Appendix R… Texas TEKS Correlation, Computer Science I

Texas TEKS (Knowledge and Skills)	Student Expectations	Page(s)
01. Foundations. The student demonstrates knowledge and appropriate use of hardware components, software programs, and their connections.	A. Demonstrate knowledge and appropriate use of operating systems, software applications, and communication and networking components.	S-4, U-1
01. Foundations. The student demonstrates knowledge and appropriate use of hardware components, software programs, and their connections.	B. Compare, contrast, and appropriately use the various input, processing, output, and primary/secondary storage devices.	S-5
01. Foundations. The student demonstrates knowledge and appropriate use of hardware components, software programs, and their connections.	C. Make decisions regarding the selection, acquisition, and use of software taking under consideration its quality, appropriateness, effectiveness, and efficiency.	14-4, U-1
01. Foundations. The student demonstrates knowledge and appropriate use of hardware components, software programs, and their connections.	D. Delineate and make necessary adjustments regarding compatibility issues including, but not limited to, digital file formats and cross platform connectivity.	E-2, T-2
01. Foundations. The student demonstrates knowledge and appropriate use of hardware components, software programs, and their connections.	E. Differentiate current programming languages, discuss the use of the languages in other fields of study, and demonstrate knowledge of specific programming terminology and concepts.	V-1, V-2
01. Foundations. The student demonstrates knowledge and appropriate use of hardware components, software programs, and their connections.	F. Differentiate among the levels of programming languages including machine, assembly, high-level compiled and interpreted languages.	V-1, V-2
01. Foundations. The student demonstrates knowledge and appropriate use of hardware components, software programs, and their connections.	G. Demonstrate coding proficiency in a contemporary programming language.	Lessons 1 - 48
02. Foundations. The student uses data input skills appropriate to the task.	A. Demonstrate proficiency in the use of a variety of input devices such as keyboard, scanner, voice/sound recorder, mouse, touch screen, or digital video by appropriately incorporating such components into the product.	7-1, 45-5, U-1
02. Foundations. The student uses data input skills appropriate to the task.	B. Use digital keyboarding standards for the input of data.	1-1, 7-1
03. Foundations. The student complies with the laws and examines the issues regarding the use of technology in society.	A. Discuss copyright laws/issues and model ethical acquisition and use of digital information, citing sources using established methods.	T-2
03. Foundations. The student complies with the laws and examines the issues regarding the use of technology in society.	B. Demonstrate proper etiquette and knowledge of acceptable use policies when using networks, especially resources on the Internet and intranet.	T-2
03. Foundations. The student complies with the laws and examines the issues regarding the use of technology in society.	C. Investigate measures, such as passwords or virus detection/prevention, to protect computer systems and databases from unauthorized use and tampering.	47-2, T-2
03. Foundations. The student complies with the laws and examines the issues regarding the use of technology in society.	D. Discuss the impact of computer programming on the World Wide Web (WWW) community.	36-5, V-1
04. Information acquisition. The student uses a variety of strategies to acquire information from electronic resources, with appropriate supervision.	A. Use local area networks (LANs) and wide area networks (WANs), including the Internet and intranet, in research and resource sharing.	U-1
04. Information acquisition. The student uses a variety of strategies to acquire information from electronic resources, with appropriate supervision.	B. Construct appropriate electronic search strategies in the acquisition of information including keyword and Boolean search strategies.	8-1, 8-3
05. Information acquisition. The student acquires electronic information in a variety of formats, with appropriate supervision.	A. Acquire information in and knowledge about electronic formats including text, audio, video, and graphics.	14-4, E-1, E-2, E-3

05. Information acquisition. The student acquires electronic information in a variety of formats, with appropriate supervision.	B. Use a variety of resources, including foundation and enrichment curricula, together with various productivity tools to gather authentic data as a basis for individual and group programming projects.	14-4, U-1
05. Information acquisition. The student acquires electronic information in a variety of formats, with appropriate supervision.	C. Design and document sequential search algorithms for digital information storage and retrieval.	39-3, 41-2, 47-1
06. Information acquisition. The student evaluates the acquired electronic information.	A. Determine and employ methods to evaluate the design and functionality of the process using effective coding, design, and test data.	7-3, 11-5, 15-8, 16-6, 17-6, 23-5, 24-5
06. Information acquisition. The student evaluates the acquired electronic information.	B. Implement methods for the evaluation of the information using defined rubrics.	U-1
07. Solving problems. The student uses appropriate computer-based productivity tools to create and modify solutions to problems.	A. Apply problem-solving strategies such as design specifications, modular top-down design, step-wise refinement, or algorithm development.	27-3, 27-4, L-1, 25-6, 30-6
07. Solving problems. The student uses appropriate computer-based productivity tools to create and modify solutions to problems.	B. Use visual organizers to design solutions such as flowcharts or schematic drawings.	48-1, 48-2
07. Solving problems. The student uses appropriate computer-based productivity tools to create and modify solutions to problems.	C. Develop sequential and iterative algorithms and code programs in prevailing computer languages to solve practical problems modeled from school and community.	25-6, 26-2, 27-4, 38-7
07. Solving problems. The student uses appropriate computer-based productivity tools to create and modify solutions to problems.	D. Code using various data types.	2-1, 8-1, 10-1, 18-1, D-1
07. Solving problems. The student uses appropriate computer-based productivity tools to create and modify solutions to problems.	E. Demonstrate effective use of predefined input and output procedures for lists of computer instructions including procedures to protect from invalid input.	37-1, 38-1, 42-1
07. Solving problems. The student uses appropriate computer-based productivity tools to create and modify solutions to problems.	F. Develop coding with correct and efficient use of expressions and assignment statements including the use of standard/user-defined functions, data structures, operators/proper operator precedence, and sequential/conditional/repetitive control structure.	4-1, 6-1, 8-1, 9-1, 10-1, 12-1, H-1
07. Solving problems. The student uses appropriate computer-based productivity tools to create and modify solutions to problems.	G. Create and use libraries of generic modular code to be used for efficient programming.	6-1, 19-3, 21-1, 23-1, 31-1, 37-1, 46-1, 47-1
07. Solving problems. The student uses appropriate computer-based productivity tools to create and modify solutions to problems.	H. Identify actual and formal parameters and use value and reference parameters.	15-2, 15-3, 34-1
07. Solving problems. The student uses appropriate computer-based productivity tools to create and modify solutions to problems.	I. Use control structures such as conditional statements and iterated, pretest, and posttest loops.	9-1, 10-1, 11-1, 12-1
07. Solving problems. The student uses appropriate computer-based productivity tools to create and modify solutions to problems.	J. Use sequential, conditional, selection, and repetition execution control structures such as menu-driven programs that branch and allow user input.	9-1, 7-1, 10-1,
07. Solving problems. The student uses appropriate computer-based productivity tools to create and modify solutions to problems.	K. Identify and use structured data types of one-dimensional arrays, records, and text files.	18-1, 19-1, 24-1, F-1
08. Solving problems. The student uses research skills and electronic communication, with appropriate supervision, to create new knowledge.	A. Participate with electronic communities as a learner, initiator, contributor, and teacher/mentor.	36-5, U-1
08. Solving problems. The student uses research skills and electronic communication, with appropriate supervision, to create new knowledge.	B. Demonstrate proficiency in, appropriate use of, and navigation of LANs and WANs for research and for sharing of resources.	47-2, T-2, U-1

08. Solving problems. The student uses research skills and electronic communication, with appropriate supervision, to create new knowledge.	C. Extend the learning environment beyond the school walls with digital products created to increase teaching and learning in the foundation and enrichment curricula.	14-4, U-1
08. Solving Problems. The student uses research skills and electronic communication, with appropriate supervision, to create new knowledge.	D. Participate in relevant, meaningful activities in the larger community and society to create electronic projects.	36-5, U-1
09. Solving problems. The student uses technology applications to facilitate evaluation of work, both process and product.	A. Design and implement procedures to track trends, set timelines, and review/evaluate progress for continual improvement in process and product.	39-1, 41-2, 41-4, 41-6, 41-9
09. Solving problems. The student uses technology applications to facilitate evaluation of work, both process and product.	B. Use correct programming style to enhance the readability and functionality of the code such as spacing, descriptive identifiers, comments, or documentation.	1-2, 2-2, 15-1
09. Solving problems. The student uses technology applications to facilitate evaluation of work, both process and product.	C. Seek and respond to advice from peers and professionals in delineating technological tasks.	36-5, U-1
09. Solving problems. The student uses technology applications to facilitate evaluation of work, both process and product.	D. Resolve information conflicts and validate information through accessing, researching, and comparing data.	45-1, 45-5, U-1
09. Solving Problems. The student uses technology applications to facilitate evaluation of work, both process and product.	E. Create technology specifications for tasks/evaluation rubrics and demonstrate that products/product quality can be evaluated against established criteria.	14-4, U-1
10. Communication. The student formats digital information for appropriate and effective communication.	A. Annotate coding properly with comments, indentation, and formatting.	1-2, 2-2, 27-3
10. Communication. The student formats digital information for appropriate and effective communication.	B. Create interactive documents using modeling, simulation, and hypertext.	9-3, 11-5
11. Communication. The student delivers the product electronically in a variety of media, with appropriate supervision.	A. Publish information in a variety of ways including, but not limited to, printed copy and monitor displays.	14-4, U-1
12. Communication. The student uses technology applications to facilitate evaluation of communication, both process and product.	B. Seek and respond to advice from peers and professionals in evaluating the product.	36-5, U-1
12. Communication. The student uses technology applications to facilitate evaluation of communication, both process and product.	C. Debug and solve problems using reference materials and effective strategies.	14-4, A-1 – U-1