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| **TEXAS CTE LESSON PLAN**[www.txcte.org](http://www.txcte.org) |
| **Lesson Identification and TEKS Addressed** |
| **Career Cluster** | Information Technology |
| **Course Name** | Web Technologies |
| **Lesson/Unit Title** | Scripting with Client-Side Processing |
| **TEKS Student Expectations** | **130.308. (c) Knowledge and Skills**(7) The student demonstrates and employs knowledge of Internet programming strategies to develop and maintain web applications. (F) The student is expected to identify the advantages and disadvantages of client-side processing(G) The student is expected to identify security issues related to client-side processing(H) The student is expected to use standard scripting languages to produce interactive web applications |
| **Basic Direct Teach Lesson**(Includes Special Education Modifications/Accommodations and one English Language Proficiency Standards (ELPS) Strategy) |
| **Instructional Objectives** | Students will be able to* create simple scripts
* understand and utilize variables within their scripts
* output data to the screen
* create and use scripting functions
* successfully pass data from a form to a scripting function
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| **Rationale** | It is essential that students can create simple scripts, understand, and utilize script variables, and pass data from a form to a scripting function.  |
| **Duration of Lesson** | 4 hours |
| **Word Wall/Key Vocabulary***(ELPS c1a, c, f; c2b; c3a, b, d; c4c; c5b) PDAS II (5)* |  |
| **Materials/Specialized Equipment Needed** | **Materials Needed:*** Printout of the sample code for each student
* Printout of the presentation for each student in notes format
* Lab exercises 1 & 2 printed for each student
* Quiz printed for each student

**Equipment Needed:*** Projector for the scripting presentation
* Computers for each student
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| **Anticipatory Set**(May include pre-assessment for prior knowledge) |

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| Search for simple online games using scripting languages*.* Demonstrate to the |
| students some of the games created using a scripting language. Explain to the |
| students that scripting languages are powerful tools for creating interactive websites. |
| Explain to students that scripting languages can be used for other purposes as well, |
| such as processing forms and creating dynamic content on web pages. |

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| **Direct Instruction \*** | I. Introduction to the scripting lessonII. Introduction to programming1. What is Programming?
2. Programming Languages

III. Examining a script program1. Objects

i. Document objectsii. Object PropertiesIV. Variables1. Initializing Variables
2. Variable Names
3. Arithmetic operators

V. Functions a. Creating functions b. Passing values to functionsVI. Using forms with scripting software1. event handlers
2. Retrieving data from forms

VII. Creating a simple calculatorVIII. Students Complete hands-on labs 1 and 2 on their ownIX. End of Lesson Quiz *Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*NONE |
| **Guided Practice \*** |

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| As the instructor presents the lesson, the students should be following along on their |
| computers and entering the sample codes as demonstrated. During the presentation, |
| guide the students through creating a simple script calculator. |

*Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*NONE |
| **Independent Practice/Laboratory Experience/Differentiated Activities \*** |

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| Following the lecture and guided practice, the students should complete the hands- |
| on lab exercises 1 & 2. |

*Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*NONE |
| **Lesson Closure** |

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| The instructor should go over the lab exercises, pointing out how the programs work |
| and how data flows. It is important that students understand the sequence of how |
| data flows and is passed from the forms to the script functions. |

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| **Summative/End of Lesson Assessment \***  | Following the lesson, give the students the script quiz over the concepts presented.*Individualized Education Plan (IEP) for all special education students must be followed. Examples of accommodations may include, but are not limited to:*NONE |
| **References/Resources/****Teacher Preparation** |  |
| **Additional Required Components** |
| **English Language Proficiency Standards (ELPS) Strategies** |  |
| **College and Career Readiness Connection[[1]](#footnote-1)** |  |
| **Recommended Strategies** |
| **Reading Strategies** |  |
| **Quotes** |  |
| **Multimedia/Visual Strategy****Presentation Slides + One Additional Technology Connection** |  |
| **Graphic Organizers/Handout** |  |
| **Writing Strategies****Journal Entries + 1 Additional Writing Strategy** |  |
| **Communication****90 Second Speech Topics** |  |
| **Other Essential Lesson Components** |
| **Enrichment Activity**(e.g., homework assignment) |

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| The instructor can give students more challenging exercises such as creating simple |
| games like blackjack. In order to complete games, to the instructor should introduce |
| students to random number generation. |

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| **Family/Community Connection** |  |
| **CTSO connection(s)** | SkillsUSATechnology Student Association |
| **Service Learning Projects** |  |
| **Lesson Notes** |  |

1. Visit the Texas College and Career Readiness Standards at <http://www.thecb.state.tx.us/collegereadiness/CRS.pdf>, Texas Higher Education Coordinating Board (THECB), 2009. [↑](#footnote-ref-1)