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| **TEXAS CTE LESSON PLANS**  [www.txcte.org](http://www.txcte.org) | |
| **Lesson Identification and TEKS Addressed** | |
| **Career Cluster** | Information Technology |
| **Course Name** | Web Technologies |
| **Lesson/Unit Title** | Internet Fundamentals and Background |
| **TEKS Student Expectations** | **130.308. (c) Knowledge and Skills**  (3) The student demonstrates knowledge and appropriate use of hardware, software, and connectivity technologies.  (A) The student is expected to identify networking components and define the impact of networking components on web development  (C) The student is expected to identify current and future Internet protocols such as hypertext transfer protocol, file transfer protocol, telnet, and email and  (D) The student is expected to describe current trends in web technology and evaluate their impact on web development.  (8) The student employs knowledge of web administration to develop and maintain web applications.  (B) The student is expected to explain the Transmission Control Protocol/Internet Protocol |
| **Basic Direct Teach Lesson**  (Includes Special Education Modifications/Accommodations and  one English Language Proficiency Standards (ELPS) Strategy) | |
| **Instructional Objectives** | * Students will be able to describe why the Internet was developed and its background. * Students will be able to describe the Internet protocols such as TCP/IP * Students will be able to describe the different information protocols such as http, pop3, FTP, and Telnet and describe how information is transmitted online. * Students will understand the difference between the Internet and the World Wide Web. * Students will be able to describe how the Internet has evolved over time.   **Performance Objective:**  Upon completion of the lesson, students will understand why the Internet was developed, how it works, and its evolution over time. |
| **Rationale** | Students should be able to describe the development of the internet, how it functions, and how it has evolved over time. |
| **Duration of Lesson** | 2 hours |
| **Word Wall/Key Vocabulary**  *(ELPS c1a, c, f; c2b; c3a, b, d; c4c; c5b) PDAS II (5)* |  |
| **Materials/Specialized Equipment Needed** | **Materials Needed:**   * Lecture Worksheet printed for each student * Quiz printed for each student   **Equipment Needed:**   * Projector for student presentations * Computer |
| **Anticipatory Set**  (May include pre-assessment for prior knowledge) | Ask students how long the internet has been around. Most will likely say since the 1990s.  Explain to the students that the Internet goes back to the 1960s and is a byproduct of the Cold War between the United States and the Soviet Union. |
| **Direct Instruction \*** | 1. Introduction to the lesson 2. Development of the Internet 3. Need for Communication 4. The Early Internet and Arpanet 5. How information is Transmitted Online 6. TCP/IP Protocol 7. Other Information Protocols 8. Transmission of data packets 9. Early Uses of the Internet 10. Time Burners-Lee and the Development of the World Wide Web 11. The need for more efficient information sharing 12. The invention of HTML 13. The Internet Today 14. Integrated uses of the Internet 15. New Technologies   i. location based services  VII. 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 \*** | Distribute the Lecture Worksheet. The students should complete the Lecture Worksheet during your lecture (from Outline). Following the lecture, the instructor should review and insure that students have completed the worksheet before moving on.  *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 \*** | *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** | * The instructor should review important concepts with the student such as:   + Why does the Internet not have a central hub?   + How is information sent across the Internet?   + Who invented HTML?   + What is the difference between the Internet and the World Wide Web? |
| **Summative/End of Lesson Assessment \*** | Following the lesson, students should complete the quiz to test their knowledge and understanding of 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** | * Warriors of the Net Movie * Content Developer Knowledge |
| **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) | * Have students look up the IP Address of the computer they are using. (There are a few websites which provide that service for free.) * Have student open the command prompt on their computer and type: ping (nameofsearchengine).com * This will send a data packet to a search engine, called a ping, and the search engine will send it back, called a pong. The time of the exchange will be displayed. Have them experiment with multiple other sites to see the difference in response time. |
| **Family/Community Connection** |  |
| **CTSO connection(s)** | SkillsUSA  Technology Student Association (TSA) |
| **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)