

Constructions Systems– Grade Levels 9-12 TEKS Manager

Credit: ½

Place a check (✓) in each column to show when TEKS taught.

	TEKS	1 st 6 wks	2 nd 6 wks	3 rd 6 wks
(b) Introduction. In Technology Education, students gain knowledge and skills in the application, design, production, and assessment of products, services, and systems. Knowledge and skills in the proper application of technology, the design of technology, the efficient production of technology, and the assessment of the effects of technology prepare students for success in the modern world. The study of technology allows students to reinforce, apply, and transfer their academic knowledge and skills to a variety of interesting and relevant activities, problems, and settings. In addition to their general academic and technical knowledge and skills, students gain an understanding of career opportunities available in technology and what employers require to gain and maintain employment in these careers.				
(c) Knowledge and skills.				
(1) The student describes how a systems model can be used to describe construction activities. The student is expected to:	(A) apply the universal systems model to construction activities;			
	(B) identify the inputs, processes, outputs, and feedback associated with construction systems;			
	(C) describe the subsystems used in construction; and			
	(D) describe how technological systems interact to achieve common goals.			
(2) The student selects and uses the proper construction technology to meet practical objectives. The student is expected to:	(A) distinguish between architectural and civil construction systems and related construction systems;			
	(B) apply construction technology to individual or community problems;			
	(C) describe the factors that affect the purchase and use of constructed items; and			
	(D) identify and describe the roles of construction.			
(3) The student designs an item for construction using appropriate design processes and techniques. The student is expected to:	(A) describe the design processes and techniques used in construction;			
	(B) develop or improve a building or structure that meets specified needs; and			
	(C) identify areas where quality, reliability, and safety can be designed into a building or structure.			
(4) The student investigates emerging and innovative construction technologies. The student is expected to:	(A) report on emerging and innovative construction technologies; and			
	(B) conduct research and experimentation in construction technology.			

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(5) The student describes quality and how it is measured in construction. The student is expected to:	(A) describe different quality control applications in construction; and			
	(B) apply continuous quality improvement techniques to the construction of a building or structure.			
(6) The student builds buildings or structures using the appropriate tools, equipment, machines, materials and technical processes. The student is expected to:	(A) describe the chemical, mechanical and physical properties of construction materials;			
	(B) describe the processes used in construction;			
	(C) use a variety of tools, equipment, and machines to construct buildings or structures; and			
	(D) construct a building or structure.			
(7) The student works safely with construction tools, equipment, machines, and materials. The student is expected to:	(A) master relevant safety tests;			
	(B) follow safety manuals, instructions, and requirements;			
	(C) identify and classify hazardous materials and wastes; and			
	(D) dispose of hazardous materials and wastes appropriately.			
(8) The student describes the importance of maintenance in construction. The student is expected to:	(A) handle and store tools and materials correctly;			
	(B) locate and perform manufacturers' maintenance procedures on selected tools, equipment, and machines; and			
	(C) describe the results of negligent or improper maintenance.			
(9) The student manages a construction project. The student is expected to:	(A) develop a plan for completing a construction project; and			
	(B) participate in the organization and operation of a real or simulated construction project.			
(10) The student applies the appropriate codes, laws, standards, or regulations related to construction technology, such as Occupational Safety and Health Administration (OSHA), National Electrical Code (NEC), American Society for Testing Materials (ASTM), standard symbols, and line weights. The student is expected to:	(A) describe the importance of codes			
	(B) identify areas where codes			
	(C) follow the appropriate codes			
(11) The student describes the intended and unintended effects of technological solutions. The student is expected to:	(A) use an assessment strategy to determine the risks and benefits of technological developments in construction;			
	(B) describe how technology has affected individuals, societies, cultures, economies, and environments;			
	(C) discuss the international effects of construction technology; and			
	(D) describe the issues related to regional and community planning.			
(12) The student identifies the factors that	(A) describe how changes in construction			

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influence the evolution of construction technology. The student is expected to:	technology affect business and industry;			
	(B) describe how the development and use of construction technology are influenced by past events;			
	(C) describe change and the factors that affect the adoption or rejection of construction technology; and			
	(D) describe how and why technology evolves.			
(13) The student solves problems, thinks critically, and makes decisions related to construction technology. The student is expected to:	(A) develop or improve a building or structure by following a problem			
	(B) apply critical			
	(C) apply decision			
(14) The student identifies the factors that influence the cost of goods and services in construction projects. The student is expected to:	(A) develop a budget for a construction project;			
	(B) determine the most effective strategies to minimize costs;			
	(C) identify the financial factors associated with starting and operating construction enterprises; and			
	(D) explain the role of business in a free enterprise system.			
(15) The student applies his/her communication, mathematics, and science knowledge and skills to construction activities. The student is expected to:	(A) use written, verbal, and visual communication techniques consistent with industry standards;			
	(B) use mathematics concepts in construction technology;			
	(C) identify and apply science principles used in construction technology; and			
	(D) use the appropriate units of measure.			
(16) The student describes basic product marketing processes and techniques used in construction. The student is expected to:	(A) prepare a marketing plan for a(n) idea, product, or service; and			
	(B) discuss the effect of customer satisfaction on the image of a product or company.			
(17) The student investigates career opportunities, requirements, and expectations in construction technology. The student is expected to:	(A) identify an area of interest in construction and investigate its entry-level and advancement requirements and its growth potential; and			
	(B) describe the careers available in construction technology.			
(18) The student describes the importance of	(A) describe how teams function;			

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teamwork, leadership, integrity, honesty, work habits, and organizational skills. The student is expected to:	(B) use teamwork to solve problems;			
	(C) distinguish between the roles of team leaders and team members;			
	(D) identify characteristics of good leaders;			
	(E) identify employers' expectations and appropriate work habits;			
	(F) define discrimination, harassment, and equality;			
	(G) use time management techniques to develop and maintain work schedules and meet deadlines; and			
	(H) complete his/her work according to established criteria.			

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