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| **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**  **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**  **WHST.11-12.7** | **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**  **COMP-VI-B.2**  **COMP-VI-B.3**  **COMP-VI-B.4**  **COMP-VI-C.1**  **COMP-VI-C.2**  **COMP-VI-C.3**  **COMP-VI-D.1**  **COMP-VI-D.2**  **COMP-VI-D.3**  **COMP-VI-E.3**  **COMP-VI-E.4**  **COMP-VI-F.2**  **COMP-VI-F.3**  **COMP-VI-F.4**  **COMP-VI-G.1**  **COMP-VI-G.2**  **COMP-VI-G.3**  **COMP-VI-H.1**  **COMP-VI-H.2**  **COMP-VI-H.3**  **COMP-VI-H.4**  **COMP-VI-I.3**  **COMP-VI-I.4**  **COMP-VI-J.3**  **COMP-VI-J.4**  **COMP-VI-K.2**  **COMP-VI-K.3**  **COMP-VI-L.3**  **COMP-VI-M.3** | **3** |
| 1. 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**  **WHST.11-12.6**  **WHST.11-12.7** | **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**  **COMP-VI-B.2**  **COMP-VI-B.3**  **COMP-VI-B.4**  **COMP-VI-C.1**  **COMP-VI-C.2**  **COMP-VI-C.3**  **COMP-VI-D.1**  **COMP-VI-D.2**  **COMP-VI-D.3**  **COMP-VI-E.3**  **COMP-VI-E.4**  **COMP-VI-F.2**  **COMP-VI-F.3**  **COMP-VI-F.4**  **COMP-VI-G.1**  **COMP-VI-G.2**  **COMP-VI-G.3**  **COMP-VI-H.1**  **COMP-VI-H.2**  **COMP-VI-H.3**  **COMP-VI-H.4**  **COMP-VI-I.3**  **COMP-VI-I.4**  **COMP-VI-J.3**  **COMP-VI-J.4**  **COMP-VI-K.2**  **COMP-VI-K.3**  **COMP-VI-L.3**  **COMP-VI-M.3**  **COMM-I.A.1**  **COMM-I.A.2**  **COMM-I.A.3**  **COMM-I.A.4**  **COMM-I.B.1**  **COMM-I.B.2**  **COMM-I.B.3**  **COMM-I.B.4**  **COMM-I.C.1**  **COMM-I.C.2**  **COMM-I.C.3**  **COMM-I.C.4**  **COMM-I.D.1**  **COMM-I.D.2**  **COMM-I.D.3**  **COMM-I.D.4**  **COMM-III.E.3**  **COMM-IV.1**  **COMM-IV.2**  **COMM-IV.3**  **COMM-IV.4** | **4** |
| 1. Identify the use and limitations of different data types (integer, double, and constant) | |  | |  |  | **N.RN.1**  **N.RN.2**  **N.RN.3**  **N.Q.1**  **N.Q.2**  **N.Q.3**  **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**  **WHST.11-12.7** |  | **1** |
| 1. 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 | |  | |  |  | **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**  **WHST.11-12.7** | **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**  **COMP-VI-B.2**  **COMP-VI-B.3**  **COMP-VI-B.4**  **COMP-VI-C.1**  **COMP-VI-C.2**  **COMP-VI-C.3**  **COMP-VI-D.1**  **COMP-VI-D.2**  **COMP-VI-D.3**  **COMP-VI-E.3**  **COMP-VI-E.4**  **COMP-VI-F.2**  **COMP-VI-F.3**  **COMP-VI-F.4**  **COMP-VI-G.1**  **COMP-VI-G.2**  **COMP-VI-G.3**  **COMP-VI-H.1**  **COMP-VI-H.2**  **COMP-VI-H.3**  **COMP-VI-H.4**  **COMP-VI-I.3**  **COMP-VI-I.4**  **COMP-VI-J.3**  **COMP-VI-J.4**  **COMP-VI-K.2**  **COMP-VI-K.3**  **COMP-VI-L.3**  **COMP-VI-M.3** | **4** |
| 1. Identify type of errors (e.g. syntax, run-time and logic) | |  | |  |  | **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**  **WHST.11-12.7** | **COMM-I.A.1**  **COMM-I.A.2**  **COMM-I.A.3**  **COMM-I.A.4**  **COMM-I.B.1**  **COMM-I.B.2**  **COMM-I.B.3**  **COMM-I.B.4**  **COMM-I.C.1**  **COMM-I.C.2**  **COMM-I.C.3**  **COMM-I.C.4**  **COMM-I.D.1**  **COMM-I.D.2**  **COMM-I.D.3**  **COMM-I.D.4**  **COMM-III.E.3**  **COMM-IV.1**  **COMM-IV.2**  **COMM-IV.3**  **COMM-IV.4** | **1** |
| 1. Create a program with a standard graphic user interface (GUI) that includes: objects and menus; and a custom GUI | |  | |  |  | **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**  **WHST.11-12.7** | **IT-VII.1**  **IT-VII.2**  **IT-VII.3**  **IT-VII.4**  **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**  **COMP-VI-B.2**  **COMP-VI-B.3**  **COMP-VI-B.4**  **COMP-VI-C.1**  **COMP-VI-C.2**  **COMP-VI-C.3**  **COMP-VI-D.1**  **COMP-VI-D.2**  **COMP-VI-D.3**  **COMP-VI-E.3**  **COMP-VI-E.4**  **COMP-VI-F.2**  **COMP-VI-F.3**  **COMP-VI-F.4**  **COMP-VI-G.1**  **COMP-VI-G.2**  **COMP-VI-G.3**  **COMP-VI-H.1**  **COMP-VI-H.2**  **COMP-VI-H.3**  **COMP-VI-H.4**  **COMP-VI-I.3**  **COMP-VI-I.4**  **COMP-VI-J.3**  **COMP-VI-J.4**  **COMP-VI-K.2**  **COMP-VI-K.3**  **COMP-VI-L.3**  **COMP-VI-M.3** | **4** |
| 1. Modify an existing program | |  | |  |  | **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**  **WHST.11-12.7** | **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**  **COMP-VI-B.2**  **COMP-VI-B.3**  **COMP-VI-B.4**  **COMP-VI-C.1**  **COMP-VI-C.2**  **COMP-VI-C.3**  **COMP-VI-D.1**  **COMP-VI-D.2**  **COMP-VI-D.3**  **COMP-VI-E.3**  **COMP-VI-E.4**  **COMP-VI-F.2**  **COMP-VI-F.3**  **COMP-VI-F.4**  **COMP-VI-G.1**  **COMP-VI-G.2**  **COMP-VI-G.3**  **COMP-VI-H.1**  **COMP-VI-H.2**  **COMP-VI-H.3**  **COMP-VI-H.4**  **COMP-VI-I.3**  **COMP-VI-I.4**  **COMP-VI-J.3**  **COMP-VI-J.4**  **COMP-VI-K.2**  **COMP-VI-K.3**  **COMP-VI-L.3**  **COMP-VI-M.3** | **3** |
| 1. Create a program in collaboration with a team | |  | |  |  | **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**  **SL.11-12.1**  **SL.11-12.2**  **SL.11-12.3**  **SL.11-12.4**  **SL.11-12.5**  **SL.11-12.6**  **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**  **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**  **WHST.11-12.7** | **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**  **COMP-VI-B.2**  **COMP-VI-B.3**  **COMP-VI-B.4**  **COMP-VI-C.1**  **COMP-VI-C.2**  **COMP-VI-C.3**  **COMP-VI-D.1**  **COMP-VI-D.2**  **COMP-VI-D.3**  **COMP-VI-E.3**  **COMP-VI-E.4**  **COMP-VI-F.2**  **COMP-VI-F.3**  **COMP-VI-F.4**  **COMP-VI-G.1**  **COMP-VI-G.2**  **COMP-VI-G.3**  **COMP-VI-H.1**  **COMP-VI-H.2**  **COMP-VI-H.3**  **COMP-VI-H.4**  **COMP-VI-I.3**  **COMP-VI-I.4**  **COMP-VI-J.3**  **COMP-VI-J.4**  **COMP-VI-K.2**  **COMP-VI-K.3**  **COMP-VI-L.3**  **COMP-VI-M.3**  **COMM-I.A.1**  **COMM-I.A.2**  **COMM-I.A.3**  **COMM-I.A.4**  **COMM-I.B.1**  **COMM-I.B.2**  **COMM-I.B.3**  **COMM-I.B.4**  **COMM-I.C.1**  **COMM-I.C.2**  **COMM-I.C.3**  **COMM-I.C.4**  **COMM-I.D.1**  **COMM-I.D.2**  **COMM-I.D.3**  **COMM-I.D.4**  **COMM-III.E.3**  **COMM-IV.1**  **COMM-IV.2**  **COMM-IV.3**  **COMM-IV.4**  **MGMT-IV-A.1**  **MGMT-IV-A.2**  **MGMT-IV-A.3**  **MGMT-IV-A.4**  **MGMT-IV-B.1**  **MGMT-IV-B.2**  **MGMT-IV-B.3**  **MGMT-IV-B.4**  **MGMT-IV-C.3**  **MGMT-IV-C.4**  **MGMT-IV-D.1**  **MGMT-IV-D.2**  **MGMT-IV-D.3**  **MGMT-IV-D.4**  **MGMT-IV-E.1**  **MGMT-IV-E.2**  **MGMT-IV-E.3**  **MGMT-IV-E.4**  **MGMT-V-A.1**  **MGMT-V-A.2**  **MGMT-V-A.3**  **MGMT-V-B.2**  **MGMT-V-B.3**  **MGMT-VIII-A.1**  **MGMT-VIII-A.2**  **MGMT-VIII-A.3**  **MGMT-VIII-A.4**  **CARDEV-III.A.1**  **CARDEV-III.A.2**  **CARDEV-III.A.3**  **CARDEV-III.A.4**  **CARDEV-III.B.1**  **CARDEV-III.B.2**  **CARDEV-III.B.3**  **CARDEV-III.B.4**  **CARDEV-III.C.1**  **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** | **4** |
| 1. Describe and practice steps of troubleshooting and debugging | |  | |  |  | **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**  **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**  **WHST.11-12.7** | **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**  **COMP-VI-B.2**  **COMP-VI-B.3**  **COMP-VI-B.4**  **COMP-VI-C.1**  **COMP-VI-C.2**  **COMP-VI-C.3**  **COMP-VI-D.1**  **COMP-VI-D.2**  **COMP-VI-D.3**  **COMP-VI-E.3**  **COMP-VI-E.4**  **COMP-VI-F.2**  **COMP-VI-F.3**  **COMP-VI-F.4**  **COMP-VI-G.1**  **COMP-VI-G.2**  **COMP-VI-G.3**  **COMP-VI-H.1**  **COMP-VI-H.2**  **COMP-VI-H.3**  **COMP-VI-H.4**  **COMP-VI-I.3**  **COMP-VI-I.4**  **COMP-VI-J.3**  **COMP-VI-J.4**  **COMP-VI-K.2**  **COMP-VI-K.3**  **COMP-VI-L.3**  **COMP-VI-M.3** | **2** |
| **ASSESSMENT DESCRIPTIONS\*: (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  **\*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 #.)** | | | | | | | | |
| **Obj. #** | **INSTRUCTIONAL STRATEGIES (research-based): (Teacher Methods)** | | | | | | | |
| 3,5,9 | 1. Lecture | | | | | | | |
| 1,2,4,6,7,8 | 1. Lecture/demonstration | | | | | | | |
| **Obj. #** | **INSTRUCTIONAL ACTIVITIES: (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 | | | | | | | |
| **UNIT RESOURCES: (include internet addresses for linking)** | | | | | | | | |