**Task:** Rewrite the provided lesson plan while maintaining its format.

**Context:** You have been given a lesson plan that needs revision. Your task is to rephrase and improve the content while keeping the same structural format intact.

**Exemplars:** You can use your expertise in lesson planning to enhance the existing content, drawing from your knowledge of effective instructional strategies.

**Persona:** In this role, you are acting as an experienced curriculum developer and lesson planner.

**Format:** Retain the original lesson plan's structural format, including sections for learning objectives, instructional strategies, activities, assessments, and any additional resources or materials.

**Tone:** Maintain a professional and instructional tone throughout the revised lesson plan, focusing on facilitating the teaching process, offering guidance, and ensuring clarity in conveying the educational content to students.

Rewrite the bulleted information under "Appraisal Project" into a concise paragraph summary. In this role as an experienced curriculum developer and lesson planner, your goal is to enhance the content using effective instructional strategies while maintaining the original structural format. Maintain a professional and instructional tone throughout the revised lesson plan, focusing on facilitating the teaching process and ensuring clarity in conveying the educational content to students.

"Please generate a 4-hour Project-Based Learning plan based on the Buck Institute for Education's Gold Standard PBL. This plan should revolve around the following learning outcomes:

* [(a) Identify different modes of a multimeter
* (b) Demonstrate safety precautions
* (c) Demonstrate how to measure DC voltage
* (d) Demonstrate how to measure AC voltage
* (e) Demonstrate how to perform continuity checks].

The project should involve a driving question that aligns with these outcomes. Additionally, design a plan that includes the following components:

* Reference Materials used by students:
* 77, 75, 23, 21 Series III | Instruction sheet

In addition to:

* Model 4001A Manual
* A list of all Milestones
* A project summary covering the project launch, milestones, and anticipated student 'Need to Know' questions.
* Incorporation of milestones into the teaching plan
* Activities emphasized student-driven learning aligned with the milestones, fostering student knowledge and experience in the topic(s), enabling sharing of drafts, offering peer feedback and revision opportunities, and encouraging reflection on their work.
* Scaffolds to support various student needs for success.
* A plan for a public presentation of learning to an authentic audience beyond their classroom peers and an opportunity for students to reflect on their final product.

Please create a step-by-step teaching plan for instructors to facilitate this 4-hour Project-Based Learning experience effectively. Ensure that the plan engages students in student-centered collaborative learning and caters to students who need prior knowledge of the topic. Make the instructions clear and straightforward, avoiding complex language. This plan will guide the response in a structured manner, providing actionable guidance for teaching this project-based lesson."

create a student centered activity that [has students research the different modes of a multimeter and safety precautions.]

Please create step-by-step teaching instructions for a teacher on how to facilitate the provided information effectively. Include the following details in your instructions:

* [List of specific details and information you'd like to include]
* [More details if needed]

Ensure that the instructions are clear and straightforward, avoiding complex language. This will guide the response in a structured manner, providing the teacher with actionable guidance on facilitating the provided information.

1. **Chat GPT you are a curriculum developer for the United States Airforce. Your role is to create comprehensive curriculum from a course Map that includes Modules, Units, and Lessons. Tell me you understand my prompt and then wait for the next chain of prompts.**
   1. **You write student centered learning activities for each lesson**
   2. **You create detailed lesson plans for instructors to facilitate the student learning activities.**
   3. **You write point of instructions that summarize the lesson plan**
   4. **You Write student workbooks that all students to complete the student learning actives.**
   5. **You write formative assessments for each lesson**
   6. **You write Summative assessments for each module.**
   7. **You ensure everything is scaffolded based on the learning outcomes**
2. **I will provide you with Module 1-7 learning outcomes.** 
   1. **Analyze the information provided, find Module #: [Name]**
   2. **List each module separately**
   3. **Write a summative assessment for each module**
   4. **The assessment will not be a multiple-choice test**
   5. **Tell me you understand my prompt and then wait for the next chain of prompts**
3. **Create a summative assessment for each module 1-7 from the outline provided**
   1. **Analyze the outline**
   2. **Write to the "understand" level of blooms taxonomy.**
   3. **Ensure all summative assessments are simple**
   4. **Write comprehensive instructions for each module 1-7**
   5. **Tell me you understand my prompt and then wait for the next chain of prompts**
4. **Replace Module 1 Summative assessment with the following. No response is required from you**
5. **Replace Module 2 Summative assessment with the following. No response is required from you**
6. **Replace Module 3 Summative assessment with the following. No response is required from you**
7. **Replace Module 4 Summative assessment with the following. No response is required from you**
8. **Replace Module 5 Summative assessment with the following. No response is required from you**
9. **Replace Module 6 Summative assessment with the following. No response is required from you**
10. **Replace Module 7 Summative assessment with the following. No response is required from you**
11. **List all module summative essessments**

**module a large amount of information regarding creating lesson plans and plans of instruction (POI) and you will follow all the information provided to you exactly as it is given.**

**Use all the information I provide you to redesign the lesson plan. Check for and change continuity errors, spelling and sentence problems, that is thorough and detailed enough for an instructor to follow, add approximate times to each activity, write the steps like most lesson plans would be written in the education field.**

**Respond to me that you understand Below are three separate concepts and I will list them now.**

1. **Write a comprehensive point of instructor in paragraph form for each lesson using the learning outcomes**
2. **Create student Learning Activates**
3. **Rewrite the actives to ensure they build up to the capstone**
4. **Create a detailed Lesson Plan to help instructors facilitate and generate discussion from the activities**

* Course Learning Outcomes:
  + Demonstrate a comprehensive understanding of foundational maintenance and electronics knowledge, safety protocols, and technical requirements essential for effective troubleshooting and issue resolution in various systems and equipment. (Aligned with Module 1 and its Learning Outcomes 1, 2, 3, and 4)
  + Apply safety regulations, technical orders, and hazardous material handling procedures effectively in diverse workplace scenarios, ensuring a safe work environment and risk management. (Aligned with Module 2 and its Learning Outcomes 1, 2, 3, and 4)
  + Utilize principles of Ohm's law, direct current (DC), alternating current (AC), and reactive circuits (capacitance and inductance) to analyze and operate electronic systems and circuits. (Aligned with Module 3 and its Learning Outcomes 1, 2, 3, and 4)
  + Demonstrate proficiency in using maintenance tools and equipment, including the Composite Tool Kit (CTK) and torque devices, ensuring accurate maintenance and adherence to safety protocols. (Aligned with Module 4 and its Learning Outcomes)
  + Apply advanced wire maintenance techniques, including avionics cable identification, multimeter usage, and cable assembly, to effectively troubleshoot and repair avionics systems. (Aligned with Module 5 and its Learning Outcomes)
  + Understand numbering system conversions, digital logic circuits, solid-state devices (diodes, relays), and integrated circuits, enabling analysis and operation of electronic components and systems. (Aligned with Module 6 and its Learning Outcomes)
* Module 1: MAINTENANCE PROFESSIONAL ORIENTATION
  + Module Learning Outcomes:
    - Recognize and describe the significance of Air Force Foundational Competencies, linking them to their roles in the maintenance career field.
    - Understand the various Occupational Competencies relevant to their specific maintenance career path, demonstrating how these competencies apply to their roles.
    - Identify and outline the duties and responsibilities associated with different skill levels (3/5/7/9-Level) in the maintenance career field, linking them to the core training requirements necessary to achieve a 5-skill level.
    - Analyze and compare the distinct roles and duties of flightline maintenance personnel, differentiating their responsibilities and contributions within aviation operations.
* Unit 1: Air Force Maintenance Career Field Competencies and Personnel Duties
  + Explain Foundational Competencies and their relevance to the maintenance career field.
  + Identify the primary categories of Occupational Competencies and their application in specific maintenance roles.
  + Describe the duties and responsibilities of personnel at different skill levels (3/5/7/9-Level) in the maintenance career field, along with the core training requirements for achieving a 5-skill level.
  + Differentiate the roles and contributions of flightline maintenance personnel within aviation operations.
* Lesson 1: Understand Air Force Foundational Competencies and the Maintenance Career Field
  + Define Air Force Foundational Competencies and their importance in the maintenance career field.
  + Categorize the different Foundational Competencies and explain how they contribute to effective maintenance practices.
  + Relate the relevance of Occupational Competencies to specific maintenance roles and responsibilities.
  + Discuss how the application of Foundational and Occupational Competencies enhances overall maintenance performance.
* Lesson 2: Understand Duties and Responsibilities of 3/5/7/9-Level Personnel
  + Outline the path to achieving a 5-skill level in the maintenance career field, starting from lower skill levels (3/5/7-Level).
  + Identify the core training requirements for attaining a 5-skill level and becoming proficient in maintenance duties.
  + Analyze the role and responsibilities of personnel at different skill levels (3/5/7/9-Level) within the maintenance career field.
  + Interpret the significance of the Career Field Education and Training Plan (CFETP) in guiding skill development for various maintenance skill levels.
  + **The IDEA model**

is a concept called IDEA. IDEA is an acronym for a concept that explains the facilitation process in a classroom. It explains in detail the reason for why each step in the model is important. I stand for Introduction, D stand for develop questions E stands for Explore Research, A stand for Align Conclusions.

**Plan of Instruction (POI)**

Tells the instructor how to teach the material. Was developed using the IDEA model.

**Lesson Plan Template**

Is the template that lays the structure of how a lesson plan should look and flow. This template is for people who are creating a lesson plan using the IDEA model.

In brackets I will indicate to chatgpt where each concept starts and ends. Example [Start The Idea model] [End The Idea model] You will use every piece of information that I provide to create lesson plans or Plans of Instruction (POI).

**[Start Plan of Instruction (POI)]**

The interaction between instructors and students is crucial for effective learning and assessment. Instructors play a vital role in engaging with students, providing learning activities, evaluating their knowledge, structuring lessons, and addressing their questions to ensure a clear understanding of the subject matter. It is essential to provide students with adequate resources to support their comprehension. Continuous interaction with students help instructors assess their understanding and determine the most effective ways to present information, thereby maximizing their learning opportunities. Collaborating within small teams is also key to success as students navigate the course material.

During the orientation phase, it is important to assess team dynamics and, if applicable, assign students to teams. Team assignments should be based on factors such as learning styles, personality, ASVAB scores, experience, and time in service. For large classes, teams should ideally consist of three to four students, while smaller class sizes may require teams of two.

When beginning a new objective, it is crucial to reassess team dynamics and adjust if necessary. When reassessing team dynamics, consider students' academic performance, learning styles, personality, ASVAB scores, experience, and time in service. If there is a possibility of unnecessary conflict or hindrance to learning, instructors may need to move students between teams during an objective or module. Additionally, ensure that students have access to reference materials and their student workbooks. In cases where an objective spans multiple days, start each day by briefly reviewing and assessing students' progress and understanding of the material. Summarize the key points of the objective before proceeding with the learning activity.

General Facilitation Requirements:

Encourage active participation, such as assigning different roles within the group (e.g., discussion leader, note-taker, timekeeper, presenter, etc) to ensure equitable engagement. See Cooperative Learning Strategies provided in the Active Learning Toolkit for more details.

Instructors have ACADEMIC FREEDOM so they have autonomy to employ diverse facilitation methods and activities that support inquiry-based learning approaches, as long as they align with the intended purpose of the course, lesson plans, and learning outcomes. Instructors should seek activities that fulfill the intent of the "general facilitation requirements" outlined in item 7 of the forward. However, instructors are mandated to avoid relying solely on lectures and must actively engage students through a variety of facilitation methods to adhere to the principles of student-centered learning.

Introduction: Utilize the lesson plan to provide the students with a demonstration or real-world example to grab students' attention, get them engaged in the topic and provide context for the learning activities. The introduction is not an opportunity to lecture about the topic or teach concepts.

Develop Questions:  Engage students who have no prior knowledge about the topic, by incorporating an activity like a KWL (know, want to know, learned). These activities should aim to activate and connect students' existing knowledge and establish a foundation for further learning.

Organize the students into groups and encourage students to observe and discuss the concepts presented in the introduction carefully. Have them make connections with any similar concepts in introducing they might have encountered in previous jobs, school, or life at home. Instruct the students to discuss and document their prior knowledge about the topic. They should write down what they already know or have experienced related to the subject matter. Emphasize that this should be based on their personal understanding, not on any new information gained from the demonstration.

Encourage students to generate objective questions or express their curiosities about the content. These questions should focus on what they want to learn or explore further. For instance, students might wonder about the specific hazards mentioned in an SDS or how the information is organized. Encourage students to reflect on their relationship with the content, their past experiences, the questions they have, and any predictions they might make about what they will learn.

After the activity, each group will turn towards the center of the room. The students should stand up, share their questions and experiences with the class. The instructor will facilitate the discussion and align student questions with the learning outcome(s) and guided questions to motivate students to learn the material. Additionally, the instructor will listen intently to what is being discussed and take note of each students experience level of the topic. The instructor can use this information to prime cooperative learning strategies during the later research stage. A list of what the class wants to know will be written down as a collective by a student so the list can be easily viewed by the class. The instructor will use the list of want to knows to supplement the end of lesson review and use the learned to supplement the students reflection of the lesson.

Explore Research: To begin each learning activity, utilize the lesson plan to provide key points and directions for the students. Encourage students to ask questions if any directions are unclear. If questions arise, facilitate peer assistance by first allowing other students to help clarify. Step in to provide aid if no student can assist.

Ensure students have access to the necessary resources and information required to explore the guided questions. This may include articles, videos, case studies, or other relevant materials. Encourage active engagement with these resources and urge students to seek out additional information to deepen their understanding of the topic.

Instruct students to open their student workbooks and independently read the directions for the learning activity. The student workbook contains guided questions and activities aligned with the learning outcomes. These questions are designed to encourage critical thinking and engagement, utilizing Bloom's Taxonomy Question Stems according to the appropriate learning level. Encourage students to ask questions if any directions are unclear. If questions arise, facilitate peer assistance by first allowing other students to help clarify. Step in to provide aid if no student can assist.

Before commencing the research phase, prompt students to engage in a discussion and create a plan encompassing a simple course of action, role assignment, and next steps. Recognize that planning is an integral part of learning that often occurs subconsciously. Revealing the subconscious planning process can help students develop metacognitive skills.

Direct students to complete the learning activity, which entails interpreting information, solving problems, or fulfilling assigned tasks. During the activity, students are responsible for task completion. As the instructor, actively seek opportunities to enhance the student learning experience, make timely decisions, track and monitor individual, group, and class progress, and utilize available resources such as students, materials, activities, and instructional aides to enhance learning. Continuously consider the learning outcomes, schedule, classroom direction, and strategies to promote collaboration.

During the collaboration phase, ask yourself the following questions to guide your facilitation:

- What are my students learning?

- What are their goals?

- Is their progress slow or fast?

- Should I pause and teach something?

- Can I leverage another student or group to teach this concept?

- What can I do to encourage increased interaction among students?

- Are all groups on task?

- Is that particular group functioning effectively together?

- Should I consider rearranging groups?

- Could incorporating a game enhance the learning experience?

- What aspects are unclear to the students, and what do they already understand?

- What visual aids or demonstrations can I employ to enhance comprehension?

- How can I ask questions that redirect their thinking?

- What questions do the students currently have?

Align Conclusions: Once the learning activity is complete, have students turn away from their desks to minimize distractions. Select one or more groups to present their findings and conclusions to the rest of the students. The communication should be directed towards their peers, not the instructor. While the presenting group speaks, all other students will take notes on the information shared. They will then provide feedback, ask questions, or compare answers. As the instructor, monitor the students' understanding and provide feedback as needed based on their responses to the guided questions.

After completing all activities, revisit the student questions from the “Develop Questions” stage to ensure their curiosities have been addressed. Allow students to answer their own questions first and facilitate a discussion for the remaining questions.

Lastly, prompt students to reflect on their learning process and identify key takeaways. Encourage them to create a "Reflection Journal" per the lesson plan to document their learning journey. Additionally, have students summarize what they have learned in an objective manner. This step enhances their understanding of their own thinking process as learners, which is the core principle of metacognition. Furthermore, this approach creates a historical record of students' learning progress, which can be valuable for future reference.

As needed, fill in any information gaps through facilitation or concise instructions. Incorporate personal experiences, visual aids, and examples when necessary. Ensure that all information on the left-hand side of the Lesson Plan has been covered and assess the overall understanding of the learning outcomes. If students demonstrate a comprehensive understanding of all learning outcomes, provide the appraisal or capstone activity.

During the appraisal or capstone activity, read aloud all the directions to the students. Ensure that they understand the instructions and address any questions they may have. Once all students have completed the appraisal or capstone, provide them with a break so that rubric grading can take place without distractions.

Review the student submissions and utilize the grading rubric to provide feedback to each student. When students return to the classroom after the break, give them time to review their feedback and allow them to ask questions if needed.

If a group does not meet a criterion, provide them with verbal feedback to help them understand where they fell short. As the instructor, you may ask high-performing groups to share their answers with the class as a way of providing additional examples and promoting peer learning.

**[End Plan of Instruction]**

**[Start The IDEA model]**

Introduction

Effective student engagement is a crucial element in facilitating a student-centered learning experience. The classroom environment can quickly deteriorate, leading to chaos and disruption if the instructor fails to maintain control. Thus, the instructor's role is critical in maintaining the classroom's perpetual motion and providing a framework for students to connect with. The IDEA model is a valuable tool that helps instructors stay on track, maintain control, and foster engagement.

Introduce Content

To engage students, instructors must immerse them in the objective by offering a demonstration, experiment, or example. This provides the students with context

Develop Questions

Incorporate an activity like KWL to activate students' prior knowledge and provide a foundation for further engagement. The student should ask objective questions based on the demonstration or experiment from the introduction and document prior knowledge. This process encourages metacognition and prompts students to consider their relationship with the content, experiences, questions, and predictions.

After the activity, students will share their questions and experiences with the class. The instructor should facilitate the discussion and note student questions on the board to review them at the end of the objective. Align their questions with the learning outcome(s) and guided questions to motivate students to learn the material. Additionally, students should communicate their strengths and weaknesses during this stage which the instructor can use to prime cooperative learning strategies during the later research stage.

Foundational competencies developed.

Teamwork

Communication

Information Seeking

Decision Making

Analytical Thinking

Explore Research

Driving Question

To guide students through their research, instructors must provide them with key questions based on the learning outcomes. Develop questions using Bloom's Taxonomy Question Stems to encourage critical thinking based on the appropriate learning level.

Initiate a plan

Before engaging in research, students should discuss a plan that includes a simple course of action, role assignment, next steps, etc. Although it is a quick and seamless step, planning is an essential part of learning that often happens subconsciously. Revealing the subconscious planning process can help students develop metacognitive skills.

Research

Students must interpret the information during the research phase, solve problems, or complete the assigned tasks. While it is up to the student to complete the task, instructors must take on the most work at this stage. They must look for opportunities to make the student learning experience more engaging, make quick decisions, track, and monitor student, group, and class progress, and use resources such as students, materials, activities, and instructional aides to enhance learning. The instructor must continuously consider the learning outcomes, schedule, classroom direction, and ways to promote collaboration.

As an instructor, you should ask yourself: What are my students learning? What are the student's goals for the task? Are the students progressing slowly or fast through the material? Should I stop research and teach concepts that are unclear to the students? Can another student or group be used to instruct a concept that other groups are struggling with? What can I do to get them to interact more? Are the groups on task? Is that group working well together? Should I change groups? Could we play a game? What are they not understanding? What do they know? What can I show them? What questions can I ask to change their direction? What questions do the students have now?

Foundational competencies developed.

Initiative

Teamwork

Flexibility

Leadership

Foster Inclusion

Information Seeking

Creative Thinking

Analytical Thinking

Decision Making

Align Conclusions

Once the research phase is complete, students will communicate their learning and conclusions about the assigned activity. They will take notes on what they hear from other groups and provide feedback. Instructors will monitor their knowledge and provide feedback, as necessary, based on the student's responses to the guided questions. The instructor should revisit the student questions from KWL to ensure their curiosities have been satisfied. Allow students to answer their questions first and facilitate discussion for the remaining questions from the KWL.

Finally, students should reflect on their learning process and key takeaways. Instructors should encourage students to create a "Reflection Journal" to document their learning process. Additionally, students should summarize what they have learned in the objective. This step improves their understanding of their thought process as learners, which is the fundamental concept of metacognition. Moreover, this approach provides a historical document of the student's learning process, which can be helpful for future reference.

Foundational competencies developed.

Teamwork

Communication

Flexibility

Analytical Thinking

Decision Making

**[End The IDEA model]**

**[Start Lesson Plan Template]**

**Facilitate I-D-E-As Lesson Plan Helper**

Note: The Capstone project serves as the goal of the module, with the appraisal project assessing the attainment of the learning outcomes. The learning activities and their corresponding discussion questions should align with the learning outcomes and contribute to the development of the appraisal project. The scaffold ensures that each component builds upon the previous one, ultimately leading to the successful completion of the Capstone project.

1. **Introduction**:
   1. **Demonstration/Experiment/Example**: [Briefly describe the demonstration, experiment, or example you will use to grab students' attention and provide context for the learning activities.]
2. **Learning Activity #:** [KWL (Know, Want to Know, Learned)]
   1. **Discussion Question(s):** [Enter the discussion question(s) that will prompt students' thinking and engagement.]
   2. **Instructions**: Write steps to:
      1. Introduce the topic and provide a brief overview to engage students' interest.
      2. Instruct students to create a three-column chart labeled as "K" (Know) and "W" (Want to Know).
      3. In the "K" column, ask students to write down what they already know about the topic.
      4. In the "W" column, prompt students to note down questions or aspects they want to learn more about.
      5. Facilitate a class discussion based on the provided discussion question(s), encouraging students to share their ideas, insights, and questions related to the topic.
   3. **Facilitation** **Concepts for Instructional Guidance**: Write steps to:
      1. Engage in a discussion and create a plan encompassing a simple course of action, role assignment, and next steps. Continuously consider the learning outcomes, schedule, classroom direction, and strategies to promote collaboration.
3. **Learning Activity #:** [Enter the title of the learning activity]
   1. **Discussion Question(s):** [Enter the discussion question(s) that will prompt students' thinking and engagement.]
   2. **Instructions**: Write steps to:
      1. Provide key points and directions for the students to explore the discussion questions.
      2. Ensure students have access to necessary resources and information to deepen their understanding of the topic.
      3. Encourage active engagement with these resources and urge students to seek out additional information if needed.
      4. Prompt students to engage in a discussion and create a plan encompassing a simple course of action, role assignment, and next steps.
      5. Continuously consider the learning outcomes, schedule, classroom direction, and strategies to promote collaboration.
   3. **Facilitation** **Concepts for Instructional Guidance**: Write steps to:
      1. Engage in a discussion and create a plan encompassing a simple course of action, role assignment, and next steps. Continuously consider the learning outcomes, schedule, classroom direction, and strategies to promote collaboration.
4. *[Add Additional Learning Activities as needed]*
5. **Learning Activity #:** [KPA (Knowledge Priming Activity)]
   1. **Discussion Question(s):** [Enter the discussion question(s) that will prompt students' thinking and engagement.]
   2. **Instructions**: Write steps to:
      1. Transition to the "Learned" column in the chart.
      2. Guide students to reflect on the discussion and their individual contributions.
      3. Instruct them to record new insights, information, or perspectives they have gained during the activity.
      4. Optional: Provide additional resources or materials for further exploration if time allows or if students express a strong interest.
      5. Bring the class back together for a brief sharing session, allowing students to volunteer and share what they have learned or any new questions that have arisen.
      6. Conclude the activity by emphasizing the importance of continuous learning and the value of exploring new ideas and concepts.
   3. **Facilitation** **Concepts for Instructional Guidance**: Write steps to:
      1. Engage in a discussion and create a plan encompassing a simple course of action, role assignment, and next steps. Continuously consider the learning outcomes, schedule, classroom direction, and strategies to promote collaboration.
6. **Learning Activity #:** [Reflective Portfolio]
   1. **Discussion Question(s)**: [Enter the discussion question(s) that will prompt students' reflection on the effectiveness of their strategies and skills used in the assignment.]
   2. **Instructions**: Provide clear instructions for students to complete a reflective portfolio, which allows them to reflect on their learning process, key takeaways, and the effectiveness of their strategies and skills utilized throughout the learning activities.
7. **Conclusion**:
   1. **Instructions**: Write a way to conclude the lesson by summarizing the key concepts covered and encouraging students to ask any remaining questions or share their reflections on the learning activities. Emphasize the importance of ongoing learning and application of the knowledge gained.

(Notes):

1. Create as many Learning Activities and discussion questions as needed to facilitate the objective.
2. Use “Blooms Taxonomy Wheel” to help choose activities/projects/assignments that support the learning level.
3. Use “Blooms Taxonomy Question Stems” to help create discussion questions based on the learning level.