

Principles of Construction At-A-Glance - Lamar CISD

Grading Period	Unit Name	Estimated Time Frame	TEKS	
Grading Period 1 28 Days	Introduction	3 Days		
	Employment Standards & Employability Skills	15 Days	1A, 1B, 1C, 1D, 1E, 1F, 1G, 1H, 1I	
	Work Ethic 1(A) The student will explain the role of an employee in the construction industry. Communications 1(B) The student will demonstrate critical-thinking skills. 1(C) The student will demonstrate the ability to solve problems using critical-thinking skills. 1(D) The student will demonstrate knowledge of basic computer systems. 1(E) The student will explain common uses for computers in the construction industry. Public Relations 1(F) The student will demonstrate effective relationship skills. 1(G) The student will recognize workplace issues such as sexual harassment, stress, and substance abuse. Government 1(H) The student will explain the Occupational Safety and Health Administration (OSHA) General Duty Clause. 1(I) The student will explain OSHA 1926 CFR Subpart C.			
	Career Discovery Project	5 Days	1A	
	1(A) The student will explain the role of an employee in the construction industry.			
	Career Portfolio	5 Days	1B, 1C	
	1(B) The student will demonstrate critical-thinking skills. 1(C) The student will demonstrate the ability to solve problems using critical-thinking skills.			
Grading Period 2 25 Days	Safety	5 Days	2A, 2B	
	2(A) The student will explain the idea of a safety culture. 2(B) The student will explain the importance of a safety culture in the construction crafts.			
	OSHA Standards	7 Days	2C, 2D, 2E, 2F	
	2(C) The student will explain the role of the OSHA in job-site safety. 2(D) The student will explain fall protection, ladder safety, stair safety, and scaffold safety procedures. 2(E) The student will demonstrate the use and care of appropriate personal protective equipment, including safety goggles and glasses, hard hats, gloves, safety harnesses, and safety shoes. 2(F) The student will define safe work procedures around electrical hazards.			
	Safety Data Sheets/Building Codes	5 Days	2G	
	2(G) The student will explain the importance of Safety Data Sheets (SDS).			
	Accident Prevention – Industry Standards & Quality Work	8 Days	3A, 3B, 3C, 3D, 3E, 3F, 3G	
3(A) The student will identify causes of accidents. 3(B) The student will identify impacts of accident costs. 3(C) The student will define hazard recognition. 3(D) The student will identify struck-by hazards. 3(E) The student will identify caught-in-between hazards. 3(F) The student will identify other construction hazards on the jobsite, including hazardous material exposures, environmental elements, welding and cutting hazards, confined spaces, and fires. 3(G) The student will explain the importance of hazard communication (HazCom).				
Grading Period 3 25 Days	Construction Mathematics	5 Days	4A, 4B, 4C, 4D, 4E	
	4(A) The student will add, subtract, multiply, and divide whole numbers with and without a calculator. 4(B) The student will add, subtract, multiply, and divide fractions. 4(C) The student will add, subtract, multiply, and divide decimals with and without a calculator. 4(D) The student will convert decimals to percentages and percentages to decimals. 4(E) The student will convert fractions to decimals and decimals to fractions.			

	Measurement – How to Read Scale	5 Days	5A, 5B, 5C, 5D
	5(A) The student will use a standard ruler, a metric ruler, a measuring tape, and an architectural/engineering scale to measure. 5(B) The student will explain what the metric system is and how it is important in the construction trade. 5(C) The student will recognize and use metric units of length, weight, volume, and temperature. 5(D) The student will recognize some of the basic shapes used in the construction industry and apply basic geometric principles to measure them.		
	Drawings: Blueprints, Floor Plans, Intro to Green Design, & Interpret Work Documents	15 Days	8A, 8B, 8C, 8D, 8E, 8F
8(A) The student will interpret and use drawing dimensions. 8(B) The student will recognize and identify basic construction terms. 8(C) The student will recognize and identify basic drawing components. 8(D) The student will recognize and identify commonly used drawing symbols. 8(E) The student will relate information on construction drawings to actual locations on the print. 8(F) The student will recognize different classifications of construction drawings.			
Grading Period 4 33 Days	Communication Skills	8 Days	9A, 9B, 9C, 9D, 1D, 1E
	9(A) The student will interpret information and instructions presented in written form. 9(B) The student will interpret information and instructions presented in verbal form. Networking 9(C) The student will communicate effectively using verbal and writing skills. Mail Etiquette 9(D) The student will communicate effectively on the job using electronic communication devices. Computer Introduction 1(D) The student will demonstrate knowledge of basic computer systems. 1(E) The student will explain common uses for computers in the construction industry.		
	Construction Mathematics: Product Search, Estimate materials, & Alternative Materials	16 Days	4A, 4B, 4C, 4D, 4E
	4(A) The student will add, subtract, multiply, and divide whole numbers with and without a calculator. 4(B) The student will add, subtract, multiply, and divide fractions. 4(C) The student will add, subtract, multiply, and divide decimals with and without a calculator. 4(D) The student will convert decimals to percentages and percentages to decimals. 4(E) The student will convert fractions to decimals and decimals to fractions.		
	Construction Mathematics: Spreadsheets	9 Days	4A, 4B, 4C, 4D, 4E
4(A) The student will add, subtract, multiply, and divide whole numbers with and without a calculator. 4(B) The student will add, subtract, multiply, and divide fractions. 4(C) The student will add, subtract, multiply, and divide decimals with and without a calculator. 4(D) The student will convert decimals to percentages and percentages to decimals. 4(E) The student will convert fractions to decimals and decimals to fractions.			
Grading Period 5 34 Days	Tools	3 Days	6A, 6B, 6C
	6(A) The student will recognize and identify the basic hand tools and their purposes for the construction trades. 6(B) The student will inspect basic hand tools visually to determine if they are safe for use. 6(C) The student will use the basic construction hand tools safely and properly.		
	Power Tools	3 Days	7A, 7B, 7C
	7(A) The student will identify powered hand tools commonly used in the construction trades. 7(B) The student will practice safe and proper application of powered hand tools commonly used in the construction trades. 7(C) The student will explain how to properly maintain, and clean powered hand tools commonly used in construction trades.		
	Safe Tool & Materials Handling, Loading, & Construction Schedule Management	12 Days	10A, 10B, 10C, 10E
10(A) The student will define a load. 10(B) The student will establish a pre-task plan prior to moving a load. 10(C) The student will apply proper material-handling techniques. 10(E) The student will choose appropriate material-handling equipment for the task.			

	General Safety Project – Building Systems	16 Days	4D, 4E, 5A, 6C, 7B, 10C, 10E
	4(D) The student will convert decimals to percentages and percentages to decimals. 4(E) The student will convert fractions to decimals and decimals to fractions. 5(A) The student will use a standard ruler, a metric ruler, a measuring tape, and an architectural/engineering scale to measure. 6(C) The student will use the basic construction hand tools safely and properly. 7(B) The student will practice safe and proper application of powered hand tools commonly used in the construction trades. 10(C) The student will apply proper material-handling techniques. 10(E) The student will choose appropriate material-handling equipment for the task.		
Grading Period 6 28 Days	House of Cards	14 Days	4D, 4E, 5A, 6C, 7B, 10C, 10E
	4(D) The student will convert decimals to percentages and percentages to decimals. 4(E) The student will convert fractions to decimals and decimals to fractions. 5(A) The student will use a standard ruler, a metric ruler, a measuring tape, and an architectural/engineering scale to measure. 6(C) The student will use the basic construction hand tools safely and properly. 7(B) The student will practice safe and proper application of powered hand tools commonly used in the construction trades. 10(C) The student will apply proper material-handling techniques. 10(E) The student will choose appropriate material-handling equipment for the task.		
	Career Advancement/Career Portfolio	14 Days	1A, 9C, 9D
	1(A) The student will explain the role of an employee in the construction industry. 9(C) The student will communicate effectively using verbal and writing skills. 9(D) The student will communicate effectively on the job using electronic communication devices.		