|  |  |
| --- | --- |
| **TEXAS CTE LESSON PLAN**  [www.txcte.org](http://www.txcte.org) | |
| **Lesson Identification and TEKS Addressed** | |
| **Career Cluster** | Science, Technology, Engineering & Mathematics |
| **Course Name** | Engineering Design and Presentation |
| **Lesson/Unit Title** | Portfolio—Part 3 |
| **TEKS Student Expectations** | **130.410. (c) Knowledge and Skills**  (2) The student gains knowledge of and demonstrates the skills necessary for success in the workplace. The student is expected to:  (E) identify and use appropriate work habits  (4) The student develops skills for managing a project. The student is expected to:  (A) implement project management methodologies, including initiating, planning, executing, monitoring, and controlling, and closing a project  (B) develop a project schedule and complete work according to established criteria  (7) The student uses engineering design methodologies. The student is expected to:  (F) use an engineering notebook and portfolio to record the final design, construction, and manipulation of finished projects  (8) The student applies concepts of engineering to specific problems. The student is expected to:  (D) use multiple software applications for concept presentations  (9) The student designs products using appropriate design processes and techniques. The student is expected to:  (D) produce engineering drawings to industry standards |
| **Basic Direct Teach Lesson**  (Includes Special Education Modifications/Accommodations and  one English Language Proficiency Standards (ELPS) Strategy) | |
| **Instructional Objectives** | Students will be able to:   * Review the Portfolio Order and Checklist and ePortfolio (Digital Portfolio) Rubric and make recommendations for changes needed * Discuss what they may have any questions about or feel needs to be shared * Apply requirements in the Portfolio and Order Checklist and ePortfolio (Digital Portfolio) Rubric * Compile the artifacts into an ePortfolio using one of the free web designers of their choice |
| **Rationale** | Upon completion of this lesson the student will be able to apply all the knowledge and skills they have learned about two types of portfolios (traditional print and ePortfolio) and will create an ePortfolio that meets the criteria given in the rubrics and/or examples given. |
| **Duration of Lesson** | Two to Three 45-minute periods |
| **Word Wall/Key Vocabulary**  *(ELPS c1a,c,f; c2b; c3a,b,d; c4c; c5b) PDAS II(5)* | Portfolio  Research  Portfolio rubric  Artifacts  ePortfolio |
| **Materials/Specialized Equipment Needed** | **Instructional Aids:**   * Internet   **Materials Needed:**   * Portfolio and Order Checklist handout for each student * ePortfolio (Digital Portfolio) Rubric (Option 1 or Option 2) handout for each student   **Equipment Needed:**   * Computer with internet access and printer * Data projector |
| **Anticipatory Set**  (May include pre-assessment for prior knowledge) | **Introduction:**  **SAY:** Today we are going to start making your own ePortfolio.  **SHOW:** The Portfolio Order and Checklist and ePortfolio (Digital Portfolio) Rubric.  **ASK:** Is there anything you think we need to add to the checklist or rubric?  **SAY:** We will make changes if the whole class feels something is missing or wrong with it.  We want student ownership in this capstone unit.  **ASK:** How should you organize your portfolio? (The questions are all Socratic in design. If the students participate and can explain WHY they feel that way, it is correct.)  **ASK:** What web design method should you use?  **SAY:** You get to select which free version you use.  **SAY:** By the end of class today you need to have decided which method you will use andshow me the account you’ve made so that you can create it.  **SAY:** Good luck and I will be helping you as you need it over the next 3-5 days as you createyour ePortfolio. Once you have a URL web address for your ePortfolio, email me that URL link so I can grade it off this site. |
| **Direct Instruction \*** | Instructors can use handouts, and note pages in conjunction with the following outline  Week 1: (1-5 days)  Day 1 = Complete the Portfolio Scavenger Hunt handout.  Days 2-5 = Hand back the Portfolio Scavenger Hunt handout. Begin to gather and select artifacts as outlined in checklist and rubric.  Week 2: (3-5 days)  Days 6-10 = Create, organize, and compile the traditional print portfolio (per rubric) and examples the teacher provides. Give everyone a copy of the checklist and rubric. Gather the artifacts to be used.  Week 3: (3-5 days)  Days 11-15 = Create, organize, and compile the ePortfolio (per rubric) and examples the teacher provides using one of the free web designers.  *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 \*** | The classroom discussion about the Portfolio Order and Checklist handout and ePortfolio (Digital Portfolio) Rubric.  *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 \*** | Students create their own ePortfolio.  *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** | **Question:** Why would you want to have an ePortfolio to show in this “day and age”?  **Answer:** Many colleges now expect students to be able to use multiple deliverymethods and will not even consider enrolling you unless you can show all the skills you have. |
| **Summative/End of Lesson Assessment \*** | **Informal Assessment:**  Class discussion about the checklist and rubric.  **Formal Assessment:**  Create an ePortfolio is a major grade.  *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** | * Refer to the Portfolio and Order Checklist * ePortfolio (Digital Portfolio) Rubric |
| **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 create an ePortfolio for the capstone engineering design project they did in class as a team. Allow them to work together as a team on this if they so wish. |
| **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)