:** so, because, as a result, therefore, for the following reasons

Problem and Solution

When writers organize text around the question “how?” they state a problem and suggest solutions.

**Signal words:** how, help, problem, obstruction, overcome, difficulty, need, attempt, have to, must

Sequence

Sequencing tells you the order in which to consider thoughts or facts. Examples of sequencing are:

- **Chronological order** refers to the order in which events take place.
  - **Signal words:** first, next, then, finally

- **Spatial order** describes the organization of things in space (to describe a room, for example).
  - **Signal words:** above, below, behind, next to

- **Order of importance** lists things or thoughts from the most important to the least important (or the other way around).
  - **Signal words:** principal, central, main, important, fundamental

Reading for Meaning

It is important to think about what you are reading to get the most information out of a text, to understand the consequences of what the text says, to remember the content, and to form your own opinion about what the content means.

Interpret

Interpreting is asking yourself, “What is the writer really saying?” and then using what you already know to answer that question.

Infer

Writers do not always state exactly everything they want you to understand. By providing clues and details, they sometimes imply certain information. An inference involves using your reason and experience to develop the idea on your own, based on what an author implies or suggests. What is most important when drawing inferences is to be sure that you have accurately based your guesses on supporting details from the text. If you cannot point to a place in the selection to help back up your inference, you may need to rethink your guess.
**Draw Conclusions**

A conclusion is a general statement you can make and explain with reasoning or with supporting details from a text. If you read a story describing a sport in which five players bounce a ball and throw it through a high hoop, you may conclude that the sport is basketball.

**Analyze**

To understand persuasive nonfiction (a text that discusses facts and opinions to arrive at a conclusion), you need to analyze statements and examples to see if they support the main idea. To understand an informational text (a text, such as a textbook, that gives you information, not opinions), you need to keep track of how the ideas are organized to find the main points.

**Hint:** Use your graphic organizers and notes charts.

**Distinguish Facts and Opinions**

This is one of the most important reading skills you can learn. A fact is a statement that can be proven. An opinion is what the writer believes. A writer may support opinions with facts, but an opinion cannot be proven. For example:

- **Fact:** California produces fruit and other agricultural products.
- **Opinion:** California produces the best fruit and other agricultural products.

**Evaluate**

Would you take seriously an article on nuclear fission if you knew it was written by a comedic actor? If you need to rely on accurate information, you need to find out who wrote what you are reading and why. Where did the writer get information? Is the information one-sided? Can you verify the information?

**Reading for Research**

You will need to **read actively** in order to research a topic. You might also need to generate an interesting, relevant, and researchable **question** on your own and locate appropriate print and nonprint information from a wide variety of sources. Then you will need to **categorize** that information, evaluate it, and **organize** it in a new way in order to produce a research project for a specific audience. Finally, **draw conclusions** about your original research question. These conclusions may lead you to other areas for further inquiry.
How to Access the Online Learning Center

Follow these steps to access the resources of the Carpentry & Building Construction Online Learning Center:

**Step 1** Go to glencoe.com

**Step 2** Enter your state and user type.

**Step 3** Enter “Trade and Technical Education” in the discipline field.

**Step 4** Click ENTER.

**Step 5** Find Carpentry & Building Construction ©2010 on the program list. Click the title, and you are there.

**Step 6** Click Student Center for a variety of classroom resources.
Carpentry & Building Construction contains a wealth of information. The trick is to know where to look to access all the information in the book. If you spend time reviewing this textbook, you get the most out of your reading and study time. Let’s begin!

1. How many chapters are in the book? How many units?

2. What part of the textbook will show you specific safety tips?

3. Where do you find the Construction Careers feature?

4. Where can you find specific Science, Technology, Engineering, and Mathematics (STEM) applications?

5. If you need help with one of the math applications, where would you look?

6. Where can you find the definitions of mastic and underlayment?