TeenCoder: Java Programming (Abridged)

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

STUDENT and TEACHER Material

Subject	Chapter 126. Technology Applications
Subchapter	Subchapter C. High School
Course Title	§126.33. Computer Science I (One-Half to One Credit), Beginning with School Year 2012-2013.
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Unless otherwise noted, references to instructions, assessments, and activities are valid for both STUDENT and TEACHER material as follows:

Citation Type	Citation Format	Student Location	Teacher Location
Instruction	Chapter X, Lesson Y	Chapter X, Lesson Y “Lesson Text”	Chapter X, Lesson Y “Teacher Guide”
Assessment	Chapter X, Lesson Y Quiz Chapter X Exam	Chapter X, Lesson Y Quiz Chapter X Exam	Chapter X, Lesson Y “Quiz Answer Key” Chapter X “Test Answer Key”
Activity	Chapter X Activity	Chapter X “Activity Instructions”	Chapter X “Activity Solution Guide” and “Activity Solution Files”

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

Student Expectation	Breakout	Citation Type	Description
(1) (A) participate with electronic communities as a learner, initiator, contributor, and teacher/mentor	(i) participate with electronic communities as a learner	Instruction	Chapter 21, Lessons 1-4 (Team Project)
		Activity	Chapter 21, Activities 1-4 (Team Project)
(1) (A) participate with electronic communities as a learner, initiator, contributor, and teacher/mentor	(ii) participate with electronic communities as a[n] initiator	Instruction	Chapter 21, Lessons 1-4 (Team Project)
		Activity	Chapter 21, Activities 1-4 (Team Project)
(1) (A) participate with electronic communities as a learner, initiator, contributor, and teacher/mentor	(iii) participate with electronic communities as a contributor	Instruction	Chapter 21, Lessons 1-4 (Team Project)
		Activity	Chapter 21, Activities 1-4 (Team Project)
(1) (A) participate with electronic communities as a learner, initiator, contributor, and teacher/mentor	(iv) participate with electronic communities as a teacher/mentor	Instruction	Chapter 21, Lessons 1-4 (Team Project)
		Activity	Chapter 21, Activities 1-4 (Team Project)
(1) (B) extend the learning environment beyond the school walls with digital products created to increase teaching and learning in the other subject areas	(i) extend the learning environment beyond the school walls with digital products created to increase teaching in the other subject areas	Instruction	Chapter 21, Lessons 1-4 (Team Project)
		Activity	Chapter 21, Activities 1-4 (Team Project)
(1) (B) extend the learning environment beyond the school walls with digital products created to increase teaching and learning in the other subject areas	(ii) extend the learning environment beyond the school walls with digital products created to increase learning in the other subject areas	Instruction	Chapter 21, Lessons 1-4 (Team Project)
		Activity	Chapter 21, Activities 1-4 (Team Project)

(1) (C) participate in relevant, meaningful activities in the larger community and society to create electronic projects	(i) participate in relevant activities in the larger community to create electronic projects	Instruction	Chapter 21, Lessons 1-4 (Team Project)
		Activity	Chapter 21, Activities 1-4 (Team Project)
(1) (C) participate in relevant, meaningful activities in the larger community and society to create electronic projects	(ii) participate in relevant activities in society to create electronic projects	Instruction	Chapter 21, Lessons 1-4 (Team Project)
		Activity	Chapter 21, Activities 1-4 (Team Project)
(1) (C) participate in relevant, meaningful activities in the larger community and society to create electronic projects	(iii) participate in meaningful activities in the larger community to create electronic projects	Instruction	Chapter 21, Lessons 1-4 (Team Project)
		Activity	Chapter 21, Activities 1-4 (Team Project)
(1) (C) participate in relevant, meaningful activities in the larger community and society to create electronic projects	(iv) participate in meaningful activities in society to create electronic projects	Instruction	Chapter 21, Lessons 1-4 (Team Project)
		Activity	Chapter 21, Activities 1-4 (Team Project)

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	Breakout	Citation Type	Description
(2) (A) create and properly display meaningful output	(i) create meaningful output	Instruction	Chapter 5, Lesson 4 Chapter 12, Lessons 1-4 Chapter 13, Lessons 1-3
		Activity	Chapter 5 Activity (String Theory) Chapter 12 Activity (Phone Dialer) Chapter 13 Activity (Pizza Place)
(2) (A) create and properly display meaningful output	(ii) properly display meaningful output	Instruction	Chapter 5, Lesson 4 Chapter 12, Lessons 1-4 Chapter 13, Lessons 1-3
		Activity	Chapter 5 Activity (String Theory) Chapter 12 Activity (Phone Dialer) Chapter 13 Activity (Pizza Place)

(2) (B) create interactive console display interfaces, with appropriate user prompts, to acquire data from a user		Instruction	Chapter 6, Lesson 2
		Activity	Chapter 6 Activity (Conversation Piece)
(2) (C) use Graphical User Interfaces (GUIs) to create interactive interfaces to acquire data from a user and display program results	(i) use Graphical User Interfaces (GUIs) to create interactive interfaces to acquire data from a user	Instruction	Chapter 12, Lessons 1-4 Chapter 13, Lessons 1-3
		Activity	Chapter 12 Activity (Phone Dialer) Chapter 13 Activity (Pizza Place)
(2) (C) use Graphical User Interfaces (GUIs) to create interactive interfaces to acquire data from a user and display program results	(ii) use Graphical User Interfaces (GUIs) to create interactive interfaces to display program results	Instruction	Chapter 12, Lessons 1-4 Chapter 13, Lessons 1-3
		Activity	Chapter 12 Activity (Phone Dialer) Chapter 13 Activity (Pizza Place)
(2) (D) write programs with proper programming style to enhance the readability and functionality of the code by using meaningful descriptive identifiers, internal comments, white space, spacing, indentation, and a standardized program style	(i) write programs with proper programming style to enhance the readability of the code by using meaningful descriptive identifiers	Instruction	Chapter 4, Lesson 2
		Activity	Chapter 4 Activity (Experiment With Data Types)
(2) (D) write programs with proper programming style to enhance the readability and functionality of the code by using meaningful descriptive identifiers, internal comments, white space, spacing, indentation, and a standardized program style	(ii) write programs with proper programming style to enhance the readability of the code by using internal comments	Instruction	Chapter 2, Lesson 2
		Activity	Chapter 2 Activity (Show Time)

(2) (D) write programs with proper programming style to enhance the readability and functionality of the code by using meaningful descriptive identifiers, internal comments, white space, spacing, indentation, and a standardized program style	(iii) write programs with proper programming style to enhance the readability of the code by using white space	Instruction	Chapter 2, Lesson 2
		Activity	Chapter 2 Activity (Show Time)
(2) (D) write programs with proper programming style to enhance the readability and functionality of the code by using meaningful descriptive identifiers, internal comments, white space, spacing, indentation, and a standardized program style	(iv) write programs with proper programming style to enhance the readability of the code by using spacing	Instruction	Chapter 2, Lesson 2
		Activity	Chapter 2 Activity (Show Time)
(2) (D) write programs with proper programming style to enhance the readability and functionality of the code by using meaningful descriptive identifiers, internal comments, white space, spacing, indentation, and a standardized program style	(v) write programs with proper programming style to enhance the readability of the code by using indentation	Instruction	Chapter 2, Lesson 2
		Activity	Chapter 2 Activity (Show Time)
(2) (D) write programs with proper programming style to enhance the readability and functionality of the code by using meaningful descriptive identifiers, internal comments, white space, spacing, indentation, and a standardized program style	(vi) write programs with proper programming style to enhance the readability of the code by using a standardized program style	Instruction	Chapter 2, Lesson 2
		Activity	Chapter 2 Activity (Show Time)

(2) (D) write programs with proper programming style to enhance the readability and functionality of the code by using meaningful descriptive identifiers, internal comments, white space, spacing, indentation, and a standardized program style	(vii) write programs with proper programming style to enhance the functionality of the code by using meaningful descriptive identifiers	Instruction	Chapter 4, Lesson 2
		Activity	Chapter 4 Activity (Experiment With Data Types)
(2) (D) write programs with proper programming style to enhance the readability and functionality of the code by using meaningful descriptive identifiers, internal comments, white space, spacing, indentation, and a standardized program style	(viii) write programs with proper programming style to enhance the functionality of the code by using internal comments	Instruction	Chapter 2, Lesson 2
		Activity	Chapter 2 Activity (Show Time)
(2) (D) write programs with proper programming style to enhance the readability and functionality of the code by using meaningful descriptive identifiers, internal comments, white space, spacing, indentation, and a standardized program style	(ix) write programs with proper programming style to enhance the functionality of the code by using white space	Instruction	Chapter 2, Lesson 2
		Activity	Chapter 2 Activity (Show Time)
(2) (D) write programs with proper programming style to enhance the readability and functionality of the code by using meaningful descriptive identifiers, internal comments, white space, spacing, indentation, and a standardized program style	(x) write programs with proper programming style to enhance the functionality of the code by using spacing	Instruction	Chapter 2, Lesson 2
		Activity	Chapter 2 Activity (Show Time)

(2) (D) write programs with proper programming style to enhance the readability and functionality of the code by using meaningful descriptive identifiers, internal comments, white space, spacing, indentation, and a standardized program style	(xi) write programs with proper programming style to enhance the functionality of the code by using indentation	Instruction	Chapter 2, Lesson 2
		Activity	Chapter 2 Activity (Show Time)
(2) (D) write programs with proper programming style to enhance the readability and functionality of the code by using meaningful descriptive identifiers, internal comments, white space, spacing, indentation, and a standardized program style	(xii) write programs with proper programming style to enhance the functionality of the code by using a standardized program style	Instruction	Chapter 2, Lesson 2
		Activity	Chapter 2 Activity (Show Time)
(2) (E) improve numeric display by optimizing data visualization		Instruction	Chapter 5, Lesson 4 Chapter 17, Lesson 1
		Activity	Chapter 17 Activity 1 (MathFactory)
(2) (F) display simple vector graphics using lines, circles and rectangles	(i) display simple vector graphics using lines	Instruction	Chapter 20, Lesson 2
		Assessment	Chapter 21, Lesson 2 Quiz
(2) (F) display simple vector graphics using lines, circles and rectangles	(ii) display simple vector graphics using circles	Instruction	Chapter 20, Lesson 2
		Activity	Chapter 20 Activity (Sky Art)
(2) (F) display simple vector graphics lines, circles and rectangles	(iii) display simple vector graphics using rectangles	Instruction	Chapter 20, Lesson 2
		Assessment	Chapter 20 Exam
(2) (G) display simple bit map images		Instruction	Chapter 20, Lesson 3
		Activity	Chapter 20 Activity (Sky Art)
(2) (H) seek and respond to advice from peers and professionals in evaluating quality and accuracy	(i) seek advice from peers in evaluating quality	Instruction	Chapter 21, Lesson 4
		Activity	Chapter 21, Activities 4 (Team Project)

(2) (H) seek and respond to advice from peers and professionals in evaluating quality and accuracy	(ii) seek advice from peers in evaluating accuracy	Instruction	Chapter 21, Lesson 4
		Activity	Chapter 21, Activities 4 (Team Project)
(2) (H) seek and respond to advice from peers and professionals in evaluating quality and accuracy	(iii) seek advice from professionals in evaluating quality	Instruction	Chapter 21, Lesson 4
		Activity	Chapter 21, Activities 4 (Team Project)
(2) (H) seek and respond to advice from peers and professionals in evaluating quality and accuracy	(iv) seek advice from professionals in evaluating accuracy	Instruction	Chapter 21, Lesson 4
		Activity	Chapter 21, Activities 4 (Team Project)
(2) (H) seek and respond to advice from peers and professionals in evaluating quality and accuracy	(v) respond to advice from peers in evaluating quality	Instruction	Chapter 21, Lesson 4
		Activity	Chapter 21, Activities 4 (Team Project)
(2) (H) seek and respond to advice from peers and professionals in evaluating quality and accuracy	(vi) respond to advice from peers in evaluating accuracy	Instruction	Chapter 21, Lesson 4
		Activity	Chapter 21, Activities 4 (Team Project)
(2) (H) seek and respond to advice from peers and professionals in evaluating quality and accuracy	(vii) respond to advice from professionals in evaluating quality	Instruction	Chapter 21, Lesson 4
		Activity	Chapter 21, Activities 4 (Team Project)
(2) (H) seek and respond to advice from peers and professionals in evaluating quality and accuracy	(viii) respond to advice from professionals in evaluating accuracy	Instruction	Chapter 21, Lesson 4
		Activity	Chapter 21, Activities 4 (Team Project)

Knowledge and Skills Statement: (3) Research and information fluency. The student locates, analyzes, processes, and organizes data. The student is expected to:

Student Expectation	Breakout	Citation Type	Description
(3) (A) use a variety of resources, including foundation and enrichment curricula, to gather authentic data as a basis for individual and group programming projects	(i) use a variety of resources, including foundation curricula, to gather authentic data as a basis for individual programming projects	Instruction	Chapter 9, Lesson 3
		Activity	Chapter 9 Activity (Bug Hunt)
(3) (A) use a variety of resources, including foundation and enrichment curricula, to gather authentic data as a basis for individual and group programming projects	(ii) use a variety of resources, including foundation curricula, to gather authentic data as a basis for group programming projects	Instruction	Chapter 21, Lesson 1
		Activity	Chapter 21, Activity 1 (Team Project)
(3) (A) use a variety of resources, including foundation and enrichment curricula, to gather authentic data as a basis for individual and group programming projects	(iii) use a variety of resources, including enrichment curricula, to gather authentic data as a basis for individual programming projects	Instruction	Chapter 9, Lesson 3
		Activity	Chapter 9 Activity (Bug Hunt)
(3) (A) use a variety of resources, including foundation and enrichment curricula, to gather authentic data as a basis for individual and group programming projects	(iv) use a variety of resources, including enrichment curricula, to gather authentic data as a basis for group programming projects	Instruction	Chapter 21, Lesson 1
		Activity	Chapter 21, Activity 1 (Team Project)

(3) (B) use various productivity tools to gather authentic data as a basis for individual and group programming projects	(i) use various productivity tools to gather authentic data as a basis for individual programming projects	Instruction	Chapter 9, Lesson 3
		Activity	Chapter 9 Activity (Bug Hunt)
(3) (B) use various productivity tools to gather authentic data as a basis for individual and group programming projects	(ii) use various productivity tools to gather authentic data as a basis for group programming projects	Instruction	Chapter 21, Lesson 1
		Activity	Chapter 21, Activity 1 (Team Project)

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	Breakout	Citation Type	Description
(4) (A) use program design problem-solving strategies to create program solutions		Instruction	Chapter 17, Lesson 4
		Activity	Chapter 17, Activity 2 (Algorithm Practice)
(4) (B) define and specify the purpose and goals of solving a problem	(i) define the purpose of solving a problem	Instruction	Chapter 17, Lesson 4
		Assessment	Chapter 17, Lesson 4 Quiz
(4) (B) define and specify the purpose and goals of solving a problem	(ii) define the goals of solving a problem	Instruction	Chapter 17, Lesson 4
		Assessment	Chapter 17, Lesson 4 Quiz
(4) (B) define and specify the purpose and goals of solving a problem	(iii) specify the purpose of solving a problem	Instruction	Chapter 17, Lesson 4
		Assessment	Chapter 17, Lesson 4 Quiz
(4) (B) define and specify the purpose and goals of solving a problem	(iv) specify the goals of solving a problem	Instruction	Chapter 17, Lesson 4
		Assessment	Chapter 17, Lesson 4 Quiz

(4) (C) identify the subtasks needed to solve a problem		Instruction	Chapter 8, Lesson 1
		Assessment	Chapter 8, Lesson 1 Quiz
(4) (D) identify the data types and objects needed to solve a problem	(i) identify the data types needed to solve a problem	Instruction	Chapter 4, Lesson 2 Chapter 17, Lesson 2
		Activity	Chapter 17 Activity 2 (Algorithms Practice)
(4) (D) identify the data types and objects needed to solve a problem	(ii) identify the objects needed to solve a problem	Instruction	Chapter 10, Lesson 2 Chapter 15, Lesson 2
		Activity	Chapter 10 Activity (Dog House) Chapter 15 Activity (Game Pieces)
(4) (E) identify reusable components from existing code		Instruction	Chapter 8, Lesson 1
		Assessment	Chapter 8, Lesson 1 Quiz
(4) (F) design a solution to a problem		Instruction	Chapter 17, Lesson 4
		Activity	Chapter 17 Activity 2 (Algorithms Practice)
(4) (G) code a solution from a program design		Instruction	Chapter 16, Lesson 1 (Jail Break) Chapter 21, Lessons 2-3 (Team Project)
		Activity	Chapter 16, Activities 1-6 (Jail Break) Chapter 21, Activities 2-3 (Team Project)
(4) (H) identify and debug errors	(i) identify errors	Instruction	Chapter 9, Lessons 1 and 3
		Activity	Chapter 9 Activity (Bug Hunt)
(4) (H) identify and debug errors	(ii) debug errors	Instruction	Chapter 9, Lessons 1 and 3
		Activity	Chapter 9 Activity (Bug Hunt)
(4) (I) test program solutions with appropriate valid and invalid test data for correctness	(i) test program solutions with appropriate valid test data for correctness	Instruction	Chapter 9, Lesson 3
		Activity	Chapter 9 Activity (Bug Hunt)
(4) (I) test program solutions with appropriate valid and invalid test data for correctness	(ii) test program solutions with appropriate invalid test data for correctness	Instruction	Chapter 6, Lesson 3
		Activity	Chapter 6 Activity (Conversation Piece)

(4) (J) debug and solve problems using error messages, reference materials, language documentation, and effective strategies	(i) debug problems using error messages	Instruction	Chapter 9, Lesson 3
		Assessment	Chapter 9 Exam
(4) (J) debug and solve problems using error messages, reference materials, language documentation, and effective strategies	(ii) debug problems using reference materials	Instruction	Chapter 9, Lesson 3
		Assessment	Chapter 9, Lesson 3 Quiz
(4) (J) debug and solve problems using error messages, reference materials, language documentation, and effective strategies	(iii) debug problems using language documentation	Instruction	Chapter 9, Lesson 3
		Assessment	Chapter 9, Lesson 3 Quiz
(4) (J) debug and solve problems using error messages, reference materials, language documentation, and effective strategies	(iv) debug problems using effective strategies	Instruction	Chapter 9, Lesson 3
		Assessment	Chapter 9, Lesson 3 Quiz
(4) (J) debug and solve problems using error messages, reference materials, language documentation, and effective strategies	(v) solve problems using error messages	Instruction	Chapter 9, Lesson 3
		Assessment	Chapter 9 Exam
(4) (J) debug and solve problems using error messages, reference materials, language documentation, and effective strategies	(vi) solve problems using reference materials	Instruction	Chapter 9, Lesson 3
		Assessment	Chapter 9, Lesson 3 Quiz
(4) (J) debug and solve problems using error messages, reference materials, language documentation, and effective strategies	(vii) solve problems using language documentation	Instruction	Chapter 9, Lesson 3
		Assessment	Chapter 9, Lesson 3 Quiz

(4) (J) debug and solve problems using error messages, reference materials, language documentation, and effective strategies	(viii) solve problems using effective strategies	Instruction	Chapter 9, Lesson 3
		Assessment	Chapter 9, Lesson 3 Quiz
(4) (K) explore common algorithms, including greatest common divisor, finding the biggest number out of three, finding primes, making change, and finding the average	(i) explore common algorithms, including greatest common divisor	Instruction	Chapter 17, Lesson 4
		Assessment	Chapter 17, Lesson 4 Quiz
(4) (K) explore common algorithms, including greatest common divisor, finding the biggest number out of three, finding primes, making change, and finding the average	(ii) explore common algorithms, including finding the biggest number out of three	Instruction	Chapter 17, Lesson 4
		Assessment	Chapter 17, Lesson 4 Quiz
(4) (K) explore common algorithms, including greatest common divisor, finding the biggest number out of three, finding primes, making change, and finding the average	(iii) explore common algorithms, including finding primes	Instruction	Chapter 17, Lesson 4
		Assessment	Chapter 17, Lesson 4 Quiz
(4) (K) explore common algorithms, including greatest common divisor, finding the biggest number out of three, finding primes, making change, and finding the average	(iv) explore common algorithms, including making change	Instruction	Chapter 17, Lesson 4
		Assessment	Chapter 17, Lesson 4 Quiz
(4) (K) explore common algorithms, including greatest common divisor, finding the biggest number out of three, finding primes, making change, and finding the average	(v) explore common algorithms, including finding the average	Instruction	Chapter 17, Lesson 4
		Assessment	Chapter 17, Lesson 4 Quiz
(4) (L) analyze and modify existing code to improve the underlying algorithm	(i) analyze existing code to improve the underlying algorithm	Instruction	Chapter 17, Lesson 4
		Assessment	Chapter 17, Lesson 4 Quiz

(4) (L) analyze and modify existing code to improve the underlying algorithm	(ii) modify existing code to improve the underlying algorithm	Instruction	Chapter 17, Lesson 4
		Assessment	Chapter 17, Lesson 4 Quiz
(4) (M) create program solutions that exhibit robust behavior by understanding, avoiding, and preventing runtime errors, including division by zero and type mismatch	(i) create program solutions that exhibit robust behavior by understanding runtime errors, including division by zero	Instruction	Chapter 9, Lesson 1
		Assessment	Chapter 9, Lesson 1 Quiz
(4) (M) create program solutions that exhibit robust behavior by understanding, avoiding, and preventing runtime errors, including division by zero and type mismatch	(ii) create program solutions that exhibit robust behavior by understanding runtime errors, including type mismatch	Instruction	Chapter 9, Lesson 1
		Assessment	Chapter 9, Lesson 1 Quiz
(4) (M) create program solutions that exhibit robust behavior by understanding, avoiding, and preventing runtime errors, including division by zero and type mismatch	(iii) create program solutions that exhibit robust behavior by avoiding runtime errors, including division by zero	Instruction	Chapter 9, Lesson 1
		Activity	Chapter 9, Lesson 1 Quiz
(4) (M) create program solutions that exhibit robust behavior by understanding, avoiding, and preventing runtime errors, including division by zero and type mismatch	(iv) create program solutions that exhibit robust behavior by avoiding runtime errors, including type mismatch	Instruction	Chapter 9, Lesson 1
		Assessment	Chapter 9, Lesson 1 Quiz
(4) (M) create program solutions that exhibit robust behavior by understanding, avoiding, and preventing runtime errors, including division by zero and type mismatch	(v) create program solutions that exhibit robust behavior by preventing runtime errors, including division by zero	Instruction	Chapter 9, Lesson 1
		Activity	Chapter 9, Lesson 1 Quiz

(4) (M) create program solutions that exhibit robust behavior by understanding, avoiding, and preventing runtime errors, including division by zero and type mismatch	(vi) create program solutions that exhibit robust behavior by preventing runtime errors, including type mismatch	Instruction	Chapter 9, Lesson 1
		Assessment	Chapter 9, Lesson 1 Quiz
(4) (N) select the most appropriate algorithm for a defined problem		Instruction	Chapter 19, Lesson 2
		Assessment	Chapter 19, Lesson 2 Quiz
(4) (O) demonstrate proficiency in the use of the arithmetic operators to create mathematical expressions, including addition, subtraction, multiplication, real division, integer division and modulus division	(i) demonstrate proficiency in the use of the arithmetic operators to create mathematical expressions, including addition	Instruction	Chapter 4, Lesson 2 Chapter 7, Lesson 1
		Assessment	Chapter 7, Lesson 1 Quiz
(4) (O) demonstrate proficiency in the use of the arithmetic operators to create mathematical expressions, including addition, subtraction, multiplication, real division, integer division and modulus division	(ii) demonstrate proficiency in the use of the arithmetic operators to create mathematical expressions, including subtraction	Instruction	Chapter 4, Lesson 2 Chapter 7, Lesson 1
		Assessment	Chapter 7, Lesson 1 Quiz
(4) (O) demonstrate proficiency in the use of the arithmetic operators to create mathematical expressions, including addition, subtraction, multiplication, real division, integer division and modulus division	(iii) demonstrate proficiency in the use of the arithmetic operators to create mathematical expressions, including multiplication	Instruction	Chapter 4, Lesson 2 Chapter 7, Lesson 1
		Assessment	Chapter 7, Lesson 1 Quiz

(4) (O) demonstrate proficiency in the use of the arithmetic operators to create mathematical expressions, including addition, subtraction, multiplication, real division, integer division and modulus division	(iv) demonstrate proficiency in the use of the arithmetic operators to create mathematical expressions, including real division	Instruction	Chapter 4, Lesson 2 Chapter 7, Lesson 1
		Assessment	Chapter 7, Lesson 1 Quiz
(4) (O) demonstrate proficiency in the use of the arithmetic operators to create mathematical expressions, including addition, subtraction, multiplication, real division, integer division and modulus division	(v) demonstrate proficiency in the use of the arithmetic operators to create mathematical expressions, including integer division	Instruction	Chapter 4, Lesson 2 Chapter 7, Lesson 1
		Assessment	Chapter 7, Lesson 1 Quiz
(4) (O) demonstrate proficiency in the use of the arithmetic operators to create mathematical expressions, including addition, subtraction, multiplication, real division, integer division and modulus division	(vi) demonstrate proficiency in the use of the arithmetic operators to create mathematical expressions, including modulus division	Instruction	Chapter 4, Lesson 2 Chapter 7, Lesson 1
		Assessment	Chapter 7, Lesson 1 Quiz
(4) (P) create program solutions to problems using available mathematics libraries, including absolute value, round, power, square, and square root	(i) create program solutions to problems using available mathematics libraries, including absolute value	Instruction	Chapter 17, Lesson 1
		Activity	Chapter 17 Activity 1 (MathFactory)
(4) (P) create program solutions to problems using available mathematics libraries, including absolute value, round, power, square, and square root	(ii) create program solutions to problems using available mathematics libraries, including round	Instruction	Chapter 17, Lesson 1
		Activity	Chapter 17 Activity 1 (MathFactory)

(4) (P) create program solutions to problems using available mathematics libraries, including absolute value, round, power, square, and square root	(iii) create program solutions to problems using available mathematics libraries, including power	Instruction	Chapter 17, Lesson 1
		Activity	Chapter 17 Activity 1 (MathFactory)
(4) (P) create program solutions to problems using available mathematics libraries, including absolute value, round, power, square, and square root	(iv) create program solutions to problems using available mathematics libraries, including square	Instruction	Chapter 17, Lesson 1
		Activity	Chapter 17 Activity 1 (MathFactory)
(4) (P) create program solutions to problems using available mathematics libraries, including absolute value, round, power, square, and square root	(v) create program solutions to problems using available mathematics libraries, including square root	Instruction	Chapter 17, Lesson 1
		Activity	Chapter 17 Activity 1 (MathFactory)
(4) (Q) develop program solutions that use assignment		Instruction	Chapter 4, Lesson 2 (Plus most subsequent lessons involve assignment statements).
		Activity	Chapter 4 Activity (Experiment with Data Types) (Plus most subsequent activities involve assignment statements).
(4) (R) develop sequential algorithms to solve non-branching and non-iterative problems	(i) develop sequential algorithms to solve non- branching problems	Instruction	Chapter 17, Lesson 3
		Activity	Chapter 17, Activity 2 (Algorithm Practice)
(4) (R) develop sequential algorithms to solve non-branching and non-iterative problems	(ii) develop sequential algorithms to solve non- iterative problems	Instruction	Chapter 17, Lesson 3
		Activity	Chapter 17, Activity 2 (Algorithm Practice)
(4) (S) develop algorithms to decision-making problems using branching control statements		Instruction	Chapter 17, Lesson 3
		Activity	Chapter 17, Activity 2 (Algorithm Practice)

(4) (T) develop iterative algorithms and code programs to solve practical problems	(i) develop iterative algorithms to solve practical problems	Instruction	Chapter 19, Lessons 2 and 3
		Assessment Activity	Chapter 19, Lessons 2 and 3 Quizzes Chapter 19 Activity (Recursive Binary Search)
(4) (T) develop iterative algorithms and code programs to solve practical problems	(ii) develop code programs to solve practical problems	Instruction	Chapter 19, Lessons 2 and 3
		Assessment Activity	Chapter 19, Lessons 2 and 3 Quizzes Chapter 19 Activity (Recursive Binary Search)
(4) (U) demonstrate proficiency in the use of the relational operators		Instruction	Chapter 7, Lessons 1 and 2
		Assessment	Chapter 7, Lessons 1 and 2 Quizzes
(4) (V) demonstrate proficiency in the use of the logical operators		Instruction	Chapter 7, Lessons 1 and 2
		Assessment	Chapter 7, Lessons 1 and 2 Quizzes
(4) (W) generate and use random numbers	(i) generate random numbers	Instruction	Chapter 17, Lesson 1
		Assessment	Chapter 17 Activity 1 (MathFactory) Chapter 20 Activity (Sky Art)
(4) (W) generate and use random numbers	(ii) use random numbers	Instruction	Chapter 17, Lesson 1
		Assessment	Chapter 17 Activity 1 (MathFactory) Chapter 20 Activity (Sky Art)

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	Breakout	Citation Type	Description
(5) (A) discuss intellectual property, privacy, sharing of information, copyright laws, and software licensing agreements	(i) discuss intellectual property	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz

(5) (A) discuss intellectual property, privacy, sharing of information, copyright laws, and software licensing agreements	(ii) discuss privacy	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz
(5) (A) discuss intellectual property, privacy, sharing of information, copyright laws, and software licensing agreements	(iii) discuss sharing of information	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz
(5) (A) discuss intellectual property, privacy, sharing of information, copyright laws, and software licensing agreements	(iv) discuss copyright laws	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz
(5) (A) discuss intellectual property, privacy, sharing of information, copyright laws, and software licensing agreements	(v) discuss software licensing agreements	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz
(5) (B) model ethical acquisition and use of digital information	(i) model ethical acquisition of digital information	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz
(5) (B) model ethical acquisition and use of digital information	(ii) model ethical use of digital information	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz
(5) (C) demonstrate proper digital etiquette, responsible use of software, and knowledge of acceptable use policies	(i) demonstrate proper digital etiquette	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz
(5) (C) demonstrate proper digital etiquette, responsible use of software, and knowledge of acceptable use policies	(ii) demonstrate responsible use of software	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz
(5) (C) demonstrate proper digital etiquette, responsible use of software, and knowledge of acceptable use policies	(iii) demonstrate knowledge of acceptable use policies	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz

(5) (D) investigate measures, including passwords and virus detection/prevention, to protect computer systems and databases from unauthorized use and tampering	(i) investigate measures, including passwords to protect computer systems from unauthorized use	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz
(5) (D) investigate measures, including passwords and virus detection/prevention, to protect computer systems and databases from unauthorized use and tampering	(ii) investigate measures, including passwords to protect computer systems from tampering	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz
(5) (D) investigate measures, including passwords and virus detection/prevention, to protect computer systems and databases from unauthorized use and tampering	(iii) investigate measures, including passwords to protect databases from unauthorized use	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz
(5) (D) investigate measures, including passwords and virus detection/prevention, to protect computer systems and databases from unauthorized use and tampering	(iv) investigate measures, including passwords to protect databases from tampering	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz
(5) (D) investigate measures, including passwords and virus detection/prevention, to protect computer systems and databases from unauthorized use and tampering	(v) investigate measures, including virus detection/prevention to protect computer systems from unauthorized use	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz
(5) (D) investigate measures, including passwords and virus	(vi) investigate measures, including virus	Instruction	Chapter 1, Lesson 4

detection/prevention, to protect computer systems and databases from unauthorized use and tampering	detection/prevention to protect computer systems from tampering	Assessment	Chapter 1, Lesson 4 Quiz
(5) (D) investigate measures, including passwords and virus detection/prevention, to protect computer systems and databases from unauthorized use and tampering	(vii) investigate measures, including virus detection/prevention to protect databases from unauthorized use	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz
(5) (D) investigate measures, including passwords and virus detection/prevention, to protect computer systems and databases from unauthorized use and tampering	(viii) investigate measures, including virus detection/prevention to protect databases from tampering	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz
(5) (E) investigate how technology has changed and the social and ethical ramifications of computer usage	(i) investigate how technology has changed	Instruction	Chapter 1, Lesson 1
		Assessment	Chapter 1, Lesson 1 Quiz
(5) (E) investigate how technology has changed and the social and ethical ramifications of computer usage	(ii) investigate the social ramifications of computer usage	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz
(5) (E) investigate how technology has changed and the social and ethical ramifications of computer usage	(iii) investigate the ethical ramifications of computer usage	Instruction	Chapter 1, Lesson 4
		Assessment	Chapter 1, Lesson 4 Quiz

Knowledge and Skills Statement: (6) Technology operations, systems, and concepts. The student understands technology concepts, systems, and operations as they apply to computer science. The student is expected to:

Student Expectation	Breakout	Citation Type	Description
(6) (A) compare and contrast types of operating systems, software applications, and programming languages	(i) compare types of operating systems, software applications, and programming languages	Instruction	Chapter 1, Lesson 2
		Assessment	Chapter 1, Lesson 2 Quiz
(6) (A) compare and contrast types of operating systems, software applications, and programming languages	(ii) contrast types of operating systems, software applications, and programming languages	Instruction	Chapter 1, Lesson 2
		Assessment	Chapter 1, Lesson 2 Quiz
(6) (B) demonstrate knowledge of major hardware components, including primary and secondary memory, a central processing unit (CPU), and peripherals	(i) demonstrate knowledge of major hardware components, including primary memory	Instruction	Chapter 1, Lesson 1
		Assessment	Chapter 1, Lesson 1 Quiz
(6) (B) demonstrate knowledge of major hardware components, including primary and secondary memory, a central processing unit (CPU), and peripherals	(ii) demonstrate knowledge of major hardware components, including secondary memory	Instruction	Chapter 1, Lesson 1
		Assessment	Chapter 1, Lesson 1 Quiz
(6) (B) demonstrate knowledge of major hardware components, including primary and secondary memory, a central processing unit (CPU), and peripherals	(iii) demonstrate knowledge of major hardware components, including a central processing unit (CPU)	Instruction	Chapter 1, Lesson 1
		Assessment	Chapter 1, Lesson 1 Quiz

(6) (B) demonstrate knowledge of major hardware components, including primary and secondary memory, a central processing unit (CPU), and peripherals	(iv) demonstrate knowledge of major hardware components, including peripherals	Instruction	Chapter 1, Lesson 1
		Assessment	Chapter 1, Lesson 1 Quiz
(6) (C) differentiate among current programming languages, discuss the use of those languages in other fields of study, and demonstrate knowledge of specific programming terminology and concepts	(i) differentiate between current programming languages	Instruction	Chapter 1, Lesson 3
		Assessment	Chapter 1, Lesson 3 Quiz
(6) (C) differentiate among current programming languages, discuss the use of those languages in other fields of study, and demonstrate knowledge of specific programming terminology and concepts	(ii) discuss the use of [current programming] languages in other fields of study	Instruction	Chapter 1, Lesson 3
		Assessment	Chapter 1, Lesson 3 Quiz
(6) (C) differentiate among current programming languages, discuss the use of those languages in other fields of study, and demonstrate knowledge of specific programming terminology and concepts	(iii) demonstrate knowledge of specific programming terminology	Instruction	Terms and keywords are introduced and used throughout the course (e.g. Chapter 2, Lesson 2 and Chapter 4, Lesson 2).
		Activity	Terms and keywords are introduced and used throughout the course (e.g. Chapter 2, Lesson 2 Quiz, Chapter 4, Lesson 2), and all activities.
(6) (C) differentiate among current programming languages, discuss the use of those languages in other fields of study, and demonstrate knowledge of specific programming terminology and concepts	(iv) demonstrate knowledge of specific programming concepts	Instruction	Programming concepts are introduced and used throughout the course (e.g. Chapter 2, Lesson 2 and Chapter 4, Lesson 2).
		Activity	Programming concepts are introduced and used throughout the course (e.g. Chapter 2, Lesson 2 Quiz, Chapter 4, Lesson 2), and all activities.

(6) (D) differentiate between a high-level compiled language and an interpreted language		Instruction	Chapter 1, Lesson 3
		Assessment	Chapter 1, Lesson 3 Quiz
(6) (E) understand concepts of object-oriented design		Instruction	Chapters 10, 11, 15, and 16
		Activity	Chapter 10 Activity (Dog House) Chapter 11 Activity (Let's Go Racing) Chapter 15 Activity (Game Pieces) Chapter 16 Activities (Jail Break)
(6) (F) use local and global scope access variable declarations	(i) use local scope access variable declarations	Instruction	Chapter 4, Lesson 2 Chapter 10, Lesson 2
		Activity	Chapter 4 Activity (Experiment with Data Types)
(6) (F) use local and global scope access variable declarations	(ii) use global scope access variable declarations	Instruction	Chapter 4, Lesson 2 Chapter 10, Lesson 2
		Activity	Chapter 10 Activity (Dog House)
(6) (G) encapsulate data and associated subroutines into an abstract data type	(i) encapsulate data into an abstract data type	Instruction	Chapter 15, Lesson 2
		Activity	Chapter 15 Activity (Game Pieces)
(6) (G) encapsulate data and associated subroutines into an abstract data type	(ii) encapsulate associated subroutines into an abstract data type	Instruction	Chapter 15, Lesson 2
		Activity	Chapter 15 Activity (Game Pieces)
(6) (H) create subroutines that do not return values with and without the use of arguments and parameters	(i) create subroutines that do not return values with the use of arguments	Instruction	Chapter 8, Lesson 2
		Activity	Chapter 8 Activity (Checkboard)
(6) (H) create subroutines that do not return values with and without the use of arguments and parameters	(ii) create subroutines that do not return values with the use of parameters	Instruction	Chapter 8, Lesson 2
		Activity	Chapter 8 Activity (Checkboard)
(6) (H) create subroutines that do not return values with and without the use of arguments and parameters	(iii) create subroutines that do not return values without the use of arguments	Instruction	Chapter 8, Lesson 1
		Activity	Chapter 15 Activity (Game Pieces)

(6) (H) create subroutines that do not return values with and without the use of arguments and parameters	(iv) create subroutines that do not return values without the use of parameters	Instruction	Chapter 8, Lesson 1
		Activity	Chapter 15 Activity (Game Pieces)
(6) (I) create subroutines that return typed values with and without the use of arguments and parameters	(i) create subroutines that return typed values with the use of arguments	Instruction	Chapter 8, Lesson 2
		Activity	Chapter 19 Activity (Recursive Binary Search)
(6) (I) create subroutines that return typed values with and without the use of arguments and parameters	(ii) create subroutines that return typed values with the use of parameters	Instruction	Chapter 8, Lesson 2
		Activity	Chapter 19 Activity (Recursive Binary Search)
(6) (I) create subroutines that return typed values with and without the use of arguments and parameters	(iii) create subroutines that return typed values without the use of arguments	Instruction	Chapter 8, Lesson 2
		Assessment	Chapter 8, Lesson 2
		Activity	Chapter 11 Activity (Let's Go Racing)
(6) (I) create subroutines that return typed values with and without the use of arguments and parameters	(iv) create subroutines that return typed values without the use of parameters	Instruction	Chapter 8, Lesson 2
		Assessment	Chapter 8, Lesson 2
		Activity	Chapter 11 Activity (Let's Go Racing)
(6) (J) understand and identify the data-binding process between arguments and parameters	(i) understand the data-binding process between arguments and parameters	Instruction	Chapter 8, Lesson 3
		Activity	Chapter 8, Lesson 3 Quiz
(6) (J) understand and identify the data-binding process between arguments and parameters	(ii) identify the data-binding process between arguments and parameters	Instruction	Chapter 8, Lesson 3
		Activity	Chapter 8, Lesson 3 Quiz
(6) (K) compare objects using reference values and a comparison routine	(i) compare objects using reference values	Instruction	Chapter 7, Lesson 1 Chapter 15, Lesson 5
		Assessment	Chapter 7, Lesson 1 Quiz Chapter 15, Lesson 5 Quiz
(6) (K) compare objects using reference values and a comparison routine	(ii) compare objects using a comparison routine	Instruction	Chapter 5, Lesson 2 Chapter 15, Lesson 5
		Assessment	Chapter 5, Lesson 2 Quiz Chapter 15, Lesson 5 Quiz

(6) (L) understand the binary representation of numeric and nonnumeric data in computer systems	(i) understand the binary representation of numeric data in computer systems	Instruction	Chapter 17, Lesson 2
		Assessment	Chapter 17, Lesson 2 Quiz
(6) (L) understand the binary representation of numeric and nonnumeric data in computer systems	(ii) understand the binary representation of nonnumeric data in computer systems	Instruction	Chapter 5, Lesson 3 Chapter 17, Lesson 2
		Assessment	Chapter 5, Lesson 3 Quiz Chapter 17, Lesson 2 Quiz
(6) (M) understand the finite limits of numeric data		Instruction	Chapter 17, Lesson 2
		Assessment	Chapter 17, Lesson 2 Quiz
(6) (N) perform numerical conversions between the decimal and binary number systems and count in the binary number system	(i) perform numerical conversions between the decimal and binary number systems	Instruction	Chapter 17, Lesson 2
		Assessment	Chapter 17, Lesson 2 Quiz
(6) (N) perform numerical conversions between the decimal and binary number systems and count in the binary number system	(ii) count in the binary number system	Instruction	Chapter 17, Lesson 2
		Assessment	Chapter 17, Lesson 2 Quiz
(6) (O) choose, identify, and use the appropriate data types for integer, real, and Boolean data when writing program solutions	(i) choose the appropriate data types for integer data when writing program solutions	Instruction	Chapter 4, Lesson 1
		Assessment Activity	Chapter 4, Lesson 1 Quiz Chapter 4 Activity (Experiment with Data Types)
(6) (O) choose, identify, and use the appropriate data types for integer, real, and Boolean data when writing program solutions	(ii) choose the appropriate data types for real data when writing program solutions	Instruction	Chapter 4, Lesson 1
		Assessment Activity	Chapter 4, Lesson 1 Quiz Chapter 4 Activity (Experiment with Data Types)
(6) (O) choose, identify, and use the appropriate data types for integer, real, and Boolean data when writing program solutions	(iii) choose the appropriate data types for Boolean data when writing program solutions	Instruction	Chapter 4, Lesson 1
		Assessment Activity	Chapter 4, Lesson 1 Quiz Chapter 4 Activity (Experiment with Data Types)

(6) (O) choose, identify, and use the appropriate data types for integer, real, and Boolean data when writing program solutions	(iv) identify the appropriate data types for integer data when writing program solutions	Instruction	Chapter 4, Lesson 1
		Assessment	Chapter 4, Lesson 1 Quiz
		Activity	Chapter 4 Activity (Experiment with Data Types)
(6) (O) choose, identify, and use the appropriate data types for integer, real, and Boolean data when writing program solutions	(v) identify the appropriate data types for real data when writing program solutions	Instruction	Chapter 4, Lesson 1
		Assessment	Chapter 4, Lesson 1 Quiz
		Activity	Chapter 4 Activity (Experiment with Data Types)
(6) (O) choose, identify, and use the appropriate data types for integer, real, and Boolean data when writing program solutions	(vi) identify the appropriate data types for Boolean data when writing program solutions	Instruction	Chapter 4, Lesson 1
		Assessment	Chapter 4, Lesson 1 Quiz
		Activity	Chapter 4 Activity (Experiment with Data Types)
(6) (O) choose, identify, and use the appropriate data types for integer, real, and Boolean data when writing program solutions	(vii) use the appropriate data types for integer data when writing program solutions	Instruction	Chapter 4, Lesson 1
		Assessment	Chapter 4, Lesson 1 Quiz
		Activity	Chapter 4 Activity (Experiment with Data Types)
(6) (O) choose, identify, and use the appropriate data types for integer, real, and Boolean data when writing program solutions	(viii) use the appropriate data types for real data when writing program solutions	Instruction	Chapter 4, Lesson 1
		Assessment	Chapter 4, Lesson 1 Quiz
		Activity	Chapter 4 Activity (Experiment with Data Types)
(6) (O) choose, identify, and use the appropriate data types for integer, real, and Boolean data when writing program solutions	(ix) use the appropriate data types for Boolean data when writing program solutions	Instruction	Chapter 4, Lesson 1
		Assessment	Chapter 4, Lesson 1 Quiz
		Activity	Chapter 4 Activity (Experiment with Data Types)
(6) (P) demonstrate an understanding of the concept of a variable		Instruction	Chapter 4, Lesson 2
		Activity	Chapter 4 Activity (Experiment with Data Types)
(6) (Q) demonstrate an understanding of and use reference variables for objects	(i) demonstrate an understanding of reference variables for objects	Instruction	Chapter 5, Lesson 1
		Activity	Chapter 5 Activity (String Theory)

(6) (Q) demonstrate an understanding of and use reference variables for objects	(ii) use reference variables for objects	Instruction	Chapter 5, Lesson 1
		Activity	Chapter 5 Activity (String Theory)
(6) (R) demonstrate an understanding of how to represent and manipulate text data, including concatenation and other string functions	(i) demonstrate an understanding of how to represent text data, including concatenation	Instruction	Chapter 5, Lesson 3 Chapter 5, Lesson 4
		Assessment	Chapter 5, Lesson 3 Quiz Chapter 5, Lesson 4 Quiz
(6) (R) demonstrate an understanding of how to represent and manipulate text data, including concatenation and other string functions	(ii) demonstrate an understanding of how to represent text data, including other string functions	Instruction	Chapter 5, Lesson 3 Chapter 5, Lesson 4
		Assessment Activity	Chapter 5 Activity (String Theory)
(6) (R) demonstrate an understanding of how to represent and manipulate text data, including concatenation and other string functions	(iii) demonstrate an understanding of how to manipulate text data, including concatenation	Instruction	Chapter 5, Lesson 3 Chapter 5, Lesson 4
		Assessment Activity	Chapter 5, Lesson 3 Quiz Chapter 5, Lesson 4 Quiz
(6) (R) demonstrate an understanding of how to represent and manipulate text data, including concatenation and other string functions	(iv) demonstrate an understanding of how to manipulate text data, including other string functions	Instruction	Chapter 5, Lesson 3 Chapter 5, Lesson 4
		Assessment Activity	Chapter 5 Activity (String Theory)
(6) (S) demonstrate an understanding of the concept of scope		Instruction	Chapter 10, Lesson 2
		Activity	Chapter 10 Activity (Dog House)
(6) (T) identify and use the structured data type of one- dimensional arrays to traverse, search, and modify data	(i) identify the structured data type of one-dimensional arrays to traverse data	Instruction	Chapter 14, Lesson 1
		Assessment	Chapter 14, Lesson 1 Quiz
(6) (T) identify and use the structured data type of one- dimensional arrays to traverse, search, and modify data	(ii) identify the structured data type of one-dimensional arrays to search data	Instruction	Chapter 14, Lesson 1
		Assessment	Chapter 14, Lesson 1 Quiz

(6) (T) identify and use the structured data type of one- dimensional arrays to traverse, search, and modify data	(iii) identify the structured data type of one-dimensional arrays to modify data	Instruction	Chapter 14, Lesson 1
		Assessment	Chapter 14, Lesson 1 Quiz
(6) (T) identify and use the structured data type of one- dimensional arrays to traverse, search, and modify data	(iv) use the structured data type of one-dimensional arrays to traverse data	Instruction	Chapter 14, Lesson 1
		Assessment	Chapter 14, Lesson 1 Quiz
(6) (T) identify and use the structured data type of one- dimensional arrays to traverse, search, and modify data	(v) use the structured data type of one-dimensional arrays to search data	Instruction	Chapter 14, Lesson 1
		Assessment	Chapter 14, Lesson 1 Quiz
(6) (T) identify and use the structured data type of one- dimensional arrays to traverse, search, and modify data	(vi) use the structured data type of one-dimensional arrays to modify data	Instruction	Chapter 14, Lesson 1
		Assessment	Chapter 14, Lesson 1 Quiz
(6) (U) choose, identify, and use the appropriate data type and structure to properly represent the data in a program problem solution	(i) choose the appropriate data type to properly represent the data in a program problem solution	Instruction	Chapter 4, Lesson 1
		Assessment Activity	Chapter 4, Lesson 1 Quiz Chapter 4 Activity (Experiment with Data Types)
(6) (U) choose, identify, and use the appropriate data type and structure to properly represent the data in a program problem solution	(ii) choose the appropriate data structure to properly represent the data in a program problem solution	Instruction	Chapter 10, Lesson 2 Chapter 14, Lesson 1 Chapter 14, Lesson 2
		Activity	Chapter 14 Activity (Baseball Stats)
(6) (U) choose, identify, and use the appropriate data type and structure to properly represent the data in a program problem solution	(iii) identify the appropriate data type to properly represent the data in a program problem solution	Instruction	Chapter 4, Lesson 1
		Assessment Activity	Chapter 4, Lesson 1 Quiz Chapter 4 Activity (Experiment with Data Types)

(6) (U) choose, identify, and use the appropriate data type and structure to properly represent the data in a program problem solution	(iv) identify the appropriate data structure to properly represent the data in a program problem solution	Instruction	Chapter 10, Lesson 2 Chapter 14, Lesson 1 Chapter 14, Lesson 2
		Activity	Chapter 14 Activity (Baseball Stats)
(6) (U) choose, identify, and use the appropriate data type and structure to properly represent the data in a program problem solution	(v) use the appropriate data type to properly represent the data in a program problem solution	Instruction	Chapter 4, Lesson 1
		Assessment	Chapter 4, Lesson 1 Quiz
		Activity	Chapter 4 Activity (Experiment with Data Types)
(6) (U) choose, identify, and use the appropriate data type and structure to properly represent the data in a program problem solution	(vi) use the appropriate data structure to properly represent the data in a program problem solution	Instruction	Chapter 10, Lesson 2 Chapter 14, Lesson 1 Chapter 14, Lesson 2
		Activity	Chapter 14 Activity (Baseball Stats)
(6) (V) compare and contrast strongly typed and un-typed programming languages	(i) compare strongly typed and un-typed programming languages	Instruction	Chapter 1, Lesson 3
		Assessment	Chapter 1, Lesson 3 Quiz
(6) (V) compare and contrast strongly typed and un-typed programming languages	(ii) contrast strongly typed and un-typed programming languages	Instruction	Chapter 1, Lesson 3
		Assessment	Chapter 1, Lesson 3 Quiz