

CompuScholar, Inc.Correlations to the Texas Essential Knowledge and Skills (TEKS):
Fundamentals of Computer Science**Texas Course Details:**

Chapter	Chapter 126. Texas Essential Knowledge and Skills for Tech Apps
Subchapter	Subchapter C. High School
Course	§126.32. Fundamentals of Computer Science (One-Credit)
TEKS Coverage	100% (see Note 3)

CompuScholar Course Details:

Course Title:	Digital Savvy
Course ISBN:	978-0-9887070-8-5
Course Year:	2019

Course Title:	Python Programming
Course ISBN:	978-1-946113-00-9
Course Year:	2019

Syllabus and Pacing Guide to Meet State Requirements

In order to meet "Fundamentals of Computer Science" requirements with a full credit, CompuScholar recommends using the following chapters of our "**Digital Savvy**" course in the first semester, and then complete our "**Python Programming**" course in the second semester.

Semester 1 - Digital Savvy**Semester 2 - Python Programming**

Chapter 1	Chapter 1
Chapter 2	Chapter 2
Chapter 3	Chapter 3
Chapter 4	Chapter 4
Chapter 6	Chapter 5
Chapter 7	Chapter 6
Chapter 8	Chapter 7
Chapter 14	Chapter 8
Chapter 17	Chapter 9
Chapter 18	Chapter 10
Chapter 19	Chapter 11
Chapter 20	Chapter 12
Chapter 21	Chapter 11
Chapter 22	Chapter 13
Chapter 23	Supplemental Chapter 2
Chapter 25	Supplemental Chapter 3
Supplemental Chapter 1	Supplemental Chapter 4
Supplemental. Chapter. 2, Lesson 1	

Course Standards

Note 1: Citation(s) listed may represent a subset of the instances where objectives are met throughout the course.

Note 2: Citation(s) for a "Lesson" refer to the "Lesson Text" elements and associated "Activities" within the course, unless otherwise noted. The "Instructional Video" components are supplements designed to introduce or re-enforce the main lesson concepts, and the Lesson Text contains full details.

Note 3: Line item 4.A refers to an obsolete technology that is widely discouraged by today's web standards. Line item 4.B requires significant knowledge of HTML and JavaScript. If desired, teachers can meet these standards by using selected chapters in our Web Design course; please contact us for details.

*To meet all Texas requirements, each line item has **at least one citation** from either course. Sometimes, specific standards are met by both courses, though **duplication from both courses is not necessary**. By completing the recommended chapters in each course, you will cover all listed Texas requirements.*

Knowledge and Skills Statement: (1) Creativity and innovation. The student develops products and generates new understanding by extending existing knowledge. The student is expected to:

Student Expectation	Digital Savvy Citation(s)	Python Citation(s)
(1.A) investigate and explore various career opportunities within the computer science field and report findings through various media;	Chapter 14	Suppl. Chapter 3, Lessons 4 - 5
(1.B) create and publish interactive stories, games, and animations;	Chapters 22 - 23, 25	Chapter 12
(1.C) create and publish interactive animations;	Chapters 22 - 23, 25	
(1.D) create algorithms for the solution of various problems;	Chapter 22, Lesson 3	Suppl. Chapter 3, Lesson 3
(1.E) create web pages using a mark-up language;	Chapters 19 - 21	
(1.F) use the Internet to create and publish solutions;	Chapters 19 - 23, 25	
(1.G) design creative and effective user interfaces.	Chapters 19 - 21, 25	Chapter 12, Lesson 3

Knowledge and Skills Statement: (2) Communication and collaboration. The student communicates and collaborates with peers to contribute to his or her own learning and the learning of others. The student is expected to:

Student Expectation	Digital Savvy Citation(s)	Python Citation(s)
(2.A) seek and respond to advice from peers and professionals in evaluating problem solutions;	Chapter 25, Activity 3	Chapter 13, Activity 4

(2.B) debug and solve problems using reference materials and effective strategies;		Chapter 5
(2.C) publish information in a variety of ways such as print, monitor display, web pages, and video.	Chapters 19 - 23, 25	

Knowledge and Skills Statement: (3) Research and information fluency. The student locates, analyzes, processes, and organizes data. The student is expected to:		
Student Expectation	Digital Savvy Citation(s)	Python Citation(s)
(3.A) construct appropriate electronic search strategies;	Chapter 7	
(3.B) use a variety of resources, including other subject areas, together with various productivity tools to gather authentic data as a basis for individual and group programming projects.	Chapter 25	Chapter 13

Knowledge and Skills Statement: (4) Critical thinking, problem solving, and decision making. The student uses appropriate strategies to analyze problems and design algorithms. The student is expected to:		
Student Expectation	Digital Savvy Citation(s)	Python Citation(s)
(4.A) demonstrate the ability to insert applets into web pages;	See Note 3	
(4.B) find, download, and insert scripting code into web pages to enhance interactivity;	See Note 3	
(4.C) understand binary representation of data in computer systems, perform conversions between decimal and binary number systems, and count in binary number systems;	Suppl. Chapter 2, Lesson 1	Suppl. Chapter 3, Lesson 1
(4.D) read and define a problem's description, purpose, and goals;		Chapter 13, Activity 1
(4.E) demonstrate coding proficiency in a contemporary programming language by developing solutions that create stories, games, and animations;	Chapters 22 - 23, 25	Chapters 12, 13
(4.F) choose, identify, and use the appropriate data type to properly represent data in a problem solution;	Chapter 25, Activity 1	Chapter 2 Chapter 6, Lessons 1 - 2
(4.G) demonstrate an understanding of and use variables within a programmed story, game, or animation;	Chapters 23, 25	Chapter 2 Chapter 12
(4.H) demonstrate proficiency in the use of arithmetic operators to create mathematical expressions, including addition, subtraction, multiplication, real division, integer division, and modulus division;		Chapter 2, Lesson 2
(4.I) demonstrate an understanding of and use sequence within a programmed story, game, or animation;	Chapter 22, Lesson 3	Chapter 4, Lesson 2 Chapter 12

(4.J) demonstrate an understanding of and use conditional statements within a programmed story, game, or animation;	Chapter 23, Lesson 3	Chapter 4, Lesson 2 Chapter 12
(4.K) demonstrate an understanding of and use iteration within a programmed story, game, or animation;	Chapter 23, Lesson 2	Chapter 6, Lessons 3 - 4 Chapter 12
(4.L) create an interactive story, game, or animation;	Chapters 22-23, 25	Chapter 12
(4.M) use random numbers within a programmed story, game, or animation;		Chapter 7, Lesson 3
(4.N) test program solutions by investigating valid and invalid data.		Chapter 8, Lesson 3 Chapter 9 Activity

Knowledge and Skills Statement: (5) Digital citizenship. The student explores and understands safety, legal, cultural, and societal issues relating to the use of technology and information. The student is expected to:		
Student Expectation	Digital Savvy Citation(s)	Python Citation(s)
(5.A) discuss copyright laws/issues and model ethical acquisition of digital information by citing sources using established methods;	Chapter 7, Lesson 3 Chapter 8, Lessons 4 - 5	Suppl. Chapter 2, Lessons 1 - 2
(5.B) demonstrate proper digital etiquette and knowledge of acceptable use policies when using networks, especially resources on the Internet and on intranets;	Chapter 8, Lesson 4	Suppl. Chapter 2, Lessons 1 - 2
(5.C) investigate measures such as passwords or virus detection/prevention to protect computer systems and databases from unauthorized use and tampering;	Chapter 8, Lessons 1 - 3	Suppl. Chapter 2, Lesson 3
(5.D) understand the safety risks associated with the use of social networking sites;	Chapter 8, Lesson 1 Chapters 17 - 18	Suppl. Chapter 2, Lessons 3 - 4 Suppl. Chapter 4, Lesson 2
(5.E) discuss the impact of computing and computing related advancements on society;	Suppl. Chapter 1	Suppl. Chapter 4
(5.F) determine the reliability of information available through electronic media.	Chapter 7, Lesson 3	

Knowledge and Skills Statement: (6) Technology operations and concepts. The student understands technology concepts, systems, and operations as they apply to computer science. The student is expected to:		
Student Expectation	Digital Savvy Citation(s)	Python Citation(s)
(6.A) demonstrate knowledge of the basic computer components, including a central processing unit (CPU), storage, and input/output devices;	Chapter 1	

(6.B) use operating system tools, including appropriate file management;	Chapters 3, 4	
(6.C) demonstrate knowledge and appropriate use of different operating systems;	Chapter 3	
(6.D) demonstrate knowledge and understanding of basic network connectivity;	Chapter 6	
(6.E) describe, compare, and contrast the differences between an application and an operating system;	Chapters 2, 3	
(6.F) compare, contrast, and appropriately use various input, processing, output, and primary/secondary storage devices.	Chapter 1, Lesson 3	