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| <p>Middle-level CTE Learning Experience Title: Career Poster Educator: Melissa Hirt, Albany City School District Length of Lesson: 7 days(40 minute periods) Grade Level: 7-8</p> | <p>CTE Area: Technology and Engineering Education CTE Theme: Career and Community Opportunities CTE Content: The Nature of Technology Date Created: September 9, 2019</p> |
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| PLANNING | |
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| Curriculum Goal | <p>Students research an occupation in STEM- or STEAM-related fields. Students identify and report on the training, education, skills, and aptitudes necessary to enter a chosen occupation along with the benefits of that occupation to self and society. Products include a poster, a presentation, slides, or a web page.</p> |
| Essential Question(s) | <p>What knowledge and skills are necessary to demonstrate introductory understanding of the influences that societal, economic, and technological changes have on employment and the impact that employability skills, interests, and aptitudes have on individuals' career choices and postsecondary options? What do students need to understand about the nature of technology to prepare them to become technologically literate and adaptable members of society?</p> |
| National Standards | <p>Common Career Technical Core Standards https://www.careertech.org/career-ready-practices Career Ready Practices</p> <ol style="list-style-type: none"> 1. Act as a responsible and contributing citizen and employee 2. Apply appropriate and academic and technical skills 4. Communicate clearly and effectively and with reason 6. Demonstrate creativity and innovation 7. Employ valid and reliable research strategies 9. Plan education and career paths aligned to personal goals 10. Use technology to enhance productivity 11. Work productively in teams while using cultural global competence <p>International Technology and Engineering Education Association Standards for Technological Literacy https://www.iteea.org/39197.aspx The Nature of Technology</p> <p>Standard 1: Students will develop an understanding of the characteristics and scope of technology. Standard 2: Students will develop an understanding of the core concepts of technology. Standard 3: Students will develop an understanding of the relationships among technologies and the connections between technology and other fields.</p> |

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| NYS Standards | <p>New York State Career Development and Occupational Studies (CDOS) Standards Intermediate Level http://www.p12.nysed.gov/cte/</p> <p>Standard 1: Career Development Students will be knowledgeable about the world of work, explore career options, and relate personal skills, aptitudes, and abilities to future career decisions.</p> <p>Standard 2: Integrated Learning Students will demonstrate how academic knowledge and skills are applied in the workplace and other settings.</p> <p>Standard 3a: Universal Foundation Skills Students will demonstrate mastery of the foundation skills and competencies essential for success in the workplace.</p> |
| Learning Objectives | <p>Career and Community Connections</p> <p>3. Employability Skills Students will</p> <ul style="list-style-type: none">a) Identify personal characteristics such as abilities, interests, and values and examine how they might impact career choicesb) Describe characteristics and behaviors that enable individuals to contribute to the success of a group in a variety of community and work situationsc) List and describe employability skills and ways they benefit individuals in community and work situationsd) Demonstrate personal development of employability skills through practice of these skills in a variety of classroom applications <p>7. Career Pathways Students will</p> <ul style="list-style-type: none">a) Discuss ways career path decisions influence goals for lifelong learning and leisure opportunitiesb) Examine workplace issues and trends and describe their impact on individual and family lifestylesc) Research ways social, economic, and technological changes have led to adaptations in work and community environments and expectations needed to carry out the career plan <p>The Nature of Technology</p> <p>4. Career Pathways Students will</p> <ul style="list-style-type: none">a) Explain roles and functions of individuals engaged in technology and STEM careersb) Investigate education, training requirements, and opportunities for career paths in technical and STEM fieldsc) Assess personal employability skills for technical careers and evaluate personal suitability for such careers |

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| Vocabulary | Academic Presentation, Career, Job, Resume, Application, Interview, Benefits | | Content STEM, Engineer, Salary, Hourly, Associates, Bachelors, Doctorate, Internship, Apprenticeship, Technical Training/School, On the job training |
| Materials and Resources | Devices with internet connection and access to Google Accounts with Google Docs, Google Slides (Everyday) STEM Careers Survey (Day 1) https://www.stemjobs.com/stem-type-quiz-main/ Research sites (Day 2,3,4) eGFI http://www.egfi-k12.org/index_noflash.php Career Zone https://www.careerzone.ny.gov/views/careerzone/index.jsf Kids.gov http://kids.usa.gov/teens-home/jobs/index.shtml Bureau of Labor Statistics http://www.bls.gov/ Discover Engineering http://discovere.org/discover-engineering/engineering-careers Science Kids: http://www.sciencekids.co.nz/sciencefacts/engineering/typesofengineeringjobs.html | | |
| INSTRUCTION | What will the teacher do? | What will the students do? | How much time for each activity? |
| Pre-assessment | Day 1 Give students a career inventory survey to assess students knowledge of STEM careers: https://www.stemjobs.com/stem-type-quiz-main/ | Day 1 Complete the pre-assessment survey | 20 minutes |
| Do-now/Hook | Day 1 (cont.) Instruct students on Technology Design Challenge: “Your company has been hired to design a visually appealing, letter size poster for STEM careers. Your team will create 3-4 different career posters with consistent formatting and layout. Your team design must meet all the client requirements. The client requests you use consistent fonts and sizes, | Day 1 (cont.) Students attend to teacher presentation of the design challenge. Throughout the project, students work with peers from different class periods to practice using communication technologies. If this is not an option, student teams can be dispersed around the room, not near one other and not allowed to speak to each other. | 15 minutes |

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| | <p>picture formatting, borders, logo location with a web page, as well as any other design elements your team wants to use. This is a rush job and since your team is not all located in the Albany area there is no time for a face-to-face meeting. You will need to communicate through some written communication...no verbal communication.”</p> <p>Teacher assigns groups - either across periods or by classroom seating location (so not near their team members)</p> | <p>Ask any questions about the project and expectations.</p> | <p>5min</p> |
| <p>Procedure for Instruction/ Learning Activities</p> | <p>Day 2 Set expectations for the project. Share some ideas of how students can communicate, brainstorm and collaborate with their teams. Discuss communication tools options: e-mail, Skype, Zoom, Slack, chat groups, gchat, google hangouts</p> <p>Ask students to think about the software available for them to create a poster that will be printed. Google Slides, Google Docs, Canva, Google Drawing, Adobe Illustrator</p> <p>Day 3 - 5 Review challenge. Remind that ALL posters from the group need to be standardized with the same fonts, sizes and color palette Monitor students progress. Check</p> | <p>Day 2 Choose an option for communication tool. Open the channel of communication, by introducing yourself to your teammates.</p> <p>Generate a list of brainstorms for the available software for creating posters to be printed. Discuss and share opinions for which software would work best in the given situation. If time starts research on STEM career options.</p> <p>Day 3 -5 Research careers and identify which career you want to make posters about. Collect information about the career and put it on shared communication tool. Discuss fonts types, size and color palette for the poster: career titles and job descriptions.</p> | <p>40min 20min</p> <p>20min</p> <p>40min x 3 days</p> |

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| | <p>to see that they are using the team notes to design their poster. Remind students that they are on a team. ALL posters need to meet all requirements. Students are responsible for checking team members work and making notes.</p> <p>Day 6 Teacher leads a gallery walk during which students critique team posters. Share critiques with team members.</p> <p>Teacher advises students to revise posters as needed based on comments.</p> <p>Teacher prints revised posters prior to next class.</p> <p>Day 7 (Closure) Teacher hangs up poster by the same groups next to each other. Teacher provides some commercially made posters which students can compare to student-created. Teacher instructs students to write a reflection on their ability to collaborate across teams by answering questions: Did the communication work well? What will you do differently next time? Did you like working in a team like this?</p> | <p>Students add images and logos to their posters.</p> <p>Finish work and check other team members' documents for discrepancies in consistency of formatting choices. Leave comments for other team members to make corrections.</p> <p>Day 6 Students participate in the gallery walk and create comments for team members.</p> <p>Students consider the comments and make changes to their designs.</p> <p>Day 7 Students reexamine posters by the same groups, which the teacher has hung up next to each other. Students compare commercially made posters to student-created. Students reflect on their ability to collaborate across teams by writing answers to reflection questions: Did the communication work well? What will you do differently next time? Did you like working in a team like this?</p> | <p>40min 25min</p> <p>15min</p> <p>40min</p> |
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| Differentiation | Students will be grouped by their abilities and interests. The teacher will provide scaffolded support where needed. Students who have physical disabilities will be accommodated for. Students who are meeting all of the expectations will be challenged to go above and beyond. |
| Closure | Teacher hangs up poster by the same groups next to each other. Check out some commercially made posters and compare them to student-created. Students will reflect on their ability to collaborate across teams. By answering personal reflection questions: Did the communication work well? What will you do differently next time? Did you like working in a team like this? |
| ASSESSMENT | |
| College, Career, and Life Readiness Skills | See below Based on Middle-level Life/Career Rubrics available at https://nyctecenter.org/middle-level-life-career-rubric-database/rubrics |

| Performance Measure | Exemplary | Proficient | Developing | Beginning |
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| Analyzes Career Opportunities | Analyzes career opportunities to determine requirements and compare effectively with personal strengths and skills to identify matches and gaps. | Analyzes career opportunities to determine requirements and compare effectively with personal strengths and skills. | Identifies career opportunities to determine requirements. | Unable to identify career opportunities and determine if personally interested. |
| Manages Time to Complete Tasks by Deadline | Completes work ahead of schedule by creating a plan to finish early. | Completes work on time by using time management skills. | Completes work on time with reminders and supervision. | Rarely completes work on time; fails to use time management skills. |
| Sets and Meets Goals | Sets measurable goals and action steps to accomplish them. | Defines and meets goals using the strategies. | Defines goals and strategies but has not met goals. | Has goals but no strategies to achieve them. |
| Listens and Cooperates With Team Members | Consistently listens to others and their ideas; helps the team reach its full potential. | Listens to others points of view and makes a definite effort to understand their ideas. | Sometimes listens to others, but often assumes others ideas will not work. Tries to work well with the team. | Does not listen to group opinions and ideas; wants things done own way. |

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| Reads and Interprets Workplace Documents | Reads, interprets, and applies workplace documents correctly and with ease (e.g., instructional manuals, work orders, invoices, memorandums). | Reads, interprets, and applies workplace documents (e.g., instructional manuals, work orders, invoices, memorandums). | Reads but misinterprets and misapplies workplace documents (e.g., instructional manuals, work orders, invoices, memorandums). | Incorrectly reads, interprets, and applies workplace documents (e.g., instructional manuals, work orders, invoices, memorandums). |
| Shares Responsibility | Motivates members to share contributions equally by valuing all members ideas and contributions. | Participates in and contributes to group work. Values all members ideas and contributions. | Attempts to share responsibility of groups work, but ends up completing little of the work by disregarding the input of others. | Does very little of the groups work; does not share ideas or respect others ideas. |
| Uses Technology to Locate and Evaluate Information | Effectively and consistently uses multiple technology tools to collect, organize, evaluate, and/or communicate information. | Uses technology effectively as a tool to collect, organize, evaluate, and/or communicate information. | Uses popular technology tools to collect and/or communicate information. | Attempts to use technology to collect and/or communicate information are ineffective. |
| Works Effectively with Diverse Teams | Always listens to, shares with, and supports the efforts of others. Uses respectful and appropriate statements, responses, and body language. | Listens to, shares with, and supports others. Statements and responses are respectful, and appropriate body language is exhibited. | Most statements, responses, and body language are respectful, with only an occasional negative tone. Does not always listen to, share with, or support the efforts of others. | Statements, responses, and/or body language are not respectful. Rarely listens to, shares with, and supports the efforts of others. |
| Writes Clearly | Consistently writes clearly, uses correct grammar, and understands the intended audience of documents that are produced. | Writes clearly, generally using correct grammar, and understands the intended audience of the document produced. | Produces a document that is mostly well written but, sometimes uses incorrect grammar; shows general understanding of the intended audience. | Produces a document that is unclear, uses incorrect grammar, and shows a misunderstanding of the intended audience. |
| Balances Short- and Long-term Goals | Consistently balances short-term and long-term goals | Balances short-term and long-term goals. | Succeeds sometimes in balancing short-term and long-term goals. | Attempts to balance short-term or long-term goals, but without much success. |

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| Follows Procedures | Consistently and conscientiously follows all established procedures, avoids taking shortcuts or ignoring rules. | Follows all established procedures, avoids taking shortcuts or ignoring rules. | Usually follows established procedures. | Is unaware of and/or ignores procedures. |
| Practices Workplace Safety | Consistently selects and safely uses technological resources (e.g., equipment, machines, tools, electronics) to accomplish work efficiently and productively. | Selects and safely uses technological resources (e.g., equipment, machines, tools, electronics) to accomplish work productively. | Requires reminders to select and safely use technological resources (e.g., equipment, machines, tools, electronics) to accomplish work. | Often disregards safety standards and instructor and manufacturer guidelines. |
| Shows Empathy | Consistently puts aside personal viewpoint, always considers the other person's point of view. | Is able to put aside personal viewpoint, Regularly sees things from the other person's point of view. | Tries to see things from the other person's point of view. | Shows little interest in other people's needs or perspectives. |
| Analyzes Critical Information | Thoroughly evaluates the reliability of the source and the information researched using internal and external validation. | Thoroughly evaluates information researched using internal and external validation. | Evaluates information researched but not thoroughly. | Does not evaluate information. |
| Contributes New Ideas | Appropriately contributes new and innovative ideas based on reliable resources. | Often contributes new and innovative ideas based on known and reliable resources and skills. | Contributes some new and innovative ideas based on known resources and skills. | Rarely contributes new ideas as skills and resources are not developed enough. |