

Architecture, Construction, Communications & Transportation

Exploring Construction Seventh Grade

Course Number: 46.02500

Course Description: This course will provide an exploratory foundation in construction. It is designed to be taught in a 9-week rotation in 45-minute daily classes. Standards should be taught in the order presented with the exception of Standards 1 and 8 being embedded standards with ongoing learning regarding employability skills, career investigation, and career-technical leadership opportunities. Through integrated instructional activities, students will have opportunities to apply employability skills and to research possible career options in the construction Industry. They will also complete many hands-on activities to build a strong foundation of construction techniques/skills. Capstone projects should be incorporated at the completion of all standards as time allows. Students who successfully complete this course will be prepared for the following pathways upon entering high school: Construction-carpentry, masonry, electrical, and plumbing.

Course Standard 1

ACCT-MSCONST7-1

Demonstrate employability skills required by business and industry.

The following elements should be integrated throughout the content of this course.

1.1 Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities.

Person-to-Person Etiquette	Telephone and Email Etiquette	Communicating at Work	Listening
Interacting with Your Boss	Telephone Conversations	Improving Communication Skills	Reasons, Benefits, and Barriers
Interacting with Subordinates	Barriers to Phone conversations	Effective Oral Communication	Listening Strategies
Interacting with Co-workers	Making and Returning Calls	Effective Written Communication	Ways We Filter What We Hear
		Effective Nonverbal Skills	Developing a Listening Attitude
		Effective Word Use	Show You Are Listening
		Giving and Receiving Feedback	Asking Questions
			Obtaining Feedback
			Getting Others to Listen

Nonverbal Communication	Written Communication	Speaking	Applications and Effective Résumés
Communicating Nonverbally	Writing Documents	Using Language Carefully	Completing a Job Application
Reading Body Language and mixed Messages		One-on-One Conversations	Writing a Cover Letter

Matching Verbal and Nonverbal communication		Small Group Communication	Things to Include in a Résumé
Improving Nonverbal Indicators		Large Group Communication	Terms to Use in a Résumé
Nonverbal Feedback		Making Speeches	Organizing Your Résumé
Showing Confidence Nonverbally		Answering Questions	Writing an Electronic Résumé
Showing Assertiveness		Visual and Media Aids	
		Errors in Presentation	

1.2 Demonstrate creativity by asking challenging questions and applying innovative procedures and methods.

Teamwork and Problem Solving	Meeting Etiquette
Thinking Creatively	Preparation and Participation in Meetings
Taking Risks	Conducting Two-Person or Large Group Meetings
Building Team Communication	Inviting and Introducing Speakers
	Preparing Visual Aids

1.3 Exhibit critical thinking and problem-solving skills to locate, analyze and apply information in career planning and employment situations.

Problem Solving	Customer Service	The Application Process	Interviewing Skills	Finding the Right Job
Transferable Job Skills	Gaining Trust and Interacting with Customers	Providing Information, Accuracy and Double Checking	Preparing for an Interview	Locating Jobs and Networking
Becoming a Problem Solver	Learning and Giving Customers What They Want	Online Application Process	Questions to Ask in an Interview	Job Shopping Online
Identifying a Problem	Keeping Customers Coming Back	Following Up After Submitting an Application	Things to Include in a Career Portfolio	Job Search Websites
Becoming a Critical Thinker	Seeing the Customer's Point	Effective Résumés:	Traits Employers are Seeking	Staying Motivated to Search
	Selling Yourself and the Company	Matching Your Talents to a Job	Considerations Before Taking a Job	
		When a Résumé Should be Used		

1.4 Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity.

Workplace Ethics	Personal Characteristics	Employer Expectations	Business Etiquette	Communicating at Work
Demonstrating Good Work Ethic	Demonstrating a Good Attitude	Behaviors Employers Expect	Language and Behavior	Handling Anger
Behaving Appropriately	Gaining and Showing Respect	Objectionable Behaviors	Keeping Information Confidential	Dealing with Difficult Coworkers
Maintaining Honesty	Demonstrating Responsibility	Establishing Credibility	Avoiding Gossip	Dealing with a Difficult Boss

Playing Fair	Showing Dependability	Demonstrating Your Skills	Appropriate Work Email	Dealing with Difficult Customers
Using Ethical Language	Being Courteous	Building Work Relationships	Cell Phone Etiquette	Dealing with Conflict
Showing Responsibility	Gaining Coworkers' Trust		Appropriate Work Texting	
Reducing Harassment	Persevering		Understanding Copyright	
Respecting Diversity	Handling Criticism		Social Networking	
Making Truthfulness a Habit	Showing Professionalism			

1.5 Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply teamwork skills.

Expected Work Traits	Teamwork	Time Management
Demonstrating Responsibility	Teamwork Skills	Managing Time
Dealing with Information Overload	Reasons Companies Use Teams	Putting First Things First
Transferable Job Skills	Decisions Teams Make	Juggling Many Priorities
Managing Change	Team Responsibilities	Overcoming Procrastination
Adopting a New Technology	Problems That Affect Teams	Organizing Workspace and Tasks
Use Technology Ethically & Efficiently	Expressing Yourself on a Team	Staying Organized
Interact Appropriately in a Digital World	Giving and Receiving Constructive Criticism	Finding More Time
		Managing Projects
		Prioritizing Personal and Work Life

1.6 Present a professional image through appearance, behavior, and language.

On-the-Job Etiquette	Person-to-Person Etiquette	Communication Etiquette	Presenting Yourself
Using Professional Manners	Meeting Business Acquaintances	Creating a Good Impression	Looking Professional
Introducing People	Meeting People for the First Time	Keeping Phone Calls Professional	Dressing for Success
Appropriate Dress	Showing Politeness	Proper Use of Work Email	Showing a Professional Attitude
Behavior at Conventions		Proper Use of Cell Phone	Using Good Posture
Working in a Cubicle		Proper Use in Texting	Presenting Yourself to Associates
			Accepting Criticism
			Demonstrating Leadership

Course Standard 2

ACCT-MSCONST7-2

Identify and discuss the careers associate with the construction industry

- 2.1 Identify careers in the construction and project design industries.
- 2.2 Identify architects, engineers, project managers, virtual design & construction, & skilled trades.
- 2.3 Identify the differences between horizontal and vertical construction.
- 2.4 Show examples of each type of construction (horizontal & vertical).
- 2.5 Introduce career path opportunities such as technical schools, apprenticeships, employer training, and four-year degree options.
- 2.6 Identify and properly use key terms/vocabulary used in the construction trades.

SAMPLE TASKS:

- Have students write a report on a specific career in the architecture or construction field.
- List & define the professional organizations associated with architectural & construction fields.
- Show PowerPoint on architecture and construction careers.
- Complete word search on architecture and construction careers.
- Research apprenticeship programs in Georgia.

Course Standard 3

ACCT-MSCONST7-3

Identify and discuss the basic hand tools utilized in the construction industry

- 3.1 Identify basic hand tools for carpentry, electrical, plumbing, masonry, there purpose and applications with proper safety procedures and PPE
- 3.2 Identify basic layout and measuring tools their purpose and applications
- 3.3 Discuss the differences between level, plumb, & square
- 3.4 Demonstrate the use of a measuring tape, speed square, framing square, spirit levels, (builders and/or laser), plumb bob
- 3.5 Identify the various screwdriver types, sockets and ratchet sets, and wrenches.
- 3.6 Identify basic cutting tools

Sample Tasks:

- Demonstrate lineman pliers to cut and strip electrical wiring
- Demonstrate cutting lumber with a hand saw
- Demonstrate cutting & connecting CPVC, PVC, Pex and/or copper piping with the proper tools
- Demonstrate block/brick laying to a straight line & utilizing proper trowel techniques
- Plumb a post on two adjacent faces

Course Standard 4

ACCT-MSCONST7-4

Identify and discuss the basic power tools utilized in the construction industry

- 4.1 Identify basic power tools for carpentry, electrical, plumbing, masonry, their purposes, and applications with proper safety procedures and PPE
- 4.2 Identify the differences between blades utilized in the reciprocating saw/saber saw
- 4.3 Identify the differences between the various bits and drivers utilized in drills/impact drivers

- 4.4 identify the different types of routers and their bits
- 4.5 Identify the various types of blades used in construction

Sample Tasks:

- Demonstrate the proper use of the cordless drill(s) and/or impact drivers
- Demonstrate the proper use of the orbit/vibrating sander(s)
- Demonstrate the proper use of the jig saw

Course Standard 5

ACCT-MSCONST7-5

Identify and discuss the different materials utilized in the construction industry

- 5.1 Identify the difference between nominal and dimensional lumber
- 5.2 Identify the difference between OSB, plywood, engineered lumber, etc.
- 5.3 Identify the different species of lumber utilized in the construction trades
- 5.4 Identify the proper use of pressure treated lumber

Sample Tasks:

- Demonstrate by the construction of a micro wall by measuring, cutting, and assembly
- Mathematically determine cut list dimensions
- Differentiate by sorting and matching materials

Course Standard 6

ACCT-MSCONST7-6

Identify and demonstrate the safe operation of hand and power tools used in the construction industry

- 6.1 Demonstrate the safe and proper use of the measuring tape
- 6.2 Demonstrate the safe and proper layout procedure for marking a board to be cut
- 6.3 Demonstrate the safe and proper use of basic hand tools
- 6.4 Demonstrate the safe and proper use of basic power tools & equipment utilized in the construction classroom/lab

Sample Tasks:

- Measure precut boards and have the student identify the length
- Provide a specific length of lumber that will be cut and have student mark with speed square and/or framing square
- Properly cut a piece of lumber with hand saw
- Cut a shape or standard cut with jig saw
- Drill specific size hole(s) with electric drill
- Sand flat side and edge of designated lumber

Course Standard 7

ACCT-MSCONST7-7

Identify and demonstrate the proper use of the various fasteners used in the construction industry

- 7.1 Identify the various types of fasteners used in the construction industry
- 7.2 Demonstrate the safe and proper method for fastening lumber together (nails & screws)
- 7.3 Demonstrate the installation & removal of the various fasteners used in the construction industry

Sample Tasks:

- Install specific fastener with the proper tool and label each fastener
- Utilize a flat bar, cats' claw, claw hammer, and wrecking bar to remove fasteners
- Utilize locking pliers to remove fasteners

Course Standard 8

ACCT-MSCONST7-8

Examine how SkillsUSA is a co-curricular part of career and technical education through leadership development, school and community service projects, and competitive events.

- 8.1 Explain the purpose, mission, objectives, motto, colors, official dress and other distinguishing characteristics of SkillsUSA.
- 8.2 Explain how participation in SkillsUSA can promote lifelong responsibility for community service, professional growth and development.
- 8.3 Explore the impact and opportunities that SkillsUSA can develop to bring business and industry together with education in a positive working relationship through innovative leadership and career development programs.
- 8.4 Explore the local, state, and national opportunities available to students through participation in SkillsUSA, including but not limited to conferences, competitions, community service, philanthropy, and other SkillsUSA activities.