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Texas 2017 Proclamation:

§130.53. Architectural Design I

**Correlations to the Texas Essential Knowledge
and Skills (TEKS)**

**Correlations to the English Language Proficiency
Standards (ELPS)**



Correlation of
Architecture, 12e, ©2018
to the
Texas Essential Knowledge and Skills (TEKS)
Course: §130.53 Architectural Design I (MLC 9759)

The following chart lists the Knowledge and Skills Statements and Student Expectations for the Texas Essential Knowledge and Skills (TEKS) for Architectural Design I. For each Student Expectation, the corresponding pages in *Architecture* are listed.

Student Expectations	Textbook Page(s)
(1) The student demonstrates professional standards/employability skills as required by business and industry. The student is expected to:	
(1) (A) identify employment opportunities, including entrepreneurship, and preparation requirements in the field of architecture	49–65, 140, 830
(1) (B) demonstrate an understanding of group participation and leadership related to citizenship and career preparation	62–63, 282, 522, 740
(1) (C) identify employers' expectations and appropriate work habits	60–64
(1) (D) apply the competencies related to resources, information, systems, and technology in appropriate settings and situations	49–50, 55, 97–129, 335, 552
(1) (E) demonstrate knowledge of the concepts and skills related to health and safety in the workplace, as specified by appropriate government regulations	127–129
(2) The student applies key cognitive skills and academic behaviors to the requirements of architectural studies. The student is expected to:	
(2) (A) self-monitor learning needs and seek assistance when needed	18, 57–60, 62, 382
(2) (B) practice study habits necessary to manage academic pursuits and requirements	49–51, 382
(2) (C) strive for accuracy and precision	76–79, 82–86, 552–555
(2) (D) complete and master tasks	104, 111–112, 116–127
(2) (E) demonstrate effective verbal and written communication skills with individuals from varied cultures, including fellow workers, managers, and customers	61–63, 465
(2) (F) complete work orders and related paperwork	809–819, 825–832
(2) (G) estimate jobs, schedules, and practices related to legal restrictions	287–289, 807, 809–819, 825–832

Student Expectations	Textbook Page(s)
(2) (H) read and interpret appropriate architectural symbols, schematics, blueprints, work drawings, manuals, and bulletins	110–111, 143–150, 282, 334–335, 337–349, 717–726, 831
(2) (I) apply descriptive geometry related to auxiliary views, revolutions, and intersections	72
(3) The student knows the concepts and skills that form the technical knowledge of architectural design. The student is expected to:	
(3) (A) demonstrate knowledge of architectural design principles	151–181, 282–286
(3) (B) determine building code and zoning requirements for building types in a selected area	139–140, 229
(3) (C) demonstrate knowledge of the various grades and types of construction materials	364, 448–452, 470–476, 489–495
(4) The student knows the function and application of the tools, equipment, technologies, and materials used in architectural drawing. The student is expected to:	
(4) (A) use the tools, materials, and equipment commonly employed in the field of architecture in a safe manner	72–81, 127
(4) (B) handle and dispose of environmentally hazardous materials	127–129, 261–263
(4) (C) demonstrate knowledge of new and emerging technologies that may affect the field of architecture	28–29, 275–282
(5) The student applies the concepts and skills of the profession to simulated or actual work situations. The student is expected to:	
(5) (A) use problem-solving skills to analyze a situation and identify a problem to be solved	39, 282
(5) (B) break a complex problem into component parts that can be analyzed and solved separately	18, 256–267, 284
(5) (C) strive for accuracy and precision	337–348, 573–577
(5) (D) work independently	51, 494
(5) (E) work collaboratively	62–63, 298
(5) (F) research an architectural project	305
(5) (G) design and present an effective architectural product	126–127, 155–181, 659–675
(5) (H) present a final architectural product for critique	126–127, 659–675
(5) (I) apply architectural lettering techniques	80, 89–92
(5) (J) develop preliminary sketches of a nonresidential or residential architectural design	82–86, 282–283

Student Expectations	Textbook Page(s)
(5) (K) use traditional technical architectural drafting techniques to create drawings	337–343, 362–369
(5) (L) demonstrate through drawings the development of maximum efficiency of circulation within areas or rooms	159, 205–207
(5) (M) develop a site plan using maximum orientation of the building relative to views, sun, and wind direction	178, 383
(5) (N) develop building designs to ensure compatibility between interior and exterior to enhance overall appearance	164
(5) (O) draw schematic site plans, floor plans, building elevations, sections, perspectives, and character sketches from bubble diagrams	282–284, 337–348, 386–392, 555–559, 573–580, 637–644
(5) (P) draw scaled wall thickness plans, elevations, and sections	337–342, 350–351, 555–559, 573–580
(5) (Q) develop details of floor and wall sections as required	545–547, 560–561
(5) (R) demonstrate knowledge of the Americans with Disabilities Act	155–157, 266
(5) (S) assemble an architectural design in three dimensions	124–126, 289–296
(5) (T) customize screen menus to fit specific problems or needs	112
(5) (U) construct points, lines, and other geometric forms using accepted computer-aided design methods	104, 116–118, 343, 393–394
(5) (V) create a freehand simple one-point perspective	646–651
(5) (W) use a computer system to create a bill of materials	831
(5) (X) use a computer system to create and modify architectural drawings	116–120, 343–349, 350–353
(5) (Y) plot architectural drawings for presentation	102–103, 248, 353
(6) The student begins exploration, development, and organization of ideas from the surroundings. The student is expected to:	
(6) (A) begin illustrating ideas for architectural projects from direct observation, experiences, imagination	51–52, 135–141, 494
(6) (B) begin comparing and contrasting the use of architectural elements such as color, texture, form, line, space, value, and architectural principles such as emphasis, pattern, rhythm, balance, proportion, and unity in personal architectural projects and those of others using vocabulary accurately	3–18
(7) The student begins expressing ideas through original architectural projects using a variety of media with appropriate skill. The student is expected to:	

Student Expectations	Textbook Page(s)
(7) (A) create beginning visual solutions by elaborating on direct observation, experiences, and imagination	51–52, 164, 282–283
(7) (B) create beginning designs for practical applications	33–37
(7) (C) demonstrate beginning effective use of architectural media and tools in design, drawing, painting, printmaking, and sculpture such as model building	72–82, 102–103, 126, 297–298, 663, 682–686
(8) The student demonstrates an understanding of architectural history and culture as records of human achievement from ancient Egypt to the present. The student is expected to:	
(8) (A) compare and contrast historical and contemporary styles, identifying general themes and trends	3–29
(8) (B) describe general characteristics in architectural projects from a variety of cultures	3–29
(8) (C) compare and contrast career opportunities in architecture	49–65
(9) The student makes beginning informed judgments about personal architectural projects and the architectural projects of others. The student is expected to:	
(9) (A) interpret, evaluate, and justify architectural artistic decisions in personal architectural projects	664–668
(9) (B) select and analyze original architectural projects, portfolios, and exhibitions by peers or others to form precise conclusions about formal qualities, historical and cultural contexts, intents, and meanings	24, 28, 143–146, 335
(10)The student makes informed career decisions that reflect career goals. The student is expected to:	
(10) (A) determine employment and entrepreneurial opportunities and preparation requirements in architecture and related fields	49–65, 830
(10) (B) propose short-term and long-term career goals	62–63
(10) (C) describe technology used in architectural careers	103–104, 275–277
(10) (D) maintain a project portfolio that documents experience by using graphic or written documentation of architectural-related projects	60, 335
(10) (E) develop a professional résumé	60–61, 78
(11)The student applies communication, science, and mathematics knowledge and skills to architectural projects. The student is expected to:	
(11) (A) prepare professional communications, technical reports, and presentations	61, 112–113, 284, 613, 659
(11) (B) apply mathematical equations	444–448, 783–788

Student Expectations	Textbook Page(s)
(11) (C) apply scientific principles and concepts	779, 782
(12) The student knows the concept of sustainability. The student is expected to:	
(12) (A) identify the nature of energy	264, 710
(12) (B) relate potential energy, kinetic energy, and heat energy to conservation	263, 402, 710
(12) (C) create an energy model	112, 284–286
(12) (D) evaluate different methods of energy transfer	263, 710
(12) (E) recognize sustainable design as it relates to architectural design	256–267, 284–286
(12) (F) define green architecture as related to the field of architecture	21, 39, 255–256

English Language Proficiency Standards (ELPS) Correlation for *Architecture* by Kicklighter and Thomas, ©2018

This following chart identifies some of the content in *Architecture* that may provide useful support when addressing specific Texas English Language Proficiency Standards (ELPS).

Standard	Page(s)	Specific Location
(1) Cross-curricular second language acquisition/learning strategies. The ELL uses language learning strategies to develop an awareness of his or her own learning processes in all content areas. In order for the ELL to meet grade-level learning expectations across the foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. The student is expected to:		
(1)(A) use prior knowledge and experiences to understand meanings in English	96	Communicating... activity #1
(1)(B) monitor oral and written language production and employ self-corrective techniques or other resources	68	Communicating... activity #2
(1)(C) use strategic learning techniques such as concept mapping, drawing, memorizing, comparing, contrasting, and reviewing to acquire basic and grade-level vocabulary	46	Suggested Activities #2
	68	Communicating... activity #1
	225	Curricular Connections #1
	253	Curricular Connections #1
	376	Curricular Connections #1
(1)(D) speak using learning strategies such as requesting assistance, employing non-verbal cues, and using synonyms and circumlocution (conveying ideas by defining or describing when exact English words are not known)	425	Curricular Connections #1
	32	Communicating... activity #1
	32	Communicating... activity #2
	133	Communicating... activity #2
(1)(F) use accessible language and learn new and essential language in the process	133	Communicating... activity #1
	153	Communicating... activity #1
	184	Communicating... activity #1
	184	Communicating... activity #2
	226	Communicating... activity #1
	303	Communicating... activity #1
	325	Communicating... activity #1
	376	Communicating... activity #1

Standard	Page(s)	Specific Location
(2) Cross-curricular second language acquisition/listening. The ELL listens to a variety of speakers including teachers, peers, and electronic media to gain an increasing level of comprehension of newly acquired language in all content areas. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in listening. In order for the ELL to meet grade-level learning expectations across the foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. The student is expected to:		
(2)(C) learn new language structures, expressions, and basic and academic vocabulary heard during classroom instruction and interactions	48	Communicating... activity #1
	68	Communicating... activity #2
	96	Communicating... activity #1
	184	Communicating... activity #2
(2)(D) monitor understanding of spoken language during classroom instruction and interactions and seek clarification as needed	48	Communicating... activity #2
	68	Communicating... activity #1
	254	Communicating... activity #1
(2)(E) use visual, contextual, and linguistic support to enhance and confirm understanding of increasingly complex and elaborated spoken language	32	Communicating... activity #1
	32	Communicating... activity #2
	133	Communicating... activity #2
	151	Suggested Activities #4
	184	Communicating... activity #2
	514	Communicating... activity #2
(2)(F) listen to and derive meaning from a variety of media such as audio tape, video, DVD, and CD ROM to build and reinforce concept and language attainment	627	Communicating... activity #2
(2)(G) understand the general meaning, main points, and important details of spoken language ranging from situations in which topics, language, and contexts are familiar to unfamiliar	47	Communicating... activity #1
	153	Communicating... activity #1
	325	Communicating... activity #1
(2)(H) understand implicit ideas and information in increasingly complex spoken language commensurate with grade-level learning expectations	376	Communicating... activity #1
	398	Communicating... activity #2
(2)(I) demonstrate listening comprehension of increasingly complex spoken English by following directions, retelling or summarizing spoken messages, responding to questions and requests, collaborating with peers, and taking notes commensurate with content and grade-level needs	68	Communicating... activity #1
	226	Communicating... activity #1
	272	Suggested Activities #5
	303	Curricular Connections #1
	426	Communicating... activity #1
(2)(I) demonstrate listening comprehension of increasingly complex spoken English by following directions, retelling or summarizing spoken messages, responding to questions and requests, collaborating with peers, and taking notes commensurate with content and grade-level needs	48	Communicating... activity #2
	254	Communicating... activity #1
	273	Communicating... activity #2
	357	Communicating... activity #1

Standard	Page(s)	Specific Location
(3) Cross-curricular second language acquisition/speaking. The ELL speaks in a variety of modes for a variety of purposes with an awareness of different language registers (formal/informal) using vocabulary with increasing fluency and accuracy in language arts and all content areas. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in speaking. In order for the ELL to meet grade-level learning expectations across the foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. The student is expected to:		
(3)(B) expand and internalize initial English vocabulary by learning and using high-frequency English words necessary for identifying and describing people, places, and objects, by retelling simple stories and basic information represented or supported by pictures, and by learning and using routine language needed for classroom communication	48	Communicating... activity #1
	48	Communicating... activity #2
	133	Communicating... activity #2
(3)(D) speak using grade-level content area vocabulary in context to internalize new English words and build academic language proficiency	68	Communicating... activity #1
	184	Communicating... activity #2
	254	Communicating... activity #1
(3)(E) share information in cooperative learning interactions	68	Communicating... activity #1
	184	Communicating... activity #2
	254	Communicating... activity #1
	273	Communicating... activity #2
	357	Communicating... activity #1
	376	STEM Connections #1
	564	Communicating... activity #2
	586	Communicating... activity #1
(3)(F) ask and give information ranging from using a very limited bank of high-frequency, high-need, concrete vocabulary, including key words and expressions needed for basic communication in academic and social contexts, to using abstract and content-based vocabulary during extended speaking assignments	46	Suggested Activities #2
	47	Problem Solving Case Study
	57	Suggested Activities #3
	68	Communicating... activity #2
(3)(G) express opinions, ideas, and feelings ranging from communicating single words and short phrases to participating in extended discussions on a variety of social and grade-appropriate academic topics	47	Curricular Connections #1
	184	Communicating... activity #1
(3)(H) narrate, describe, and explain with increasing specificity and detail as more English is acquired	514	Communicating... activity #1
	586	Communicating... activity #2
	658	Communicating... activity #1
	678	Communicating... activity #2

Standard	Page(s)	Specific Location
(4) Cross-curricular second language acquisition/reading. The ELL reads a variety of texts for a variety of purposes with an increasing level of comprehension in all content areas. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in reading. In order for the ELL to meet grade-level learning expectations across the foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. For kindergarten and first grade, certain of these student expectations apply to text read aloud for students not yet at the stage of decoding written text. The student is expected to:		
(4)(C) develop basic sight vocabulary, derive meaning of environmental print, and comprehend English vocabulary and language structures used routinely in written classroom materials	133	Communicating... activity #1
	153	Communicating... activity #1
	153	Communicating... activity #2
	184	Communicating... activity #1
	184	Communicating... activity #2
(4)(D) use prereading supports such as graphic organizers, illustrations, and pretaught topic-related vocabulary and other prereading activities to enhance comprehension of written text	32	Curricular Connections #1
	94	Suggested Activities #5
	133	Communicating... activity #1
	202	Suggested Activities #2
	225	Curricular Connections #1
(4)(E) read linguistically accommodated content area material with a decreasing need for linguistic accommodations as more English is learned	96	Communicating... activity #2
	226	Communicating... activity #2
	273	Curricular Connections #2
(4)(F) use visual and contextual support and support from peers and teachers to read grade-appropriate content area text, enhance and confirm understanding, and develop vocabulary, grasp of language structures, and background knowledge needed to comprehend increasingly challenging language	133	Communicating... activity #1
	226	Communicating... activity #1
	398	Communicating... activity #1
	484	Communicating... activity #1
	564	Communicating... activity #1
	696	Communicating... activity #1
	766	Communicating... activity #1
	836	Communicating... activity #1
(4)(G) demonstrate comprehension of increasingly complex English by participating in shared reading, retelling or summarizing material, responding to questions, and taking notes commensurate with content area and grade level needs	48	Communicating... activity #1
	254	Communicating... activity #1
	273	Communicating... activity #1
	357	Communicating... activity #1
	748	Suggested Activities #1
	805	Communicating... activity #1
	805	Communicating... activity #2
(4)(I) demonstrate English comprehension and expand reading skills by employing basic reading skills such as demonstrating understanding of supporting ideas and details in text and graphic sources, summarizing text and distinguishing main ideas from details commensurate with content area needs	32	Communicating... activity #1
	47	Problem Case Solving Study
	626	Suggested Activities #4
	677	STEM Connections #1

Standard	Page(s)	Specific Location
(4)(K) demonstrate English comprehension and expand reading skills by employing analytical skills such as evaluating written information and performing critical analyses commensurate with content area and grade level needs	31	Suggested Activities #5
	47	Curricular Connections #1
	224	Suggested Activities #3
	323	Suggested Activities #3
	357	Curricular Connections #1
(5) Cross-curricular second language acquisition/writing. The ELL writes in a variety of forms with increasing accuracy to effectively address a specific purpose and audience in all content areas. ELLs may be at the beginning, intermediate, advanced, or advanced high stage of English language acquisition in writing. In order for the ELL to meet grade-level learning expectations across foundation and enrichment curriculum, all instruction delivered in English must be linguistically accommodated (communicated, sequenced, and scaffolded) commensurate with the student's level of English language proficiency. For kindergarten and first grade, certain of these student expectations do not apply until the student has reached the stage of generating original written text using a standard writing system. The student is expected to:		
(5)(B) write using newly acquired basic vocabulary and content-based grade-level vocabulary	426	Communicating... activity #1
	585	Curricular Connections #2
	749	Communicating... activity #2
(5)(F) write using a variety of grade-appropriate sentence lengths, patterns, and connecting words to combine phrases, clauses, and sentences in increasingly accurate ways as more English is acquired	95	Curricular Connections #2
	96	STEM Connections #2
	131	Suggested Activities #3
	132	Curricular Connections #1
	184	Curricular Connections #2
	226	STEM Connections #1
(5)(G) narrate, describe, and explain with increasing specificity and detail to fulfill content area writing needs as more English is acquired	302	Suggested Activities #1
	514	Communicating... activity #1
	584	Communicating... activity #1
	658	Communicating... activity #1
	678	Communicating... activity #1