2022-2023 Three-Credit Hour Course: Problem Based Learning

▸ **Audience:** *Active West Virginia Teachers/Educators*
▸ **Type:** *Self-Paced with Rolling Enrollment*
▸ **Enrollment:** *September 1, 2022 - April 14, 2023*
▸ **Duration:** *September 1, 2022 - May 19, 2023*

Description: Participants will engage in tasks and readings to explore and develop engaging, student-centered projects that promote high-quality learning of content standards. Beginning with the end in mind, participants craft driving questions, plan assessments, map their project, and manage the implementation of project-based learning in their classrooms. Participants use realistic scenarios to design problem-based learning which guide students to develop mastery of selected curriculum goals and standards.

Course Goals:

▸ *Understand characteristics of PBL.*
▸ *Differentiate between projects and PBL.*
▸ *Differentiate between problem-based learning and project-based learning.*
▸ *Identify the teacher role in the PBL learning process.*
▸ *Identify the student role in the PBL learning process.*
▸ *Formulate authentic problem-based PBL scenarios.*
▸ *Discover the steps necessary to plan an effective PBL.*
▸ *Understand criteria for designing a quality PBL.*
▸ *Develop a PBL idea.*
▸ *design a PBL entry event (launch) scenario.*
▸ *Identify WV Standards and learning targets.*
▸ *Compile a list of performance descriptors addressing what students will need to know and be able to do.*
▸ *Craft and refine PBL driving questions.*
▸ *Understand that PBL driving questions are open-ended.*
▸ *Understand that PBL driving questions should address authentic concerns.*
▸ *Understand that some PBLs require multiple driving questions.*
▸ *Target specific content and skills.*
▸ *Provide timely and useful feedback to students.*
▸ *Help teachers plan next steps.*
▸ *Reflect students' learning over time.*
▸ *Enable teachers and students to identify and build mastery of content.*
▸ *Create a storyboard/ map identifying major activities and important milestones for their PBL.*
▸ *Identify the knowledge and skills that students will need to complete a major group product.*
▸ *Identify the knowledge and skills that students will need to complete a major individual product.*

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▸ *Identify when the knowledge and skills will be learned.*

▸ *Identify resources that students will need to complete a major group product.*

▸ *Identify resources that students will need to complete a major individual product.*

▸ *Understand the monitoring and managing process of a PBL.*

▸ *Organize and promote teamwork among students.*

▸ *Develop the PBL launch.*

▸ *Design research for student to complete.*

▸ *Develop all activities students will complete during their PBL.*

▸ *Understand the importance of reflection.*

Session Overviews

▸ **Session 1 – What is PBL?**
During this session you will learn about the basic principles of problem-based learning (PBL) and project-based learning (PBL) and explore the benefits made possible in a classroom structured around PBL. After first reading a collection of articles that define PBL, you will then proceed to the Session One tasks and view a video clip overview of PBL. During the Session One Reflection, you will describe your understanding of PBL by reflecting on questions targeted at the PBL process through exemplar PBL examples from elementary, middle, and high school. The session will culminate in a PBL centered around you developing an original poster reflecting a PBL topic gleaned from assigned readings.

▸ **Session 2 - The End is Just the Beginning**
Great PBLs begin with planning for the end result. During Session Two you will begin developing a PBL by first examining the steps that will help you plan an effective PBL. You will investigate design principles for effective PBL and review exemplary PBL components. You will download the PBL Design Template for Sessions Two through Six and start planning your own PBL. Finally, in the reflection you will provide information related to your PBL idea, the WV Standards the PBL addresses, and the dilemma all teachers face when planning a PBL.

▸ **Session 3 - Craft the Driving Question**
Intriguing driving questions are at the heart of effective PBLs. All driving questions should communicate the PBL's purpose. With that in mind, you can create your driving question based on your own style and preference, your students' characteristics and interests, and the nature of your PBL.

There are two (2) basic types of driving questions. A driving question can do the following.
• Specify a product to be created, a task to be done, or a problem to solve.
• Focus on a philosophical or debatable issue, or an intriguing topic.

Driving questions should incorporate best practices.
• The driving question captures the PBL's main focus.
• The driving question is open-ended; it allows students to develop more than one reasonable, complex answer.

• *The driving question is understandable and inspiring to students.*
• *To answer the driving question, students need to gain the intended knowledge and skills.*

During Session Three, you will learn how to write driving questions that spark interest and propel students through the project.

▶ **Session 4 – Plan the Assessment**
An explicit set of outcomes establishes the focus and forms the driving force of every PBL. PBL based assessments must include multiple formats to capture process-oriented outcomes. Assessment plans must include methods to gather information about students' mastery of content knowledge, their ability to apply skills and knowledge to solving authentic problems, their abilities to work collaboratively, and their abilities to plan and carry out PBLs. The assessment plan should include both formative and summative assessments. In this session you will learn to develop balanced assessments that provide all students opportunities to demonstrate their learning and to demonstrate how well they apply their knowledge and skills to problem solving. You will create two (2) rubrics for your PBL.

"Once you have selected a valid scoring standard, clearly communicate what this is to the students and parents before the project begins." NYC Department of Education

▶ **Session 5 – Map the PBL**
Session Five focuses on mapping the PBL. Participants must determine the instructional needs of students and structure activities/ products around these needs. Mapping the PBL helps the teacher identify the products to be completed and the skills students need to master in order to complete the PBL, establish time guidelines, and organize resources to support PBL activities/ products. It is also necessary to "work through" the PBL to anticipate problematic areas that need to be targeted before or during the implementation. During this session participants will create a storyboard/ map identifying major activities and important milestones for their PBL. In addition, they will create a map/ chart of a major group product from their PBL and a map/ chart of a major individual product from their PBL.

▶ **Session 6 – Manage the Process**
The best method of keeping students on task and supporting their work is by having a well-developed plan for the components of the PBL, timelines for products, assessment pieces in place, and a clear understanding of the targeted goals. Teacher roles change from lecturer to facilitator, students take active roles in decision-making, and classroom management strategies change from those in traditional settings. In this session participants will develop a launch to engage students, design activities and products, and define evaluation tools.

Course Grades

All grades in the course gradebook must be a checkmark for successful course completion. A checkmark indicates that all work has been completed and the work meets the expectations for that assignment. Quiz scores must meet the minimum expectations as stated in the course.