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« ABOUT MENU (/ABOUT/MENU)

What is Project Based Learning (PBL)?

Project Based Learning is a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to a complex question, problem, or challenge. Essential Elements of PBL include:

- **Significant Content -** At its core, the project is focused on teaching students important knowledge and skills, derived from standards and key concepts at the heart of academic subjects.
- **21st century competencies -** Students build competencies valuable for today's world, such as critical thinking/problem solving, collaboration, and communication, and creativity/ innovation, which are taught and assessed.
- **In-Depth Inquiry -** Students are engaged in a rigorous, extended process of asking questions, using resources, and developing answers.
- **Driving Question -** Project work is focused by an open-ended question that students understand and find intriguing, which captures their task or frames their exploration.
- **Need to Know -** Students see the need to gain knowledge, understand concepts, and apply skills in order to answer the Driving Question and create project products, beginning with an Entry Event that generates interest and curiosity.
- **Voice and Choice -** Students are allowed to make some choices about the products to be created, how they work, and how they use their time, guided by the teacher and depending on age level and PBL experience.
- **Revision and Reflection -** The project includes processes for students to use feedback to consider additions and changes that lead to high-quality products, and think about what and how they are learning.
- **Public Audience -** Students present their work to other people, beyond their classmates and teacher.


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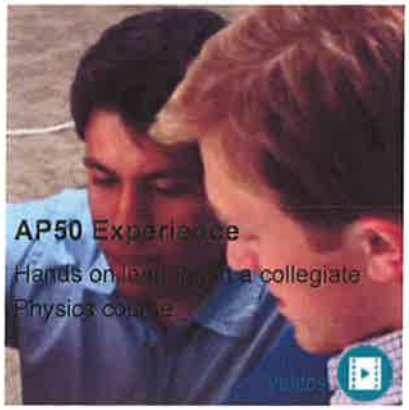
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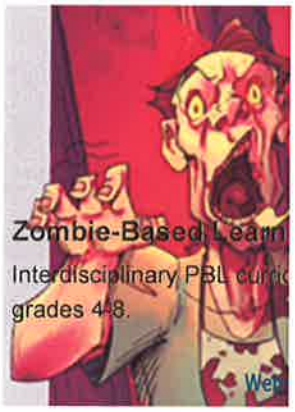
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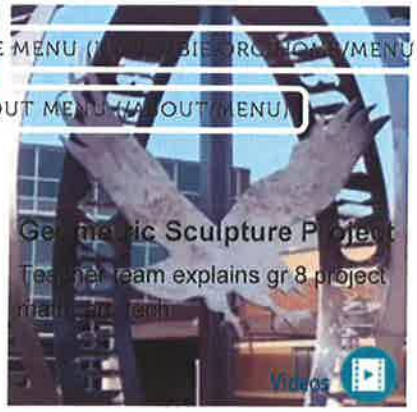
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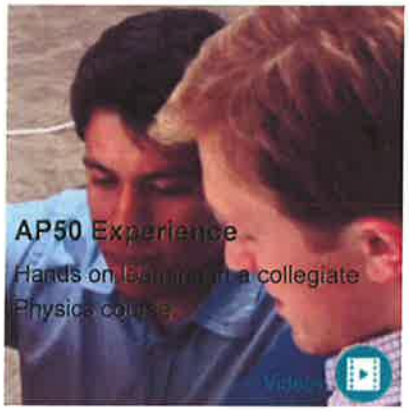
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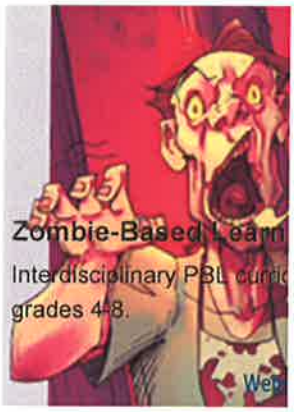
Zombie-Based Learn
grades 4-8.

Your Study Guides and Strategies starts here!

Cooperative learning series

Problem-based learning

Problem-based learning (PBL) is an exciting alternative
to traditional classroom learning.

With PBL, your teacher presents you with a problem, not lectures or assignments or exercises. Since you are not handed "content", your learning becomes active in the sense that you discover and work with content that you determine to be necessary to solve the problem.

In PBL, your teacher acts as facilitator and mentor,
rather than a source of "solutions."

Problem based learning will provide you with opportunities to
examine and try out what you know
discover what you need to learn
develop your people skills for achieving higher performance in teams
improve your communications skills
state and defend positions with evidence and sound argument
become more flexible in processing information and meeting obligations
practice skills that you will need after your education

A Summary of Problem-Based Learning:
This is a simplified model--more detailed models are referenced below.

The steps can be repeated and recycled.
Steps two through five may be repeated and reviewed as new information becomes available and redefines the problem.
Step six may occur more than once--especially when teachers place emphasis on going beyond "the first draft."

1. Explore the issues:
Your teacher introduces an "ill-structured" problem to you.
Discuss the problem statement and list its significant parts.
You may feel that you don't know enough to solve the problem but that is the challenge!
You will have to gather information and learn new concepts, principles, or skills as you engage in the problem-solving process.

2. List "What do we know?"
What do you know to solve the problem?
This includes both what you actually know and what strengths and capabilities each team member has.
Consider or note everyone's input, no matter how strange it may appear: it could hold a possibility!

3. Develop, and write out, the problem statement in your own words:
A problem statement should come from your/the group's analysis of what you know, and what you will need to know to solve it. You will need:
a written statement
the agreement of your group on the statement
feedback on this statement from your instructor.
(This may be optional, but is a good idea)

> **Note:** The problem statement is often revisited and edited as new information is discovered, or "old" information is discarded.

4. List out possible solutions
List them all, then order them from strongest to weakest
Choose the best one, or most likely to succeed

5. List actions to be taken with a timeline
What do we have to know and do to solve the problem?

How do we rank these possibilities?
How do these relate to our list of solutions?
Do we agree?

6. List "What do we need to know?"

Research the knowledge and data that will support your solution
You will need to information to fill in missing gaps.
Discuss possible resources
Experts, books, web sites, etc.
Assign and schedule research tasks, especially deadlines

If your research supports your solution,
and if there is general agreement, go to (7). If not, go to (4)

7. Write up your solution with its supporting documentation, and submit it.

You may need to present your findings and/or recommendations to a group or your classmates.

> This should include the problem statement, questions, data gathered, analysis of data, and support for solutions or recommendations based on the data analysis: in short, the process and outcome.

Presenting and defending your conclusions:

The goal is to present not only your conclusions,
but the foundation upon which they rest. Prepare to
State clearly both the problem and your conclusion
Summarize the process you used, options considered, and difficulties encountered
Convince, not overpower
Bring others to your side, or to consider without prejudice your supporting documentation and reason
Help others learn, as you have learned
If challenged
and you have an answer, present it clearly
and you don't have an answer, acknowledge it and refer it for more consideration

> Sharing your findings with teachers and students is an opportunity in demonstrating that you have learned. If you know your subject well, this will be evident. If a challenge arises that you cannot respond to, accept it as an opportunity to be explored. However, take pride in your attention to quality when you present. See also the Guide on presenting projects.

8. Review your performance

This debriefing exercise applies both to individuals and the group.
Take pride in what you have done well; learn from what you have not done well. Thomas Edison took pride in unsuccessful experiments as part of his journey to successful outcomes!

9. Celebrate your work!

Classroom learning series

Preparing for the classroom | Class "prep"/paying attention |
Classroom discussions | Taking notes in lectures | Influencing teachers |
Interviewing for class projects | Consent form for interviews |
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For more information:

To be successful, PBL requires problem solving and critical thinking skills.
See our Study Guides on
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The role of argument:

Through various stages of this process, you or your group will be expected to come to consensus on how to next proceed. While each member is expected to "argue" his or her viewpoint, the focus should be on

the issues and reason, not personalities and emotion.
If your group has difficulty, refer to your teacher for assistance as a mediator, and/or see the Guide **Cooperative conflict resolution**
For more on working in groups, see **Learning with others** in the main index.
For more on types of arguments, organization, evidence, as well as techniques in problem-based learning, see Dr. Larry D. Spence (Director, Undergraduate Learning Initiatives, Pennsylvania State University) "Problem Based learning: Lead to Learn, Learn to Lead **.pdf version** | **.doc version**
See also: Problem-based Learning, especially in the context of large classes

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