Weaving Project-Based Learning Into Rigorous High School Courses

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An on-demand archive of this webinar will be available at www.edweek.org/go/webinar in less than 24 hrs.
KNOWLEDGE IN ACTION

Rigorous PBL: Addressing the Breadth Versus Depth Conundrum

knowledgeinaction.org
GLEF, Lucas Ed, & University of Washington, Seattle

PBL Design Principles

PBL Course Content – Examples AP US Gov, APES

PBL: Shifts in Teaching & Learning
Amber M. Graeber

• Advanced Placement Coordinator, Des Moines Public Schools
• AP U.S. Government & Politics Teacher (Roosevelt High School, 2017-18)
• Former K-12 Social Studies Curriculum Coordinator, Des Moines Public Schools

Started with “Knowledge in Action” project in the fall of 2007 as a co-designer of the AP U.S. Government & Politics course with high school social studies teachers Adrienne Curtis Dickinson and Katherine Piper and the University of Washington team (Dr. Walter Parker, among others).
PBL Design Principles

- Projects as the spine
- Looping
- Engagement first
- Instructional supports
- Teachers as collaborators
Core Subject Matter and Content Selection

What is the proper role of government in a democracy?

<table>
<thead>
<tr>
<th>Limited Government</th>
<th>Separation of Powers</th>
<th>Constitutionalism</th>
<th>Civil Rights and Liberties</th>
<th>Linkage Institutions</th>
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Skills: Constitutional reasoning, Perspective-taking, Close reading
FOUNDERS’ INTENT

How do founding documents describe how our government should work?

To what extent should we be faithful to the founders’ intentions?

The Constitution

Structured Academic Controversy (HISTORICAL ISSUE)
Federalist v. Anti-Federalists

Structured Academic Controversy (CONTEMPORARY ISSUES)
Liberals v. Conservatives

INTRO

Rule of Law
Students take on roles as Delegates to the Constitutional Convention

The Rattification
Federalist v. Anti-Federalist: Ratification of the Constitution

Bill of Rights

Time Machine

Strong Central Government

States Rights

Federalism
How does the government work together to implement public policy?

To what extent is the way the government implements public policy beneficial or detrimental to the people?

1. Meeting the Client: Interest Groups on the issue of immigration
2. Prepare for a press conference: answer questions about an issue on immigration
3. File a civil suit or a complaint to the department of justice for a criminal case
4. Write a letter to the president, outlining an action plan
5. Prepare for a congressional testimony
6. Create a political action plan for comprehensive immigration reform

INTRO
Students take on roles as political advisors to Interest Group
How can we live more sustainably?

THE 7 TOPICS
1. Earth Systems and Resources
2. The Living World
3. Population
4. Land and Water Use
5. Energy Resources and Consumption
6. Pollution
7. Global Change

THE 5 CHALLENGES
1. Eco Footprint: Students explore the impacts of their individual and family behavior and consumption patterns and develop proposals to reduce their family's impact on the environment and to educate their school community.
2. My Community Ecology: Students are community resource managers who investigate and map past and present natural and cultural community resources and suggest strategies for their sustainable management.
3. Food Systems: Students are farmers who design and modify a farm plot based on a set of evolving ecological and economic constraints.
4. Ocean in Action: Students are diverse participants in a town hall meeting who develop and debate arguments for and against possible natural resource usage in their community.
5. Negotiation of Nations: Students are international representatives who draft and negotiate potential solutions for inclusion in a global climate accord.
Why does the environment matter? How can we minimize our ecological footprint?

Students explore the impacts of their individual and family behavior and consumption patterns. Then they develop proposals to reduce their family's impact on the environment and to educate their school community.

1. The Mystery of Easter Island
2. What's My Footprint?
3. What's My Family's Footprint?
4. The Power of One
5. Sustaining Systems
6. The Birth of Stuff
7. The Death of Stuff
8. The Power of Many
Differences from Traditional AP Approach

- Purpose for Learning
- Enacting “Engagement First” Design Principle
- Application of Content
- Authentic Public Audience
- Role of Teacher
PBL: Shifts in Practice

• Personal Experience
• Shifts in Teacher Practice – or the Teacher’s Role in the Learning
• Contextual Challenges and Opportunities
How can a teaching & learning platform support PBL?
Principles of Course Design

1. Projects as the spine of the course
2. Quasi-repetitive activity cycles ("looping")
3. Engagement first: create a “need to know”
4. Teachers as co-designers and collaborators
5. An eye toward scalability
What is the proper role of government in a democracy?

**THE 6 TOPICS**

1. Constitutional Underpinnings of United States Government
2. Political Beliefs and Behaviors
3. Political Parties, Interest Groups, and Mass Media
4. Institutions of National Government: The Congress, the Presidency, the Bureaucracy, and the Federal Courts
5. Public Policy
6. Civil Rights and Civil Liberties

**THE 5 CHALLENGES**

1. Founders' Intent. Students are delegates to the constitutional convention, deciding whether they would ratify the new constitution of the United States and considering the founders' thinking on the course master question: What is the proper role of government in a democracy?
2. Elections. Students take roles in an election (candidates, interest groups, media, political party), organizing and executing a presidential campaign and aiming for victory.
3. Supreme Court. Students are Supreme Court justices, petitioners, or respondents, interacting in landmark cases involving questions of constitutionality, precedent, and compelling government interest.
4. Congress. Students are legislators in the U.S. Congress, writing legislation and working to pass it, consistent with the interests of their state or district.
5. Government in Action. Students are advisors to interest groups, who create political action plans to help further their clients' causes.
Curriculum Decision-Making for PBL

It’s about relationships

• Center to periphery
  • Trunks to branches (trees)
  • Posts to wire (fences)
  • Suns to planets (solar systems)
How does the Supreme Court work?

How does the Supreme Court balance the rights of the individual and the needs of society?
How can we live more sustainably?

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KINDNOWLEDGE IN ACTION
Project-based AP Environmental Science

The University of Washington | The Knowledge in Action Project | LIFE Center, College of Education
What is our relationship with our food systems? How can we support sustainable food systems?

Students are farmers who design and modify a farm plot based on a set of evolving ecological and economic constraints.

1. Exploring My Foodshed

2. Choose Your Crops

As yourself

As a farmer

The University of Washington | The Knowledge in Action Project | LIFE Center, College of Education
Supporting engagement in PBL

*Science in Action study, NSF DRL1251595*

- Framing the project, task, activity
  - Connections to past & future, in-school & out-of-school
  - Helping students take up their role (e.g., farm designer)
- Tools to support engagement & formative assessment – examples:
  - Argument development tool
  - Topo map
- Support for learning from text
  - Setting purpose for reading, following through
  - Chunking (targeted reading to fit task)
Bartholomew Consolidated School Corporation (BCSC), Columbus, IN

Columbus Signature Academy - New Tech Campus

21st Century Skills

New culture of teaching and learning
Learn how itslearning provides support for PBL

itslearning.com
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Required Reading from *Education Week*:

**Spotlight on Project-Based Learning**
In this Spotlight, explore how PBL can improve problem-solving skills, how the ‘Maker’ movement is bringing hands-on learning into the classroom, and tips for integrating project-based and social-emotional learning.