

Level

K	1	2	3	4	5	6	7	8	9	10	11	12
----------	----------	----------	----------	----------	----------	----------	----------	----------	----------	-----------	-----------	-----------

Subject: _____ Computer Science I – Pre-AP _____

CISD Curriculum Framework – Scope

Local Objectives	Extension	Textbook	Time Range	Assessment	Resources
<p>The students will:</p> <p>HOW COMPUTERS WORK Learn how computers work. Learn to use WIN95 to find Daily Class File. Learn about the CPU, Hardware, & Software. Learn the difference between Input & Output. Learn how computers solve problems Create a Human PC, using old computer parts. Learn different types of networks: LAN &WAN.</p> <p>COMPILERS AND SYSTEM SOFTWARE Learn what a compiler is. Learn what an interpreter is. Learn the types of software programs. Learn what an op.sys.is-WIN95, DOS, UNIX Learn about Security and Privacy</p> <p>C++ ENVIRONMENT AND COMPILER Learn the C++ Editor and Environment. Learn how to use the C++ debugging options. Learn the Basics of C++. Learn about C++ Library Functions Learn the two types of Comments. Learn prop. indention used in prog./3 spaces Learn that C++ is case sensitive! Dog <> dog Learn to use Monitor Output with cout << endl Learn to Print Source code & program output. Learn to use comments to create prog. blocks. Learn about error types :: syntax and logic. Learn to identify certain compiler errors. C++ Basics reviewed and continued. Learn how to call built-in functions. Learn the steps to use Borland C++ 5.02 to write graphics programs.</p>		<p>pp.1-17 pp.1-17 pp.1-17 pp.1-17 pp.1-17 pp.1-17 pp.1-17</p> <p>pp. 14-16 pp. 14-16 pp. 14-16 pp. 14-16</p> <p>pp.19-62 pp.19-62 pp. 33-34 pp. 40-42 pp. 32-33 pp. 45-52 pp. 40-42 pp. 40-42 pp.19-62</p>	<p>½ week</p> <p>1/2 week</p> <p>1 week</p>	<p>Lab Based Evaluation Teacher Evaluation Student Evaluation Cooperative Projects Lab Based Testing Standard Testing</p> <p>Lab Based Evaluation Teacher Evaluation Student Evaluation Cooperative Projects Lab Based Testing Standard Testing</p> <p>Lab Based Evaluation Teacher Evaluation Student Evaluation Cooperative Projects Lab Based Testing Standard Testing</p>	<p>Using Visual Basic 2nd Edition Sprague MS Visual Basic 30 Handouts PowerPoint</p> <p>MS Visual Basic 3.0 Handouts PowerPoint</p> <p>C++ 4.5 Handouts PowerPoint</p>

Local Objectives	Extension	Textbook	Time Range	Assessment	Resources
VARIABLES AND CONSTANTS Learn how to define and assign variables. Learn how to use data types and operators. Learn how to write assignment statements. Learn about the scope of variables.		pp. 63-126 pp.40-43 pp. 63-69	1 week	Lab Based Evaluation Teacher Evaluation Student Evaluation Cooperative Projects Lab Based Testing Standard Testing	C++ 4.5 Handouts PowerPoint
PROGRAM DESIGN AND ALGORITHMS Learn how to make a Pizza. Learn what a program block/module is. Learn the basics of program design. Learn how to write a basic algorithm. Learn to solve problems one step at a time. Learn how to write algorithms using pseudocode.		pp.19-26 pp.19-26 pp.19-26 pp.19-26 pp.19-26 pp.19-26	1 week	Lab Based Evaluation Teacher Evaluation Student Evaluation Cooperative Projects Lab Based Testing Standard Testing	C++ 4.5 Handouts PowerPoint
DATA TYPE OPERATIONS Learn what an expression is. Learn Mathematical Precedence () ^ * / - +. Learn C++ data type compatibility - int to Char, int to float, float to int. Learn how to use the ASCII table. Learn how to initialize variables. variable = expression or value; Learn how and why to use program constants.		pp. 63-69 pp.85 pp.95-97	1 week	Lab Based Evaluation Teacher Evaluation Student Evaluation Cooperative Projects Lab Based Testing Standard Testing	C++ 4.5 Handouts PowerPoint
INPUT AND FORMATTING OUTPUT Learn how to format output. Learn to use setw() and setprecision(). Learn to get user input using Cin >>. Learn how to type Cast an expression. Learn how/when to use Shortcut operators. Learn to use the C++ apstring data type. Learn that apstring is a class with member Functions. Length () Learn to get string input with GetLine. Write the ClearBuffer code.		pp.43-50 pp. 42-49 pp. 80 -94 pp. 104-106 pp.75-76 pp. 87-97 pp. 87-97 pp. 87-97 pp. 87-97 pp. 87-97	1 week	Lab Based Evaluation Teacher Evaluation Student Evaluation Cooperative Projects Lab Based Testing Standard Testing	C++ 4.5 Handouts PowerPoint

Local Objectives	Extension	Textbook	Time Range	Assessment	Resources
<p>2nd Six Weeks</p> <p>INTRODUCTION TO MODULAR PROGRAMMING Learn to org. programs with void functions. Learn to write an algorithm for a program. with functions Learn about program design and debugging. Review stepwise refinement and program development Learn to use user-defined functions without parameters. Learn to use Function Proto-types and the reason for using them. Learn how to create an include library.</p> <p>INTRODUCTION TO PARAMETERS Learn to use built-in functions. Random, and other built-in functions Learn to use a value parameter. Learn the 2 Types of functions : Return and void(with parameters & without). Learn to use the random and math functions. Learn how to call built-in graphics functions.</p> <p>PARAMETERS Learn the difference between value parameters. and returning functions. Learn the difference between formal and actual parameters Learn to use the constant reference parameter. Learn the difference between Value vs. Reference parameter. Learn how and when to use the return feature of a function. Learn to create user-defined functions with parameters.</p>		<p>pp.139-144</p> <p>pp.19-26</p> <p>pp.139-144</p> <p>pp. 97-99 pp. 97-99 pp. 97-99 pp. 97-99 pp. 97-99 pp. 97-99</p> <p>pp. 127-201 pp.142-143 pp.133-134 pp.147-150 pp.144-145 pp.150-158 pp.144-148 pp.159-171 pp.159-171</p>	<p>1 week</p> <p>2 weeks</p> <p>2 weeks</p>	<p>Lab Based Evaluation Teacher Evaluation Student Evaluation Cooperative Projects Lab Based Testing Standard Testing</p> <p>Lab Based Evaluation Teacher Evaluation Student Evaluation Cooperative Projects Lab Based Testing Standard Testing</p> <p>Lab Based Evaluation Teacher Evaluation Student Evaluation Cooperative Projects Lab Based Testing Standard Testing</p>	<p>C++ 4.5 Handouts PowerPoint</p> <p>C++ 4.5 Handouts PowerPoint</p> <p>C++ 4.5 Handouts Powerpoint</p>

Local Objectives	Extension	Textbook	Time Range	Assessment	Resources
<p>Learn what scope is and what it means in regard to variables. Learn to determine the scope of variables and parameters. Learn to put in line debugging statements in programs. Learn to hand simulate blocks of code to test logic. Learn to write an if else statement.</p> <p>CONTROL STRUCTURES SELECTION STATEMENTS Learn all about one-way, two way and multiple selection. Learn to write if statements. Learn to write if else statements. Learn to write case statements. Learn to use relational operators : <, >, <=, >=, ==, and !=. Convert Skip to use parameters and a for loop.</p> <p>3rd Six Weeks CONTROL STRUCTURES REPETITIVE STRUCTURES Learn about repetition structures : for, while,and, do while loops Learn how to use logical operators with loops. Learn when to use each type of loop. Learn the for Loop. Learn the while loop. Learn the do while loop. Learn about assertions. Learn what a loop control variable is. Learn to evaluate short circuit evaluation. Learn to put multiple conditions into loops and selection statements Learn to use the boolean data type. Learn about boolean logic and the boolean laws. Learn to use Logical operators : &&, !, . Learn to evaluate conditions and shortcircuit evaluation.</p>		<p>pp.203-291 pp.216-226 pp. 226-251 pp.251-263 pp.206-216</p> <p>pp.293-372</p> <p>pp.206-216 pp.293-372 pp.294-314 pp.314-346 pp.314-347 pp.293-372 pp.293-372 pp.336-372 pp.336-372</p> <p>pp.206-216 pp.206-212 pp.206-212 pp.206-212</p>	<p>1 week</p> <p>3 weeks</p>	<p>Lab Based Evaluation Teacher Evaluation Student Evaluation Cooperative Projects Lab Based Testing Standard Testing</p> <p>Lab Based Evaluation Teacher Evaluation Student Evaluation Cooperative Projects Lab Based Testing Standard Testing</p>	<p>C++ 4.5 Handouts PowerPoint</p> <p>C++ 4.5 Handouts PowerPoint</p>

Local Objectives	Extension	Textbook	Time Range	Assessment	Resources
VB DATA TYPES, VARIABLES, AND OPERATORS Learn how to use variables in VB. Learn how to define a variable in VB. Learn all of the VB data-types. Learn why you should use variables. Learn what an assignment statement is. Learn what an operator is. Complete several programs using VB variables and operators. Write a self-designed lab using VB variables, objects, and operators.		pp.68-105 pp. 68-84 pp. 84-89 pp. 68-89 pp. 70-75 pp. 70-75	3 Weeks	Lab Based Evaluation Teacher Evaluation Student Evaluation Cooperative Projects Lab Based Testing Standard Testing	Handouts PowerPoint
SELECTION STATEMENTS Learn how to write an if statement in VB. Learn how to write an if else statement in VB. Learn how to write an if else if statement in VB.		pp. 109-132 pp. 109-132 pp. 109-132	1 Week	Lab Based Evaluation Teacher Evaluation Student Evaluation	Handouts PowerPoint
5th 6 Weeks SELECTION STATEMENTS Learn how to write an if statement in VB. Learn how to write an if else statement in VB. Learn how to write an if else if statement in VB. Learn how to write a Case statement in VB. Learn how to use relational operators. Learn how to evaluate a boolean expression. Write the cereal program on pages 117-123.		pp. 109-132 pp. 109-132 pp. 109-132 pp. 109-132 pp. 109-132 pp. 109-132 pp. 109-132	2 Weeks	Lab Based Evaluation Teacher Evaluation Student Evaluation Cooperative Projects Lab Based Testing Standard Testing	Handouts PowerPoint
REPETITION STATEMENTS Learn how to write a for loop in VB. Learn how to write a while loop in VB. Learn how to write a do while loop in VB. Learn how to write nested loops. Learn to use logical operators in VB and/or not Learn how to evaluate advanced boolean expressions. Learn how to use the keypress event. Write the prime number program on pp.138/143. Pass a test over repetitive control structures. Write an algorithm to modify the last create your own lab to use CS. Finish the last create your own lab to use CS.		pp. 177-182 pp. 177-182 pp. 134-146 pp. 177-182 pp. 177-182 pp. 177-182 pp. 177-182 pp. 177-182 pp. 177-182 pp. 177-182 pp. 177-182	3 Weeks	Lab Based Evaluation Teacher Evaluation Student Evaluation Cooperative Projects Lab Based Testing Standard Testing	Handouts PowerPoint

Local Objectives	Extension	Textbook	Time Range	Assessment	Resources
<p>STRINGS Learn how to use the string Data Type. Learn how to use the string member functions. Learn how to concatenate strings.</p>		pp. 151 - 160 pp. 151 - 160 pp. 151 - 160	1 Week	Lab Based Evaluation Teacher Evaluation Student Evaluation Cooperative Projects Lab Based Testing Standard Testing	Handouts PowerPoint
<p>6th 6 Weeks FILES AND MENUS Learn how to create a menu in VB. Learn to use while loops to read from files. Learn how to use the InputBox function. Learn how to use files in VB projects. Create the MiniEdit project on pages 165-177.</p>		pp. 160 -176 pp. 160 -176 pp. 170- 171 pp. 160 -176 pp. 160 -176	2 Weeks	Lab Based Evaluation Teacher Evaluation Student Evaluation Cooperative Projects Lab Based Testing Standard Testing	Handouts PowerPoint
<p>SCROLLBARS Learn how to use a ScrollBar. Learn to use for loops with scroll bars. Learn the scroll bar as a progress indicator. Create the project on page 184-185. Create the 2Point problem on page 196-204.</p>		pp. 182 - 186 pp. 182 - 186 pp. 182 - 186 pp. 182 - 186 pp. 182 - 186	1 Week	Lab Based Evaluation Teacher Evaluation Student Evaluation Cooperative Projects Lab Based Testing Standard Testing	Handouts PowerPoint
<p>MAJOR PROGRAMMING PROJECT Use all concepts learned in Visual Basic. Demonstrate advanced program design.</p>			3 Weeks	Lab Based Evaluation Teacher Evaluation	Handouts