



Course	Lesson/Module	Levels	Topics	Standards (CSTA)
<u>Introduction to Computer Science</u>	1. Basic Syntax Levels 1-8	1. Dungeons of Kithguard 2. Gems in the Deep 3. Shadow Guard 4. Enemy Mine 5. True Names 6. Cell Commentary 7. Kithguard Librarian 8. The Prisoner	Sequencing, syntax, strings, comments, arguments	Intro to CS - CSTA Alignment Doc 1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-11, 1B-AP-12, 1B-AP-13, 1B-AP-15, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2-AP-17, 2-AP-18, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-15, 3A-AP-16, 3A-AP-18, 3A-AP-19, 3A-AP-22, 3A-AP-23 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-14, 3B-AP-15, 3B-AP-16, 3B-AP-20, 3B-AP-21, 3B-AP-23
	2. Loops Levels 9-14	9. Fire Dancing 10. Haunted Kithmaze 11. Descending Further 12. Dread Door 13. Hack and Dash 14. Cupboards of Kithguard	Repeat code sequences using while-true loops	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-11, 1B-AP-12, 1B-AP-13, 1B-AP-15, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2-AP-17, 2-AP-18, 2-AP-19, 2-IC-22 3A-AP-16, 3A-AP-18, 3A-AP-19, 3A-AP-22, 3A-AP-23
	3. Variables Levels 15-17	15. Known Enemy 16. Master of Names 17. The Final Kithmaze	Save and access data using variables	3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-15, 3B-AP-16, 3B-AP-20, 3B-AP-21, 3B-AP-23
	4. Capstone Challenge - Multiplayer Arena Level 18	18. Kithguard Gates	Master course concepts	

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<u>Game Development 1</u>	1. Spawnables and Mechanics Levels 1-5	1. Over the Garden Wall 2. Click Gait 3. Hero's Journey 4. A-maze-ing 5. Gemtacular	Spawning objects, mechanics	Game Dev 1 - CSTA Alignment Doc
	2. Goal Changes Levels 6-11	6. Vorpall Mouse 7. Crushing It 8. Give and Take 9. Army Training 10. Ranger Danger 11. Hedge Magic	Goals, types of spawnables	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-11, 1B-AP-12, 1B-AP-15, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-12, 2-AP-13, 2-AP-19, 2-IC-22 3A-AP-22, 3A-AP-23
	3. Changing Properties Levels 12-16	12. Forest Incursion 13. Throwing Fire 14. Them Bones 15. Behavior Driven Development 16. Time To Live	Properties	3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-15
	4. Final Project Level 17	17. Tabula Rasa	All course topics combined	
<u>Web Development 1</u>	1. Page Setup Levels 1-4	1. Humble Beginnings 2. Breaking News 3. Paragraph Paragon 4. Headliner	Break tags, paragraph tags, heading tags	Web Dev 1 - CSTA Alignment Doc
				1B-AP-08, 1B-AP-10, 1B-AP-11, 1B-AP-12, 1B-AP-13, 1B-AP-15, 1B-AP-16, 1B-AP-17
	2. Images Levels 5-6	5. Illustrious Imagery 6. Big and Tall	Image tags and size attributes	2-AP-10, 2-AP-13, 2-AP-17, 2-AP-18, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-15, 3A-AP-16, 3A-AP-17, 3A-AP-18, 3A-AP-22, 3A-AP-23
	3. Page Setup 2 Levels 7-9	7. Dangerous Divide 8. Listing Liason 9. Orders Wanted	Div tags, unordered and ordered lists	3B-AP-10, 3B-AP-15

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Course	Lesson/Module	Levels	Topics	Standards (CSTA)
	4. Page Style Levels 10-12	10. Stylish Intent 11. Classy 12. Identification, Please	Text-align, color, classes, IDs	
	5. Final Project Level 13	13. Wanted Poster	All course topics combined	
<u>Computer Science 2</u>	1. Conditionals (if) Levels 1-10	1. Defense of Plainswood 2. Course: Winding Trail 3. One Wrong Step 4. Forest Evasion 5. Woodland Cubbies 6. Patrol Buster 7. Picnic Buster 8. If-stravaganza 9. Village Guard 10. Thrombush Farm	Check expression before executing	CS2 - CSTA Alignment Doc 1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-11, 1B-AP-12, 1B-AP-13, 1B-AP-15, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2-AP-15, 2-AP-17, 2-AP-18, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-15, 3A-AP-16, 3A-AP-17, 3A-AP-18, 3A-AP-19, 3A-AP-22, 3A-AP-23 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-14, 3B-AP-15, 3B-AP-16, 3B-AP-20, 3B-AP-21, 3B-AP-23
	6. Conditionals (else) Levels 11-19	11. Back to Back 12. Ogre Encampment 13. Woodland Cleaver 14. Elseweyr 15. Backwoods Standoff 16. Range Finder 17. Peasant Protection 18. Munchkin Swarm 19. Maniac Munchkins	Execute default code	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-11, 1B-AP-12, 1B-AP-15, 1B-AP-16, 1B-AP-17 2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2-AP-17, 2-AP-18, 2-AP-19, 2-IC-22 3A-AP-15, 3A-AP-16, 3A-AP-17, 3A-AP-18, 3A-AP-19, 3A-AP-22, 3A-AP-23 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-15, 3B-AP-16, 3B-AP-20, 3B-AP-21, 3B-AP-23

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Course	Lesson/Module	Levels	Topics	Standards (CSTA)
	7. Nested Conditionals Levels 20-22	20. Forest Fire Dancing 21. Stillness in Motion 22. The Agrippa Defense	Put one conditional inside another	
	8. Functions Levels 23-36	23. Village Rover 24. Village Warder 25. Village Champion 26. A Fine Mint 27. Backwoods Fork 28. Tomb Raider 29. Tomb Ghost 30. Seek-and-Hide 31. Forest Miners 32. Leave it to CLeaver 33. Return to Thornbush Farm 34. Agrippa Refactored 35. Closed Crossroad 36. Greed Traps	Save code for later	
	9. Events Levels 37-45	37. Backwoods Buddy 38. Buddy's Name 39. Phd Kitty 40. Pet Quiz 41. Go Fetch 42. Guard Dog 43. Long Road 44. Forest Jogging 45. Forest Cannon Dancing	Listen for events and execute code	
	10. Review - Multiplayer Arena Level 46	46. Power Peak	Design and implement algorithms	



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<u>Game Development 2</u>	1. Mechanics: Spawn and Goals Levels 1-7	1. Guard Duty 2. Army Training 2 3. Standard Operating Procedure 4. Center Formation 5. Chokepoint 6. Jailbreak 7. Risk and Reward	functions, call backs, defining behaviors, changing parameters	Game Dev 2 - CSTA Alignment doc 1B-DA-06, 1B-DA-07, 1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-11, 1B-AP-12, 1B-AP-15, 1B-AP-16,1B-AP-17 2-DA-08, 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2-AP-17, 2-AP-18, 2-AP-19, 2-IC-22 3A-DA-11, 3A-AP-15, 3A-AP-16, 3A-AP-17, 3A-AP-18, 3A-AP-19, 3A-AP-22, 3A-AP-23 3B-DA-05, 3B-DA-06, 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-15, 3B-AP-16, 3B-AP-20, 3B-AP-21, 3B-AP-23
	2. User Interface Elements and Databases Levels 8-9	8. Seeing is Believing 9. Persistence Pays	UI elements/objects/methods, tracking and displaying user statuses, databases, storing information between games	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-11, 1B-AP-12, 1B-AP-15, 1B-AP-16,1B-AP-17 2-AP-11, 2-AP-12, 2-AP-14, 2-AP-17, 2-AP-18, 2-AP-19, 2-IC-22
	3. Mechanics: Time, Randomness, Defeat Levels 10-14	10. Adventure Time 11. Teatime 12. Random Riposte 13. Agony of Defeat 14. Lernaean Hydra	timer properties, random integers, adding difficulty and complexity to games	3A-AP-15, 3A-AP-16, 3A-AP-18, 3A-AP-19, 3A-AP-22, 3A-AP-23 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-15, 3B-AP-16, 3B-AP-20, 3B-AP-21, 3B-AP-23
	4. Mechanics: Manual Goals and More Events Levels 15-22	15. Stick Shift 16. Don't Touch Them 17. From Dust to Dust 18. Cages 19. Accounts Department 20. Hot Gems 21. Berserker 22. Freeze Tag	creating custom goals, game physics (collide/destroy/collect), events, methods	

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	5. Integration Practice Levels 23-24	23. Run for Gold 24. Disintegration Arrow	combining concepts to create unique game behaviors	
	6. Arcade Game Level 25	25. Game of Coins Parts 1-5	creating a Pac-Man-style arcade game, integrating concepts to create a more complex project	
	7. Game Development 2 Project		Synthesize all Game Development 2 concepts	
Web Development 2	1. JavaScript for Web (only in Python Classes) Levels 1-10	1. JavaScript: True Names 2. JavaScript: Fire Dancing 3. JavaScript: Lost in the Stacks 4. JavaScript: Master of Names 5. JavaScript: Patrol Buster 6. JavaScript: Back to Back 7. JavaScript: Maniac Munchkins 8. JavaScript: Stillness in Motion 9. JavaScript: A Fine Mint 10. JavaScript: Return to Thornbush Farm	Sequencing, Strings, While Loops, Variables, Arguments, If Statements, Functions	Web Dev 2 - CSTA Alignment doc 1B-AP-09, 1B-AP-10, 1B-AP-12, 1B-AP-16, 1B-AP-17 2-AP-11, 2-AP-12, 2-AP-14, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-15, 3A-AP-22, 3A-AP-23 3B-AP-15, 3B-AP-16
	2. jQuery Intro Levels 11-15	11. Query Confirmed 12. Clickthrough 13. Disappearing Act 14. Toggulation 15. Eventful Selectors	Basic Web Scripting, Basic Event Handling	1B-AP-09, 1B-AP-10, 1B-AP-12, 1B-AP-16, 1B-AP-17 2-AP-11, 2-AP-12, 2-AP-14, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-15, 3A-AP-22, 3A-AP-23 3B-AP-15, 3B-AP-16



Course	Lesson/Module	Levels	Topics	Standards (CSTA)
	3. Levels 16-20	16. Border Patrol 17. Marginal Utility 18. Transformative Properties 19. Animania 20. Precision Coloring	Basic HTML, Basic CSS, Advanced HTML	1B-AP-09, 1B-AP-10, 1B-AP-12, 1B-AP-16, 1B-AP-17 2-AP-11, 2-AP-12, 2-AP-14, 2-AP-17, 2- AP-19, 2-IC-22 3A-AP-15, 3A-AP-22, 3A-AP-23 3B-AP-15, 3B-AP-16
	4. Final Project Level 21	21. Quizlet	Create a shareable interactive web page	1B-AP-09, 1B-AP-10, 1B-AP-12, 1B-AP-16, 1B-AP-17 2-AP-11, 2-AP-12, 2-AP-14, 2-AP-17, 2- AP-19, 2-IC-22 3A-AP-15, 3A-AP-22, 3A-AP-23 3B-AP-15, 3B-AP-16
<u>Computer Science 3</u>	11. String Concatenation	1. Friend and Foe 2. Deja Brew 3. Reward and Ruination 4. Concept Challenge. Air Rescue Service	Add strings together with +	CS3 - CSTA Alignment doc
	Levels 1-4			1B-AP-09, 1B-AP-10, 1B-AP-11, 1B-AP-12, 1B-AP-15, 1B-AP-16, 1B-AP-17
	12. Computer Arithmetic	5. The Wizard's Door 6. The Wizard's Haunt 7. The Wizard's Plane 8. Concept Challenge. True Alchemy	Do arithmetic with code (+ - * /)	2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2- AP-18, 2-AP-19, 2-IC-22 3A-AP-15, 3A-AP-19, 3A-AP-22, 3A-AP-23, 3A-IC-26 3B-AP-15, 3B-AP-21
	Levels 5-8			
	13. Properties Levels 9-18	9. Coincrumbs 10. White Rabbit 11. Chameleons	Access object properties with .	

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Course	Lesson/Module	Levels	Topics	Standards (CSTA)
	Levels 9-18	11. Champions 12. Concept Challenge. Rich and Safe 13. Combo Challenge. Wind Correction 14. Backwoods Bombardier 15. Thumb Biter 16. Endangered Burl 17. Taunting 18. Concept Challenge. Wrong Type		
	14. Functions with Returns Levels 19-26	19. Burlbole Grove 20. Blind Distance 21. Hit and Freeze 22. Coin Hunter 23. Agrippa Returned 24. Metal Detector 25. Concept Challenge. Ogre Invaders 26. Combo Challenge. Forest Storm	Write functions that return answers	
	15. Not Equals Levels 27-31	27. Passing Through 28. Useful Competitors 29. Wonderglade 30. Cursed Wonderglade 31. Concept Challenge. Wild Alliance	Test whether two things are not the same	

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	16. Boolean Or Levels 32-37	32. Gems or Death 33. Burls Beets Booleans 34. Salted Earth 35. Star Shower 36. Forest Shadow 37. Concept Challenge. Warders	Execute if-statements if one of two things are true	
	17. Boolean And Levels 38-46	38. Spring Thunder 39. Teleport Lasso 40. Brawler Hunt 41. Concept Challenge. Helpful Hunting 42. Usual Day 43. Logical Path 44. Logical Circle 45. Logical Conclusion 46. Combo Challenge. Nonandor	Thunder Execute if-statements if both of two things are true	
	18. Relative Movement Levels 47-55	47. The Mighty Sand Yak 48. Oasis 49. Sarven Road 50. Concept Challenge. Dried Irrigation 51. Sarven Gaps 52. Crossroads 53. Interception 54. Thunderhooves 55. Concept Challenge. Friendly Minefield	Combine x- and y-properties and arithmetic for movement	1B-AP-09, 1B-AP-10, 1B-AP-11, 1B-AP-12, 1B-AP-15, 1B-AP-16, 1B-AP-17 2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2-AP-18, 2-AP-19, 2-IC-22 3A-AP-15, 3A-AP-16, 3A-AP-18, 3A-AP-19, 3A-AP-22, 3A-AP-23, 3A-IC-26 3B-AP-15, 3B-AP-21

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Course	Lesson/Module	Levels	Topics	Standards (CSTA)
	19. Time and Health Levels 56-63	56. Kithgard Enchanter 57. Minesweeper 58. Operation 'Killdeer' 59. Medical Attention 60. Concept Challenge. Valley of the King 61. Combo Challenge. Valley of a Thousand Rocks 62. Keeping Time 63. Crux of the Desert	Code based on elapsed time and hero health	
	20. Break and Continue Levels 64-81	64. Hoarding Gold 65. Decoy Drill 66. Concept Challenge. Greed Protection 67. Continuous Alchemy 68. Concept Challenge. Master Of Camouflage 69. Combo Challenge. Escape to the Spring 70. Fast and Furry-ous 71. Sand Mushrooms 72. Mushroom Noise 73. Key Traps 74. Chain of Command 75. Pet Engineer 76. Pet Translator 77. Pet Adjutant 78. Alchemic Power 79. Concept Challenge. Pet Explorer 80. Dangerous Key 81. Olympic Race	Skip or end while-loops with break and continue statments	1B-AP-09, 1B-AP-10, 1B-AP-11, 1B-AP-12, 1B-AP-15, 1B-AP-16,1B-AP-17 2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2- AP-18, 2-AP-19, 2-IC-22 3A-AP-15, 3A-AP-19, 3A-AP-22, 3A-AP-23, 3A-IC-26 3B-AP-15, 3B-AP-21

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Course	Lesson/Module	Levels	Topics	Standards (CSTA)
	21. Capstone Challenge/Review - Multiplayer Arena	82. Cross Bones	Synthesize all CS3 concepts	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-11, 1B-AP-12, 1B-AP-13, 1B-AP-15, 1B-AP-16, 1B-AP-17
	Level 82			2-AP-10, 2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2-AP-18, 2-AP-19, 2-IC-22
				3A-AP-13, 3A-AP-15, 3A-AP-16, 3A-AP-18, 3A-AP-19, 3A-AP-22, 3A-AP-23, 3A-IC-26
				3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-14, 3B-AP-15, 3B-AP-21
<u>Game Development 3</u>	On Update and Setting Position	1. The Rule of the Square 2. The Big Guy 3. Quantum Jump 4. Looping Forest	game loops, loop variants (pauses, dropping frames) resource re-use	Game Dev 3 - CSTA Alignment doc
	Levels 1-4			1B-AP-10, 1B-AP-12, 1B-AP-13, 1B-AP-15, 1B-AP-16, 1B-AP-17
	Animations	5. Smooth Run 6. Looney Gems	game physics, tracking speed, smooth animation	2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2-AP-17, 2-AP-18, 2-AP-19, 2-IC-22
	Levels 5-6			
	Runner Project Tutorial	7. Runner Part 1 8. Runner Part 2 9. Runner Part 3 10. Runner Part 4	creating a side-scrolling arcade game, integrating concepts to create a complex project	3A-AP-13, 3A-AP-15, 3A-AP-16, 3A-AP-17, 3A-AP-18, 3A-AP-19, 3A-AP-22, 3A-AP-23, 3A-IC-26
	Levels 7-10			
	Game Dev 3 Project	11. Game Dev 3 Final Project	Synthesize all Game Development 3 concepts	3B-AP-15, 3B-AP-16, 3B-AP-21, 3B-AP-23
	Level 11			



Course	Lesson/Module	Levels	Topics	Standards (CSTA)
<u>Computer Science 4</u>	21. While Conditionals Levels 1-8	1. Dust 2. Double Check 3. Canyon of Storms 4. No Pain No Gain 5. Desert Combat 6. Bait and Switch 7. Mirage Maker 8. Spinach Power	Create a while loop with a conditional	CS4 - CSTA Alignment doc 1B-AP-09, 1B-AP-10, 1B-AP-11, 1B-AP-12, 1B-AP-13, 1B-AP-15, 1B-AP-16, 1B-AP-17 2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2-AP-17, 2-AP-18, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-15, 3A-AP-17, 3A-AP-18, 3A-AP-19, 3A-AP-22, 3A-AP-23, 3A-IC-26 3B-AP-15
	22. Arrays Levels 9-13	9. Team Work 10. Coordinated Defense 11. Recruiting Queue 12. Second Gem 13. Sarven Savior	Access an element in an array using an index	1B-AP-09, 1B-AP-10, 1B-AP-11, 1B-AP-12, 1B-AP-13, 1B-AP-15, 1B-AP-16, 1B-AP-17 2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2-AP-17, 2-AP-18, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-14, 3A-AP-15, 3A-AP-17, 3A-AP-18, 3A-AP-19, 3A-AP-22, 3A-AP-23, 3A-IC-26 3B-AP-15

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Course	Lesson/Module	Levels	Topics	Standards (CSTA)
	23. Nested While Loops Levels 14-21	14. Bank Raid 15. Wandering Souls 16. Lurkers 17. Preferential Treatment 18. Sarven Shepherd 19. Shine Getter 20. Marauder 21. Sand Snakes	Construct a nested while loop	1B-AP-09, 1B-AP-10, 1B-AP-11, 1B-AP-12, 1B-AP-13, 1B-AP-15, 1B-AP-16, 1B-AP-17 2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2-AP-17, 2-AP-18, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-15, 3A-AP-17, 3A-AP-18, 3A-AP-19, 3A-AP-22, 3A-AP-23, 3A-IC-26 3B-AP-15
	24. Optimization Levels 22-26	22. Odd Sandstorm 23. Mad Maxer 24. Brittle Morale 25. Mad Maxer Strikes Back 26. Wishing Well	Use optimization in problem solving	
	25. Objects Levels 27-31	27. Crag Tag 28. Slalom 29. Ogre Gorge Gouger 30. Cloudrip Commander 31. Mountain Mercenaries	Use an object literal as an argument	

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Course	Lesson/Module	Levels	Topics	Standards (CSTA)
	26. For Loops Levels 32-37	32. Timber Guard 33. Zoo Keeper 34. Noble Sacrifice 35. Hunting Party 36. Borrowed Sword 37. Summation Summit	Use a for loop to loop through the elements in an array	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-11, 1B-AP-12, 1B-AP-13, 1B-AP-15, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2-AP-17, 2-AP-18, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-15, 3A-AP-17, 3A-AP-18, 3A-AP-19, 3A-AP-22, 3A-AP-23, 3A-IC-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-14, 3B-AP-15, 3B-AP-21
<u>Computer Science 5 (Python)</u>	28. Modulo for Arrays Levels 1-7	1. Vital Powers 2. The Two Flowers 3. Hunters and Prey 4. Reaping Fire 5. Toil and Trouble 6. Mixed Unit Tactics 7. Steelclaw Gap	Defining functions, using modulo operator on arrays	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-14, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-1C-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-15, 3B-AP-16
<u>Computer Science 5 (JavaScript)</u>				



Course	Lesson/Module	Levels	Topics	Standards (CSTA)
	29. Predefined Functions Levels 8-10	8. Ring Bearer 9. Library Tactician 10. The Geometry of Flowers	Using predefined functions	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-11, 1B-AP-12, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-14, 3A-AP-15, 3A-AP-17, 3A-AP-22, 3A-AP-23, 3A-1C-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-15, 3B-AP-16
	30. String Searching Levels 11-13	11. The Spy Among Us 12. In My Name 13. Highlanders	Strings as arrays	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-14, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-1C-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-15, 3B-AP-16



Course	Lesson/Module	Levels	Topics	Standards (CSTA)
	31. For Loops with Non-1 Steps Levels 14-15	14. Perimeter Defense 15. Dangerous Tracks	Use for loops to iterate through a list more than one at a time	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-14, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-1C-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-15, 3B-AP-16
	32. Array Push Level 16	16. Resource Valleys	Array push function	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-14, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-1C-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-15, 3B-AP-16

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Course	Lesson/Module	Levels	Topics	Standards (CSTA)
	33. Same Array Searching Levels 17-19	17. Flawless Pairs 18. Twins Power 19. Think Ahead	Searching array	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-14, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-1C-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-15, 3B-AP-16
	34. Nested Fors As Grid Levels 20-22	20. Grid Search 21. Grid Minefield 22. To Arms!	Using nested for loops to create grids	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-14, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-1C-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-15, 3B-AP-16

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Course	Lesson/Module	Levels	Topics	Standards (CSTA)
	35. Nested Arrays As Grid Levels 23-25	23. Power Points 24. Danger Valley 25. Sleepwalkers	Using nested arrays as grids	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-14, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-1C-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-15, 3B-AP-16
	36. 2D Array Access Levels 26-27	26. Cannon Landing Force 27. Snowdrops	2D Arrays	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-14, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-1C-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-15, 3B-AP-16



Course	Lesson/Module	Levels	Topics	Standards (CSTA)
	37. For Loop Array Access Levels 28-30	28. Reindeer Wakeup 29. Reindeer Spotter 30. Reindeer Tender	Accessing 2D array elements with for loops	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-14, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-1C-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-15, 3B-AP-16
	38. Geometry Levels 31-33	31. Ritual of Rectangling 32. Square Shield 33. Area of Yetis	Write programs to calculate the area of shapes	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-14, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-1C-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-15, 3B-AP-16



Course	Lesson/Module	Levels	Topics	Standards (CSTA)
	39. Number Base Conversion Levels 34	34. Bits and Trits	Convert decimal numbers to binary	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-14, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-1C-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-15, 3B-AP-16
Computer Science 6	1. Writing Functions with Multiple Arguments	1. Misty Island Mine 2. Grim Determination	Functions with parameters	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-IC-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-13, 3B-AP-14, 3B-AP-16
	2. Reverse an Array	3. Yeti Eater	Arrays, algorithms	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-IC-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-13, 3B-AP-14, 3B-AP-16

CODE COMBAT

Course	Lesson/Module	Levels	Topics	Standards (CSTA)
	3. Reverse a String	4. Antipodes	Strings, algorithms	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-IC-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-13, 3B-AP-14, 3B-AP-16
	4. Calculate Average	5. The Hunt Begins 6. Yak Heist 7. Slumbering Sample	Algorithms	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-IC-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-13, 3B-AP-14, 3B-AP-16
	5. Vectors	8. Circle Walking 9. Skating Away	Vector algorithms	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-IC-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-13, 3B-AP-14, 3B-AP-16



Course	Lesson/Module	Levels	Topics	Standards (CSTA)
	6. Binary Search	10. Guess My Number	Search algorithms	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-IC-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-13, 3B-AP-14, 3B-AP-16
	7. Selection Sort	11. Form Up!	Sort Algorithms	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-IC-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-13, 3B-AP-14, 3B-AP-16
	8. Search 2D Array	12. Match Cord 13. Golden Choice	Search algorithms	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-IC-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-13, 3B-AP-14, 3B-AP-16

CODE COMBAT

Course	Lesson/Module	Levels	Topics	Standards (CSTA)
	9. Pathfinding	14. Fragile Maze 15. Treasured in Ice 16. Broken Circles	Search algorithms	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-IC-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-13, 3B-AP-14, 3B-AP-16
	10. Queues	17. First Out 18. Double Queue 19. Queue Manager	Queues (common data structures)	1B-AP-08, 1B-AP-09, 1B-AP-10, 1B-AP-16, 1B-AP-17 2-AP-10, 2-AP-11, 2-AP-12, 2-AP-17, 2-AP-19, 2-IC-22 3A-AP-13, 3A-AP-15, 3A-AP-22, 3A-AP-23, 3A-IC-26 3B-AP-08, 3B-AP-09, 3B-AP-10, 3B-AP-11, 3B-AP-13, 3B-AP-14, 3B-AP-16