

## DESE Model Curriculum

GRADE LEVEL/UNIT TITLE: 11-12/Develop Program Algorithms

Course Code: 034355

### **COURSE INTRODUCTION:**

**Computer technology skills are vital to business; they permeate the entire workplace. Familiarity with computer programming is required in a growing number of firms and occupations primarily because of the increasingly widespread use of computerized management information systems.**

**This course focuses on converting problems into detailed plans, writing code into computer language, testing, monitoring, debugging, documenting and maintaining computer programs. Students will also design programs for specific uses.**

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UNIT DESCRIPTION: Students will learn how to create a program and validate the code.		SUGGESTED UNIT TIMELINE: 2 WEEKS					
		CLASS PERIOD (min.): 50 MINUTES					
ESSENTIAL QUESTIONS:							
1. What changes with each execution of a program?							
2. Why follow standards?							
3. Why validate input?							
4. What is the benefit of using a method?							
ESSENTIAL MEASURABLE LEARNING OBJECTIVES		CCSS LEARNING GOALS (Anchor Standards/Clusters)	CROSSWALK TO STANDARDS				
			GLEs/CLEs	PS	CCSS	OTHER	DOK
1. Use correct syntax and naming conventions of a given programming language					RI.11-12.1 RI.11-12.2 RI.11-12.3 RI.11-12.4 RI.11-12.5 RI.11-12.6 RI.11-12.7 RI.11-12.10 L.11-12.1 L.11-12.2 L.11-12.3 L.11-12.4 L.11-12.5 L.11-12.6 RST.11-12.1 RST.11-12.2 RST.11-12.3	IT-X.3 IT-X.4 IT-XI.2 IT-XI.3 IT-XI.4 IT-XVI.1 IT-XVI.2 IT-XVI.3 IT-XVI.4 IT-XIV.1 IT-XIV.2 IT-XIII.1 IT-XIII.2 IT-XIII.3 IT-XIII.4 COMP-I.1 COMP-II.1	3

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				<p>RST.11-12.4</p> <p>RST.11-12.5</p> <p>RST.11-12.6</p> <p>RST.11-12.7</p> <p>RST.11-12.8</p> <p>RST.11-12.9</p> <p>RST.11-12.10</p> <p>WHST.11-12.6</p> <p>WHST.11-12.7</p>	<p>COMP-II.2</p> <p>COMP-III.1</p> <p>COMP-III.2</p> <p>COMP-IV.1</p> <p>COMP-IV.2</p> <p>COMP-IV.3</p> <p>COMP-V.2</p> <p>COMP-V.3</p> <p>COMP-V.4</p> <p>COMP-VI-A.3</p> <p>COMP-VI-A.4</p> <p>COMP-VI-B.1</p> <p>COMP-VI-B.2</p> <p>COMP-VI-B.3</p> <p>COMP-VI-B.4</p> <p>COMP-VI-C.1</p> <p>COMP-VI-C.2</p> <p>COMP-VI-C.3</p> <p>COMP-VI-D.1</p> <p>COMP-VI-D.2</p> <p>COMP-VI-</p>	
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					<p>D.3</p> <p>COMP-VI-</p> <p>E.3</p> <p>COMP-VI-</p> <p>E.4</p> <p>COMP-VI-F.2</p> <p>COMP-VI-F.3</p> <p>COMP-VI-F.4</p> <p>COMP-VI-</p> <p>G.1</p> <p>COMP-VI-</p> <p>G.2</p> <p>COMP-VI-</p> <p>G.3</p> <p>COMP-VI-</p> <p>H.1</p> <p>COMP-VI-</p> <p>H.2</p> <p>COMP-VI-</p> <p>H.3</p> <p>COMP-VI-</p> <p>H.4</p> <p>COMP-VI-I.3</p> <p>COMP-VI-I.4</p> <p>COMP-VI-J.3</p> <p>COMP-VI-J.4</p> <p>COMP-VI-</p> <p>K.2</p> <p>COMP-VI-</p> <p>K.3</p> <p>COMP-VI-L.3</p> <p>COMP-VI-</p>	
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					M.3	
2. Create a program using internal documentation				S-ID.8 S-MD.5 S-MD.6 S-MD.7 S-MD.8 G-SRT.8 G-GPE.7 G-GMD.3 G-MG.2 F-BF.1 F-BF.2 A-SSE.4 A-APR.1 A-APR.6 A-CED.1 A-CED.4 A-REI.1 A-REI.2 A-REI.3 A-REI.4 RST.11-12.1 RST.11-12.2 RST.11-12.3 RST.11-12.4 RST.11-12.5 RST.11-12.6 RST.11-12.7 RST.11-12.8 RST.11-12.9 RST.11-12.10	IT-X.3 IT-X.4 IT-XI.2 IT-XI.3 IT-XI.4 IT-XVI.1 IT-XVI.2 IT-XVI.3 IT-XVI.4 IT-XIV.1 IT-XIV.2 IT-XIII.1 IT-XIII.2 IT-XIII.3 IT-XIII.4 COMP-I.1 COMP-II.1 COMP-II.2 COMP-III.1 COMP-III.2 COMP-IV.1 COMP-IV.2 COMP-IV.3 COMP-V.2 COMP-V.3 COMP-V.4 COMP-VI-A.3 COMP-VI-A.4	4

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				<p>WHST.11-12.6</p> <p>WHST.11-12.7</p>	<p>COMP-VI-B.1</p> <p>COMP-VI-B.2</p> <p>COMP-VI-B.3</p> <p>COMP-VI-B.4</p> <p>COMP-VI-C.1</p> <p>COMP-VI-C.2</p> <p>COMP-VI-C.3</p> <p>COMP-VI-D.1</p> <p>COMP-VI-D.2</p> <p>COMP-VI-D.3</p> <p>COMP-VI-E.3</p> <p>COMP-VI-E.4</p> <p>COMP-VI-F.2</p> <p>COMP-VI-F.3</p> <p>COMP-VI-F.4</p> <p>COMP-VI-G.1</p> <p>COMP-VI-G.2</p> <p>COMP-VI-</p>	
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					<b>G.3</b> <b>COMP-VI-</b> <b>H.1</b> <b>COMP-VI-</b> <b>H.2</b> <b>COMP-VI-</b> <b>H.3</b> <b>COMP-VI-</b> <b>H.4</b> <b>COMP-VI-I.3</b> <b>COMP-VI-I.4</b> <b>COMP-VI-J.3</b> <b>COMP-VI-J.4</b> <b>COMP-VI-</b> <b>K.2</b> <b>COMP-VI-</b> <b>K.3</b> <b>COMP-VI-L.3</b> <b>COMP-VI-</b> <b>M.3</b> <b>COMM-I.A.1</b> <b>COMM-I.A.2</b> <b>COMM-I.A.3</b> <b>COMM-I.A.4</b> <b>COMM-I.B.1</b> <b>COMM-I.B.2</b> <b>COMM-I.B.3</b> <b>COMM-I.B.4</b> <b>COMM-I.C.1</b> <b>COMM-I.C.2</b> <b>COMM-I.C.3</b> <b>COMM-I.C.4</b>	
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					<b>COMM-I.D.1</b> <b>COMM-I.D.2</b> <b>COMM-I.D.3</b> <b>COMM-I.D.4</b> <b>COMM-</b> <b>III.E.3</b> <b>COMM-IV.1</b> <b>COMM-IV.2</b> <b>COMM-IV.3</b> <b>COMM-IV.4</b>	
3. Identify the use and limitations of different data types (integer, double, and constant)				<b>N.RN.1</b> <b>N.RN.2</b> <b>N.RN.3</b> <b>N.Q.1</b> <b>N.Q.2</b> <b>N.Q.3</b> <b>RST.11-12.1</b> <b>RST.11-12.2</b> <b>RST.11-12.3</b> <b>RST.11-12.4</b> <b>RST.11-12.5</b> <b>RST.11-12.6</b> <b>RST.11-12.7</b> <b>RST.11-12.8</b> <b>RST.11-12.9</b> <b>RST.11-12.10</b> <b>WHST.11-</b> <b>12.6</b> <b>WHST.11-</b> <b>12.7</b>		<b>1</b>



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<p>4. Create programs that include: variables and constants; counters and accumulators; arithmetic operations and functions; conditional statement; loop instruction; required user input; input validation; opening, writing, and reading from a data file; producing formatted output; modular program using one or more methods; that passes data to methods using parameters</p>			<p>S-ID.8 S-MD.5 S-MD.6 S-MD.7 S-MD.8 G-SRT.8 G-GPE.7 G-GMD.3 G-MG.2 F-BF.1 F-BF.2 A-SSE.4 A-APR.1 A-APR.6 A-CED.1 A-CED.4 A-REI.1 A-REI.2 A-REI.3 A-REI.4 RST.11-12.1 RST.11-12.2 RST.11-12.3 RST.11-12.4 RST.11-12.5 RST.11-12.6 RST.11-12.7 RST.11-12.8 RST.11-12.9 RST.11-12.10 WHST.11-12.6</p>	<p>IT-X.3 IT-X.4 IT-XI.2 IT-XI.3 IT-XI.4 IT-XVI.1 IT-XVI.2 IT-XVI.3 IT-XVI.4 IT-XIV.1 IT-XIV.2 IT-XIII.1 IT-XIII.2 IT-XIII.3 IT-XIII.4 COMP-I.1 COMP-II.1 COMP-II.2 COMP-III.1 COMP-III.2 COMP-IV.1 COMP-IV.2 COMP-IV.3 COMP-V.2 COMP-V.3 COMP-V.4 COMP-VI-A.3 COMP-VI-A.4 COMP-VI-B.1</p>	<p style="text-align: center;"><b>4</b></p>
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				<b>WHST.11-12.7</b>	<b>COMP-VI-B.2</b> <b>COMP-VI-B.3</b> <b>COMP-VI-B.4</b> <b>COMP-VI-C.1</b> <b>COMP-VI-C.2</b> <b>COMP-VI-C.3</b> <b>COMP-VI-D.1</b> <b>COMP-VI-D.2</b> <b>COMP-VI-D.3</b> <b>COMP-VI-E.3</b> <b>COMP-VI-E.4</b> <b>COMP-VI-F.2</b> <b>COMP-VI-F.3</b> <b>COMP-VI-F.4</b> <b>COMP-VI-G.1</b> <b>COMP-VI-G.2</b> <b>COMP-VI-G.3</b> <b>COMP-VI-</b>	
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					<b>H.1</b> <b>COMP-VI-</b> <b>H.2</b> <b>COMP-VI-</b> <b>H.3</b> <b>COMP-VI-</b> <b>H.4</b> <b>COMP-VI-I.3</b> <b>COMP-VI-I.4</b> <b>COMP-VI-J.3</b> <b>COMP-VI-J.4</b> <b>COMP-VI-</b> <b>K.2</b> <b>COMP-VI-</b> <b>K.3</b> <b>COMP-VI-L.3</b> <b>COMP-VI-</b> <b>M.3</b>	
5. Identify type of errors (e.g. syntax, run-time and logic)				<b>RST.11-12.1</b> <b>RST.11-12.2</b> <b>RST.11-12.3</b> <b>RST.11-12.4</b> <b>RST.11-12.5</b> <b>RST.11-12.6</b> <b>RST.11-12.7</b> <b>RST.11-12.8</b> <b>RST.11-12.9</b> <b>RST.11-12.10</b> <b>WHST.11-</b> <b>12.6</b> <b>WHST.11-</b> <b>12.7</b>	<b>COMM-I.A.1</b> <b>COMM-I.A.2</b> <b>COMM-I.A.3</b> <b>COMM-I.A.4</b> <b>COMM-I.B.1</b> <b>COMM-I.B.2</b> <b>COMM-I.B.3</b> <b>COMM-I.B.4</b> <b>COMM-I.C.1</b> <b>COMM-I.C.2</b> <b>COMM-I.C.3</b> <b>COMM-I.C.4</b> <b>COMM-I.D.1</b> <b>COMM-I.D.2</b>	<b>1</b>

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					<b>COMM-I.D.3</b> <b>COMM-I.D.4</b> <b>COMM-III.E.3</b> <b>COMM-IV.1</b> <b>COMM-IV.2</b> <b>COMM-IV.3</b> <b>COMM-IV.4</b>	
6. Create a program with a standard graphic user interface (GUI) that includes: objects and menus; and a custom GUI				<b>S-ID.8</b> <b>S-MD.5</b> <b>S-MD.6</b> <b>S-MD.7</b> <b>S-MD.8</b> <b>G-SRT.8</b> <b>G-GPE.7</b> <b>G-GMD.3</b> <b>G-MG.2</b> <b>F-BF.1</b> <b>F-BF.2</b> <b>A-SSE.4</b> <b>A-APR.1</b> <b>A-APR.6</b> <b>A-CED.1</b> <b>A-CED.4</b> <b>A-REI.1</b> <b>A-REI.2</b> <b>A-REI.3</b> <b>A-REI.4</b> <b>RST.11-12.1</b> <b>RST.11-12.2</b> <b>RST.11-12.3</b> <b>RST.11-12.4</b>	<b>IT-VII.1</b> <b>IT-VII.2</b> <b>IT-VII.3</b> <b>IT-VII.4</b> <b>IT-X.3</b> <b>IT-X.4</b> <b>IT-XI.2</b> <b>IT-XI.3</b> <b>IT-XI.4</b> <b>IT-XVI.1</b> <b>IT-XVI.2</b> <b>IT-XVI.3</b> <b>IT-XVI.4</b> <b>IT-XIV.1</b> <b>IT-XIV.2</b> <b>IT-XIII.1</b> <b>IT-XIII.2</b> <b>IT-XIII.3</b> <b>IT-XIII.4</b> <b>COMP-I.1</b> <b>COMP-II.1</b> <b>COMP-II.2</b> <b>COMP-III.1</b> <b>COMP-III.2</b>	<b>4</b>

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				<b>RST.11-12.5</b> <b>RST.11-12.6</b> <b>RST.11-12.7</b> <b>RST.11-12.8</b> <b>RST.11-12.9</b> <b>RST.11-12.10</b> <b>WHST.11-12.6</b> <b>WHST.11-12.7</b>	<b>COMP-IV.1</b> <b>COMP-IV.2</b> <b>COMP-IV.3</b> <b>COMP-V.2</b> <b>COMP-V.3</b> <b>COMP-V.4</b> <b>COMP-VI-A.3</b> <b>COMP-VI-A.4</b> <b>COMP-VI-B.1</b> <b>COMP-VI-B.2</b> <b>COMP-VI-B.3</b> <b>COMP-VI-B.4</b> <b>COMP-VI-C.1</b> <b>COMP-VI-C.2</b> <b>COMP-VI-C.3</b> <b>COMP-VI-D.1</b> <b>COMP-VI-D.2</b> <b>COMP-VI-D.3</b> <b>COMP-VI-E.3</b>	
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					<b>COMP-VI-E.4</b> <b>COMP-VI-F.2</b> <b>COMP-VI-F.3</b> <b>COMP-VI-F.4</b> <b>COMP-VI-G.1</b> <b>COMP-VI-G.2</b> <b>COMP-VI-G.3</b> <b>COMP-VI-H.1</b> <b>COMP-VI-H.2</b> <b>COMP-VI-H.3</b> <b>COMP-VI-H.4</b> <b>COMP-VI-I.3</b> <b>COMP-VI-I.4</b> <b>COMP-VI-J.3</b> <b>COMP-VI-J.4</b> <b>COMP-VI-K.2</b> <b>COMP-VI-K.3</b> <b>COMP-VI-L.3</b> <b>COMP-VI-M.3</b>	
7. Modify an existing program				<b>S-ID.8</b> <b>S-MD.5</b>	<b>IT-X.3</b> <b>IT-X.4</b>	<b>3</b>

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				S-MD.6	IT-XI.2	
				S-MD.7	IT-XI.3	
				S-MD.8	IT-XI.4	
				G-SRT.8	IT-XVI.1	
				G-GPE.7	IT-XVI.2	
				G-GMD.3	IT-XVI.3	
				G-MG.2	IT-XVI.4	
				F-BF.1	IT-XIV.1	
				F-BF.2	IT-XIV.2	
				A-SSE.4	IT-XIII.1	
				A-APR.1	IT-XIII.2	
				A-APR.6	IT-XIII.3	
				A-CED.1	IT-XIII.4	
				A-CED.4	COMP-I.1	
				A-REI.1	COMP-II.1	
				A-REI.2	COMP-II.2	
				A-REI.3	COMP-III.1	
				A-REI.4	COMP-III.2	
				RST.11-12.1	COMP-IV.1	
				RST.11-12.2	COMP-IV.2	
				RST.11-12.3	COMP-IV.3	
				RST.11-12.4	COMP-V.2	
				RST.11-12.5	COMP-V.3	
				RST.11-12.6	COMP-V.4	
				RST.11-12.7	COMP-VI-	
				RST.11-12.8	A.3	
				RST.11-12.9	COMP-VI-	
				RST.11-12.10	A.4	
				WHST.11-	COMP-VI-	
				12.6	B.1	
				WHST.11-	COMP-VI-	
				12.7	B.2	

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					<b>COMP-VI-B.3</b> <b>COMP-VI-B.4</b> <b>COMP-VI-C.1</b> <b>COMP-VI-C.2</b> <b>COMP-VI-C.3</b> <b>COMP-VI-D.1</b> <b>COMP-VI-D.2</b> <b>COMP-VI-D.3</b> <b>COMP-VI-E.3</b> <b>COMP-VI-E.4</b> <b>COMP-VI-F.2</b> <b>COMP-VI-F.3</b> <b>COMP-VI-F.4</b> <b>COMP-VI-G.1</b> <b>COMP-VI-G.2</b> <b>COMP-VI-G.3</b> <b>COMP-VI-H.1</b> <b>COMP-VI-</b>	
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					<b>H.2</b> <b>COMP-VI-</b> <b>H.3</b> <b>COMP-VI-</b> <b>H.4</b> <b>COMP-VI-I.3</b> <b>COMP-VI-I.4</b> <b>COMP-VI-J.3</b> <b>COMP-VI-J.4</b> <b>COMP-VI-</b> <b>K.2</b> <b>COMP-VI-</b> <b>K.3</b> <b>COMP-VI-L.3</b> <b>COMP-VI-</b> <b>M.3</b>	
8. Create a program in collaboration with a team				<b>S-ID.8</b> <b>S-MD.5</b> <b>S-MD.6</b> <b>S-MD.7</b> <b>S-MD.8</b> <b>G-SRT.8</b> <b>G-GPE.7</b> <b>G-GMD.3</b> <b>G-MG.2</b> <b>F-BF.1</b> <b>F-BF.2</b> <b>A-SSE.4</b> <b>A-APR.1</b> <b>A-APR.6</b> <b>A-CED.1</b> <b>A-CED.4</b>	<b>IT-X.3</b> <b>IT-X.4</b> <b>IT-XI.2</b> <b>IT-XI.3</b> <b>IT-XI.4</b> <b>IT-XVI.1</b> <b>IT-XVI.2</b> <b>IT-XVI.3</b> <b>IT-XVI.4</b> <b>IT-XIV.1</b> <b>IT-XIV.2</b> <b>IT-XIII.1</b> <b>IT-XIII.2</b> <b>IT-XIII.3</b> <b>IT-XIII.4</b> <b>COMP-I.1</b>	<b>4</b>

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				<b>A-REI.1</b> <b>A-REI.2</b> <b>A-REI.3</b> <b>A-REI.4</b> <b>SL.11-12.1</b> <b>SL.11-12.2</b> <b>SL.11-12.3</b> <b>SL.11-12.4</b> <b>SL.11-12.5</b> <b>SL.11-12.6</b> <b>L.11-12.1</b> <b>L.11-12.2</b> <b>L.11-12.3</b> <b>L.11-12.4</b> <b>L.11-12.5</b> <b>L.11-12.6</b> <b>RST.11-12.1</b> <b>RST.11-12.2</b> <b>RST.11-12.3</b> <b>RST.11-12.4</b> <b>RST.11-12.5</b> <b>RST.11-12.6</b> <b>RST.11-12.7</b> <b>RST.11-12.8</b> <b>RST.11-12.9</b> <b>RST.11-12.10</b> <b>WHST.11-12.6</b> <b>WHST.11-12.7</b>	<b>COMP-II.1</b> <b>COMP-II.2</b> <b>COMP-III.1</b> <b>COMP-III.2</b> <b>COMP-IV.1</b> <b>COMP-IV.2</b> <b>COMP-IV.3</b> <b>COMP-V.2</b> <b>COMP-V.3</b> <b>COMP-V.4</b> <b>COMP-VI-A.3</b> <b>COMP-VI-A.4</b> <b>COMP-VI-B.1</b> <b>COMP-VI-B.2</b> <b>COMP-VI-B.3</b> <b>COMP-VI-B.4</b> <b>COMP-VI-C.1</b> <b>COMP-VI-C.2</b> <b>COMP-VI-C.3</b> <b>COMP-VI-D.1</b> <b>COMP-VI-D.2</b>	
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					<b>COMP-VI-D.3</b> <b>COMP-VI-E.3</b> <b>COMP-VI-E.4</b> <b>COMP-VI-F.2</b> <b>COMP-VI-F.3</b> <b>COMP-VI-F.4</b> <b>COMP-VI-G.1</b> <b>COMP-VI-G.2</b> <b>COMP-VI-G.3</b> <b>COMP-VI-H.1</b> <b>COMP-VI-H.2</b> <b>COMP-VI-H.3</b> <b>COMP-VI-H.4</b> <b>COMP-VI-I.3</b> <b>COMP-VI-I.4</b> <b>COMP-VI-J.3</b> <b>COMP-VI-J.4</b> <b>COMP-VI-K.2</b> <b>COMP-VI-K.3</b> <b>COMP-VI-L.3</b>	
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					<p>COMP-VI-M.3</p> <p>COMM-I.A.1</p> <p>COMM-I.A.2</p> <p>COMM-I.A.3</p> <p>COMM-I.A.4</p> <p>COMM-I.B.1</p> <p>COMM-I.B.2</p> <p>COMM-I.B.3</p> <p>COMM-I.B.4</p> <p>COMM-I.C.1</p> <p>COMM-I.C.2</p> <p>COMM-I.C.3</p> <p>COMM-I.C.4</p> <p>COMM-I.D.1</p> <p>COMM-I.D.2</p> <p>COMM-I.D.3</p> <p>COMM-I.D.4</p> <p>COMM-III.E.3</p> <p>COMM-IV.1</p> <p>COMM-IV.2</p> <p>COMM-IV.3</p> <p>COMM-IV.4</p> <p>MGMT-IV-A.1</p> <p>MGMT-IV-A.2</p> <p>MGMT-IV-A.3</p> <p>MGMT-IV-A.4</p>	
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					<b>MGMT-IV-B.1</b> <b>MGMT-IV-B.2</b> <b>MGMT-IV-B.3</b> <b>MGMT-IV-B.4</b> <b>MGMT-IV-C.3</b> <b>MGMT-IV-C.4</b> <b>MGMT-IV-D.1</b> <b>MGMT-IV-D.2</b> <b>MGMT-IV-D.3</b> <b>MGMT-IV-D.4</b> <b>MGMT-IV-E.1</b> <b>MGMT-IV-E.2</b> <b>MGMT-IV-E.3</b> <b>MGMT-IV-E.4</b> <b>MGMT-V-A.1</b> <b>MGMT-V-A.2</b>	
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					<b>MGMT-V-A.3</b> <b>MGMT-V-B.2</b> <b>MGMT-V-B.3</b> <b>MGMT-VIII-A.1</b> <b>MGMT-VIII-A.2</b> <b>MGMT-VIII-A.3</b> <b>MGMT-VIII-A.4</b> <b>CARDEV-III.A.1</b> <b>CARDEV-III.A.2</b> <b>CARDEV-III.A.3</b> <b>CARDEV-III.A.4</b> <b>CARDEV-III.B.1</b> <b>CARDEV-III.B.2</b> <b>CARDEV-III.B.3</b> <b>CARDEV-III.B.4</b> <b>CARDEV-III.C.1</b>	
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					CARDEV-III.C.2 CARDEV-III.C.3 CARDEV-III.C.4 CARDEV-III.D.1 CARDEV-III.D.2 CARDEV-III.D.3 CARDEV-III.D.4 CARDEV-III.E.1 CARDEV-III.E.2 CARDEV-III.E.3 CARDEV-III.E.4 CARDEV-V-B.1 CARDEV-V-B.2 CARDEV-V-B.3	
9. Describe and practice steps of troubleshooting and debugging				RI.11-12.1 RI.11-12.2 RI.11-12.3 RI.11-12.4	IT-X.3 IT-X.4 IT-XI.2 IT-XI.3	2

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				<b>RI.11-12.5</b> <b>RI.11-12.6</b> <b>RI.11-12.7</b> <b>RI.11-12.10</b> <b>L.11-12.1</b> <b>L.11-12.2</b> <b>L.11-12.3</b> <b>L.11-12.4</b> <b>L.11-12.5</b> <b>L.11-12.6</b> <b>RST.11-12.1</b> <b>RST.11-12.2</b> <b>RST.11-12.3</b> <b>RST.11-12.4</b> <b>RST.11-12.5</b> <b>RST.11-12.6</b> <b>RST.11-12.7</b> <b>RST.11-12.8</b> <b>RST.11-12.9</b> <b>RST.11-12.10</b> <b>WHST.11-12.6</b> <b>WHST.11-12.7</b>	<b>IT-XI.4</b> <b>IT-XVI.1</b> <b>IT-XVI.2</b> <b>IT-XVI.3</b> <b>IT-XVI.4</b> <b>IT-XIV.1</b> <b>IT-XIV.2</b> <b>IT-XIII.1</b> <b>IT-XIII.2</b> <b>IT-XIII.3</b> <b>IT-XIII.4</b> <b>COMP-I.1</b> <b>COMP-II.1</b> <b>COMP-II.2</b> <b>COMP-III.1</b> <b>COMP-III.2</b> <b>COMP-IV.1</b> <b>COMP-IV.2</b> <b>COMP-IV.3</b> <b>COMP-V.2</b> <b>COMP-V.3</b> <b>COMP-V.4</b> <b>COMP-VI-A.3</b> <b>COMP-VI-A.4</b> <b>COMP-VI-B.1</b> <b>COMP-VI-B.2</b> <b>COMP-VI-B.3</b>	
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					<b>COMP-VI-B.4</b> <b>COMP-VI-C.1</b> <b>COMP-VI-C.2</b> <b>COMP-VI-C.3</b> <b>COMP-VI-D.1</b> <b>COMP-VI-D.2</b> <b>COMP-VI-D.3</b> <b>COMP-VI-E.3</b> <b>COMP-VI-E.4</b> <b>COMP-VI-F.2</b> <b>COMP-VI-F.3</b> <b>COMP-VI-F.4</b> <b>COMP-VI-G.1</b> <b>COMP-VI-G.2</b> <b>COMP-VI-G.3</b> <b>COMP-VI-H.1</b> <b>COMP-VI-H.2</b> <b>COMP-VI-</b>	
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					<b>H.3</b> <b>COMP-VI-</b> <b>H.4</b> <b>COMP-VI-I.3</b> <b>COMP-VI-I.4</b> <b>COMP-VI-J.3</b> <b>COMP-VI-J.4</b> <b>COMP-VI-</b> <b>K.2</b> <b>COMP-VI-</b> <b>K.3</b> <b>COMP-VI-L.3</b> <b>COMP-VI-</b> <b>M.3</b>	
<b>ASSESSMENT DESCRIPTIONS*:</b> (Write a brief overview here. Identify Formative/Summative. Actual assessments will be accessed by a link to PDF file or Word doc. )  There are a number of formative and summative labs and projects in the assessment folder. These are summative because they continue to build across the length of the course  <b>*Attach Unit Summative Assessment, including Scoring Guides/Scoring Keys/Alignment Codes and DOK Levels for all items. Label each assessment according to the unit descriptions above ( i.e., Grade Level/Course Title/Course Code, Unit #.)</b>						
<b>Obj. #</b>	<b>INSTRUCTIONAL STRATEGIES (research-based):</b> (Teacher Methods)					
3,5,9	1. Lecture					
1,2,4,6,7,8	2. Lecture/demonstration					
<b>Obj. #</b>	<b>INSTRUCTIONAL ACTIVITIES:</b> (What Students Do)					
3, 5	1. Datatypes ppt and hand out for the data elements					
1,2,4,6,7,8,9	2. Other instructional activities will be based upon the language used. These will be primarily lecture/demonstration					

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<b>UNIT RESOURCES: (include internet addresses for linking)</b>
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