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Pathway n/a	Cluster n/a	Course Cabling	Grade/Level 12th
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CTE LESSON PLAN (A Danielson-Aligned Lesson Plan Template)	
Lesson Topic	Common Cabling Tools
Course Learning Outcome It Addresses:	Tools for data cable (UTP and STP)
Unit of Study:	Introduction to Data Cabling
<u>College and Career Readiness Standard/Common Core:</u>	CCSS.ELA-LITERACY.RST.11-12.1, CCSS.ELA-LITERACY.RST.11-12.2, <u>CCSS.ELA-LITERACY.RST.11-12.3</u> , <u>CCSS.ELA-LITERACY.RST.11-12.4</u> , CCSS.ELA-LITERACY.RST.11-12.5
Industry Standards:	ANSI/TIA-568-C American National Standards Institute (ANSI) Telecommunication Industry Association (TIA)
21st Century Skill Standards:	Information, Media, and Technology Skills <ul style="list-style-type: none"> Information, communications, and technology (ITC) literacy
<u>www.iste.org / ISTE Standards for Educators / ISTE Standard for Learners</u>	ISTE Standards for Educators: Designer ISTE Standards for Learners: Creative Communicator

<p>Interdisciplinary Connections (1a: Demonstrating Knowledge of Content and Pedagogy)</p> <p><i>Provide a listing of the subject area(s), in addition to the primary subject area that is incorporated in this lesson.</i></p>	<p>n/a</p>
<p>Lesson Duration (1e: Designing Coherent Instruction)</p> <p><i>State the approximate time frame for this lesson.</i></p>	<p>60 minutes</p>
<p>Class Information (1b: Knowledge of Students)</p> <p><i>Describe any unique characteristics of the class (considerations may include: special needs, skill level, ELL). Describe how other adults (paraprofessionals, volunteers, co-teachers, resource teachers, etc.) will support student learning, if applicable. Also include any other circumstances an observer should know about.</i></p>	<p>n/a</p>
<p>Technologies and other Materials or Resources (1d: Demonstrating Knowledge of Resources)</p> <p><i>List all materials, handouts, resources, and technology tools that are needed by the student or the teacher to execute the lesson. Technologies may include hardware, software, and websites, etc. Materials and resources may include physical resources (e.g. books, manipulatives, supplies, equipment, etc.) and/or people resources (e.g. guest speakers, librarian, etc.).</i></p>	<ol style="list-style-type: none"> 1. Projector 2. Laptop 3. Internet 4. Data Cable 5. Cabling Tools <ol style="list-style-type: none"> a. Twisted-pair stripper b. Twisted-pair crimper c. Wire cutter d. Twisted-pair continuity tester e. Cable-Marking Supplies f. RJ-45 connector g. UTP Data Cable h. Safety eyewear

<p>Learning Objective(s) (1c: Setting Instructional Outcomes)</p> <p><i>What will students know and be able to do as a result of this lesson? The statement should be directly observable (use verbs that can be measured). Outcomes should be written in the form of student learning and suggest viable methods of assessment. For English language learners: What language objectives will be addressed?</i></p>	<p>At the end of this lesson students will be able to identify the tools and equipment used in installing a data cable into an RJ45 connector</p>
<p>Assessment Criteria for Success (Formal or Informal) (1f: Assessing Student Learning)</p> <p><i>How will you and the students assess where the learning objectives, listed above, were met? Each formal or informal assessment should describe how it is aligned to the above objective(s).</i></p> <ul style="list-style-type: none"> • <i>How and when will you assess student learning throughout the lesson (formative)?</i> • <i>How will you and your students know if they have successfully met the outcomes?</i> • <i>What are the criteria for mastery of the lesson outcome(s)?</i> • <i>Describe any (formative and summative) assessments to be used.</i> 	<p>A group activity will be assigned for the class. Students will be broken up into groups of 3-4. Given a box of miscellaneous tools and equipment, each group will have to identify the tools and equipment used specifically to install a data connector onto a data cable.</p>
<p>Academic Language: (1a: Demonstrating Knowledge of Content and Pedagogy)</p> <p><i>What language will students be expected to utilize by the end of the lesson? What key terms are essential? What key terms are essential to develop and extend students' academic language? What opportunities will you provide for students to practice the new language and develop fluency, both written and oral?</i></p>	<p>Technical terms:</p> <ol style="list-style-type: none"> 1. UTP-Unshielded Twisted-Pair 2. STP- Shielded Twisted-Pair 3. Twisted-pair stripper 4. RJ-45 connector 5. Twisted-pair crimper 6. Twisted-pair continuity tester
<p>Grouping Strategy (1e: Demonstrating Coherent Instruction)</p> <p><i>Describe how you will group students to facilitate learning of the outcomes of this lesson. What is the rationale for the grouping strategy?</i></p>	<p>Given a box of miscellaneous tools and equipment, a group of 3-4, will have to identify the tools and equipment used specifically to install a data connector onto a data cable. Students will be able to experience hands-on training of what data cabling tools and equipment is about. They will be able to take what they have seen from the presentation to reality of working with actual tools and equipment.</p>

<p>Relevance and Anticipatory Set (1a: Demonstrating Knowledge of Content and Pedagogy)</p> <p><u>10</u> minutes</p> <p><i>How will you set the purpose and help students learn why today's lesson is important to them as learners?</i></p> <p><i>How will you pique the interest or curiosity regarding the lesson topic?</i></p> <p><i>How will you build on students' prior knowledge?</i></p> <p><i>How will you introduce and explain the strategy/concept or skill?</i></p> <p><i>Provide detailed steps</i></p>	<p>At the beginning of my presentation, I will include a picture of a complete data cable and ask them what they know about putting a data cable into a connector.</p>
<p>Lesson Procedures (1a: Demonstrating Knowledge of Content and Pedagogy)</p> <p>1e: Designing Coherent Instruction)</p> <p><i>The procedures should clearly describe the sequence of learning activities and should identify where and how all materials, technology tools and student-created technology products, and reproducible materials/handouts are utilized in the lesson. Describe the lesson sequence:</i></p> <ul style="list-style-type: none"> • <i>How will the lesson launch?</i> • <i>How will the material be presented?</i> • <i>What questions will be posed to the students? What are the expected responses?</i> • <i>How and when will the teacher model?</i> • <i>What opportunities will there be for guided practice, group work and individual practice?</i> • <i>How and when will you monitor student understanding throughout the lesson?</i> 	<ol style="list-style-type: none"> 1. Begin with my presentation 2. Presentation will be done on slides 3. First question to the students will be, "Do you know how a data cable fits into a connector?" 4. Expected response is, "No, I do not". 5. Teacher model will begin from the start of my presentation 6. Student understanding will take place during lecture of presentation and also in the group activity.
<p>Instructional Strategy</p> <p>(1a: Demonstrating Knowledge of Content and Pedagogy)</p> <p>1e: Designing Coherent Instruction)</p> <p><i>Exploration (Model): How will students explore the new concepts? How will you model or provide explicit instruction?</i></p> <p><i>Guided Practice: How will you provide support to students as they apply the new concept? How will you allow them to practice (with teacher support)?</i></p>	<p>I will present a slide presentation on the types of tools used in data cabling. After the presentation I will display a video of how the tools are used during installation.</p>

<p><i>Independent practice: How will students review and solidify these concepts to be able to use this new knowledge? How will you monitor and provide feedback?</i></p> <p>Provide detailed steps.</p>	
<p>Differentiation: (1e: Designing Coherent Instruction)</p> <p><i>What differentiated support will you provide for students whose academic development is below or above the current grade level?</i> <i>What specific differentiation of content, process, products, and/or learning environment do you plan to employ to meet the needs of all of your students?</i> <i>How does your lesson support student differences with regard to linguistic, academic, and cultural diversity?</i> <i>How will your lesson actively build upon the resources that linguistically and culturally diverse students bring to the experience?</i> <i>How will your lesson be supportive for all students, including English Language Learners, and build upon the linguistic, cultural, and experiential resources that they bring to their learning?</i> <i>How will your lesson be designed to promote creative and critical thinking and inventiveness?</i></p>	<p>The display of video using laptop and internet to provide visual aid.</p> <p>I will use a video that will display the role of each cable tool and equipment. Pictures will also be included in the presentation.</p>
<p>Accommodations: (1e: Designing Coherent Instruction)</p> <p><i>What classroom accommodations do you plan to employ to increase curriculum access for students identified with special education needs or 504? Describe how these accommodations align with the current Individualized Education Plan (IEP) for each student as applicable (avoid using actual names of students).</i></p>	<p>Groups will be selected with a variety of learners for each to assist each other in learning.</p>
<p>Modifications (1e: Designing Coherent Instruction)</p> <p><i>What curricular modifications and/or changes in performance standards, if any, do you plan to employ to facilitate the participation of students identified with special education needs?</i></p>	<p>To modify the lesson, I will create flash cards with photos of each of the tools and equipment. Oneside will be the photo and the other will have the name of the tool/equipment.</p>
<p>Closure (1e: Designing Coherent Instruction)</p>	<p>Students will display their knowledge by correctly identifying the tools needed to install a data cable. To restate the lesson I will be evaluating</p>

<p style="text-align: center;"><u>20</u> minutes</p> <p><i>How will students share or show what they have learned in this lesson?</i> <i>How will you restate the teaching point and clarify key concepts?</i> <i>How will you provide opportunities to extend ideas and check for understanding?</i> <i>How will this lesson lead to the next lesson?</i></p>	<p>them during their group activity; I will informally ask them questions on the tools that they have chosen.</p> <p>Questions:</p> <ul style="list-style-type: none"> • What is the name of this tool? • What is the function of this tool? <p>Being able to correctly identify the tools and equipment for installing a connector to a data, will prepare students to actually do the install.</p>
<p>Anticipated Difficulties (1a: Demonstrating Knowledge of Content and Pedagogy)</p> <p><i>What difficulties or misunderstanding do you anticipate that students may encounter? How will you prevent them from occurring?</i></p>	<p>I anticipate that students will have difficulty remembering the appropriate terms of the material. To help with this I will prepare a handout for them to study.</p>
<p>Reflection on Instruction (4a: Reflecting on Teaching)</p> <p><i>What evidence did you collect to demonstrate that your students have met or are progressing towards the learning outcome?</i> <i>What changes or adjustments had to be made during the lesson (justify those changes) to ensure students make adequate progress in meeting the learning objective?</i> <i>What changes will have to be made to the next lesson for students to be on pace in meeting the overall goal of the Lesson or Unit?</i></p> <p><i>Taking good notes about each lesson will help as you develop a formal reflective narrative at the end of the SLO.</i></p>	