

# Transforming AP Classrooms with Problem-Based Learning

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Deeper Learning

Content

Unit	Dates Covered	Instructional Hours	Areas of Particular Focus
1	1491–1607	7 (5 sessions)	In this unit the focus is on three areas: characteristics of pre-Columbian Native American societies; the Columbian Exchange; and how European, Native American, and African societies changed as cultures converged. Perhaps the biggest challenge in Unit 1 is locating sufficient information about pre-Columbian Native American societies, especially in areas settled by the British. One day is reserved for helping students understand skills, themes, and thematic learning objectives.
2	1607–1754	13 (9 sessions)	This unit focuses on conflict and compromise between European colonizers and American Indians, the differences between the three colonial regions, and reasons for the institutionalization of slavery. Teachers need to look at this unit through the lens of the Atlantic World, especially regarding the impact of mercantilism, the Great Awakening, and the Enlightenment.
3	1754–1800	15 (11 sessions)	In this unit I focus on the tightening of British imperial control through new laws and restrictive measures, colonial reactions to this tightening, and the British reaction to the colonial reaction (which resulted in war and the birth of a new nation with a separate national identity). Students learn how the Seven Years' War led to the American Revolution, how the Declaration of Independence reflected the colonists' belief in the superiority of republican self-government, and how the limitations of the Articles of Confederation led to the writing and ratification of the Constitution. In addition, I address migration patterns, especially those that brought back-country white settlers into conflict with Native Americans and foreign countries.
4	1800–1848	12 (9 sessions)	This unit focuses on westward migration; the growth and development of American democracy; and the accompanying economic, territorial, demographic, and cultural changes. Students will learn about the Marshall Court; participate in a Reformers' Convocation; determine the causes and impact of the market revolution; and explain reasons for pro-slavery arguments, anti-immigrant feelings, and restrictive anti-Indian policies at this time.
5	1844–1877	16 (12 sessions)	This unit continues the course of westward expansion and focuses on the conflicts that resulted from domestic and international migration during this period. Students will learn about the similarities and differences between the North and the South, learn the arguments for and against slavery, and evaluate proposals to resolve the issue of the expansion of slavery in the territories. Finally students will learn how American territorial growth led to sectional tensions, a civil war, and a reconstruction period characterized by both successes and failures. Leaders of the women's rights movement, looking to expand democracy, will be juxtaposed with leaders of the African American civil rights movement who were hoping to do the same in the face of prejudice and discrimination.
6	1865–1898	15 (11 sessions)	This unit covers the transformation of America from a predominantly rural, agricultural society to an urban, industrial society — a transformation that led to economic, political, diplomatic, social, environmental, and cultural changes. It deals with the rise of big business and organized labor, domestic and foreign migrations, and the agricultural revolution that accompanied the industrial revolution. Both the agricultural and industrial revolutions led to greater opportunities for immigrants, minorities, and women, but at the same time there were still many societal inequalities that needed to be addressed. Cultural and intellectual movements that challenged the social and economic order of the Gilded Age are also included.
7	1890–1945	22 (16 sessions)	This unit focuses on how an increasingly ethnically diverse United States began its rise to world power status and, along the way, dealt with the expansion of federal power to meet the challenges of a new century (Progressivism), World War I, the Great Depression, and World War II. During this time period American society was greatly transformed.
8	1945–1980	15 (11 sessions)	The United States became a super power after World War II, and this new status led to changing political and economic responsibilities at home and abroad and a changing social climate in the United States. Topics covered include the Cold War and its impact on domestic and foreign affairs; causes of conflict in the Middle East; the civil rights movement; and the rapid economic, demographic, and technological changes that led to significant political and moral debates.
9	1980–Present	5 (4 sessions)	This unit covers the rise of the conservative movement and the impact of globalization. Students will also look at the foreign policy of presidents from Ronald Reagan to the present and the impact of the "war on terror."



# Alone in the Classroom: Why Teachers Are Too Isolated

Educators spend most of their time distanced from their colleagues. Instead of forcing them to compete with each other, we should help them find new ways to work together.

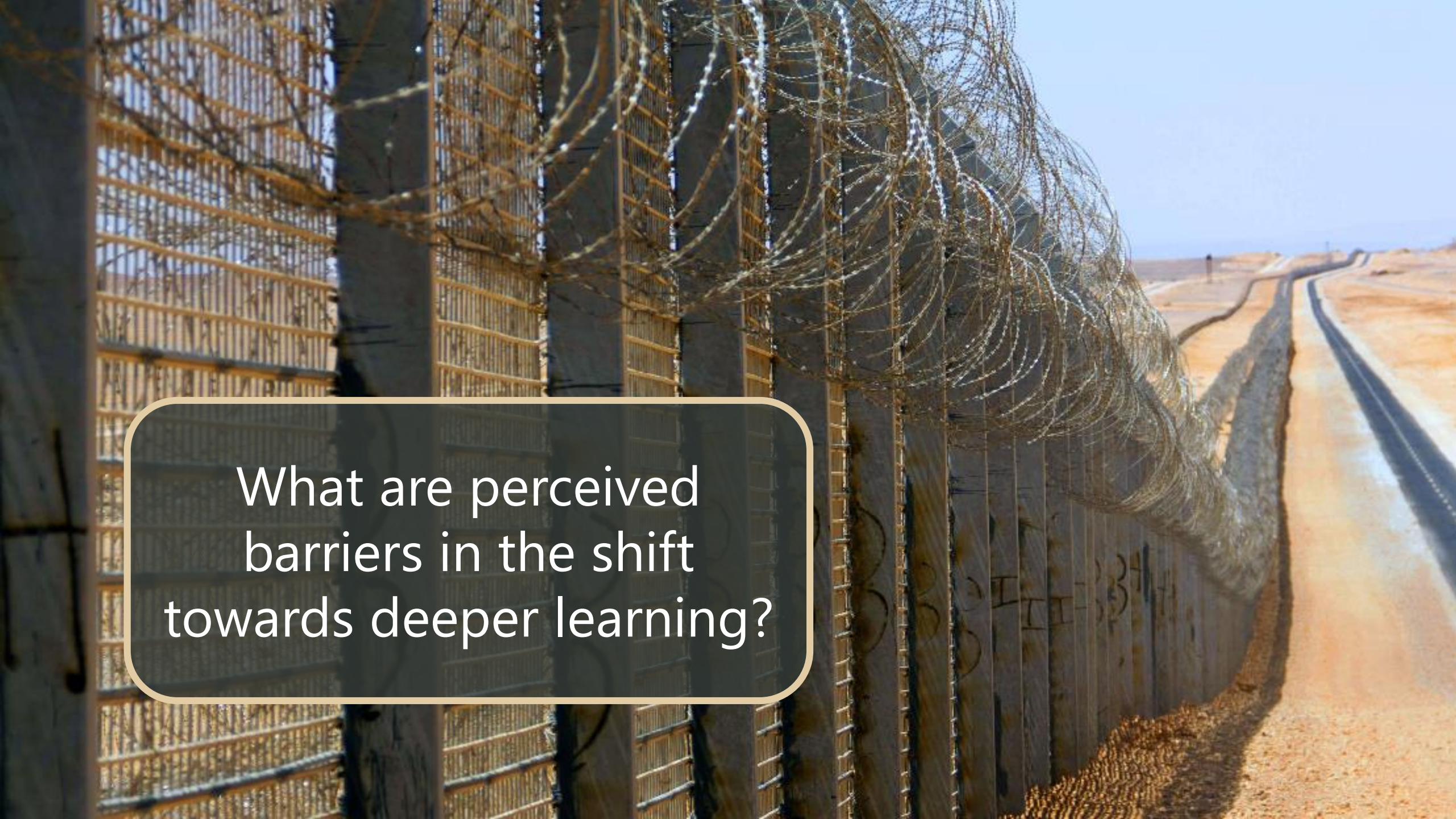
JEFFREY MIREL AND SIMONA GOLDIN | APR 17, 2012 |

U.S.

# Questions

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- 1) What does problem-based learning look like in an AP course?
- 2) What tools encourage collaboration, creativity, and connectedness?



What are perceived barriers in the shift towards deeper learning?

# My list . . .

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- Too much content, need efficient way to teach it all
- We're preparing kids for college lectures
- We're preparing students for the test
- We need to teach basic skills first
- Student's aren't ready to \_\_\_\_\_.
- Requires lots of up front planning
- Parents, colleagues, or principal expect me to \_\_\_\_\_.
- There's not enough time to \_\_\_\_\_.

Collaboration

Grit

Global  
Competency

Critical  
Thinking

Perseverance

Growth  
Mindset

Communication

Creativity

Problem  
Solving

Deeper Learning



# Collaboration





[NOW PLAYING](#)[EVENTS](#)[EDUCATION](#)[MEMBERSHIP](#)[SUPPORT](#)[ABOUT](#)

## \*Photo Essays

Friday, January 20, 2017 2:05 PM

# Photo Essay

A photo essay is a series of photographs that, when viewed together, tell a larger story. Photo essays may contain short captions, longer paragraphs, or no text at all.

## PROCESS

### PREPARATION- Chunk 1

- Watch Mentor Text-** to get to know the media  
The Love of Adventure  
A mini documentary Mr. H assistant directed while he was in High School  
<https://www.youtube.com/watch?v=TUbVSVkAlgg>
- Assign Group Roles-** this step helps group members define individual tasks and keeps the group moving as a team. Everyone is required to be actively participate in all aspects of the creative process but each member of the group must

# RATINGS

1(limited) - 5(most)

Time:

Teamwork:

## Discussion Board

[Link](#)

Ask The Expert- [LINK](#)

	9th Grade	12th Grade	Outcome
<p><b>Skill 1:</b> Decode a question (look at a question and understand what the skill is that you need to apply, what is the vocab, what do you need to do answer the question)</p>			<p>Evaluate a news source (what's credible and what's not) Interpretation of job leveling and job descriptions Filling out an application Don't get out smarted by police officers/lawyers</p>
<p><b>Skill 2:</b> Make a reasoned claim, based in the question, and use evidence to support the argument</p>			<p>Make convincing requests of people with authority Business proposal/investment opportunity Communicate your political beliefs</p>
<p><b>Skill 3:</b> Use effective search methods and reading strategies to find appropriate evidence.</p>			<p>Understand how to collect and use data to back up your thinking Sifting through information online, consuming social media Reading contracts, etc.</p>

GC

## PBL Key Elements

Authentic Problems  
Authentic Assessments  
Student Voice and Leadership  
Culturally Responsive Instruction  
Academic Discourse  
Collaboration  
Developing Expertise

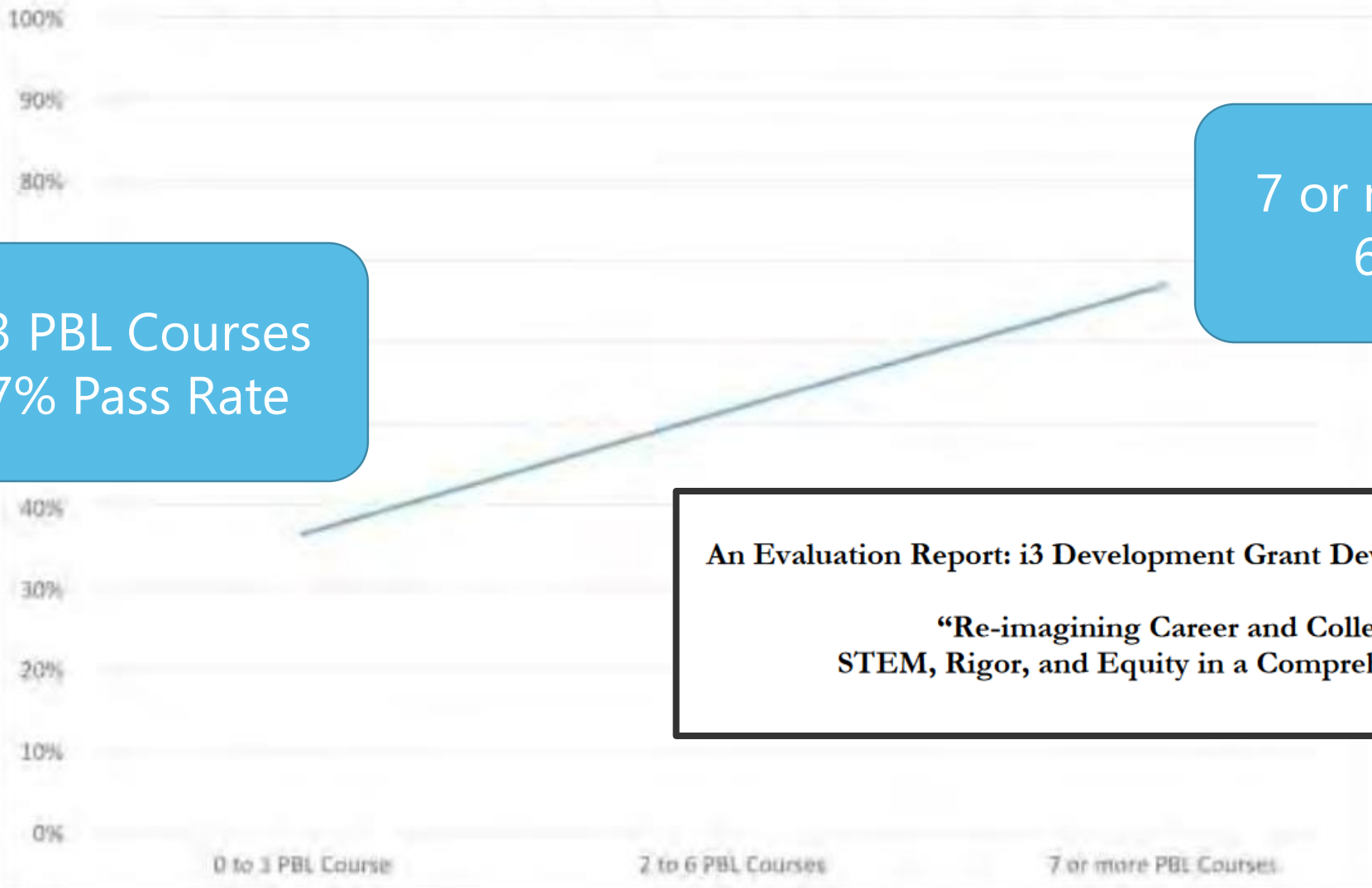
## NPDL Learning Progressions

Character  
Citizenship  
Collaboration  
Communication  
Creativity  
Critical Thinking

Overall, students in the **treatment** group passed a higher percentage of their AP tests despite a dramatic increase in student enrollment in AP courses.

<b>Statistically Significant Gains in Mean AP Scores by Course</b>	
<b>Course</b>	<b>Mean AP Score Difference</b>
AP Biology	1.62 to 1.97
AP Calculus (combined)	2.64 to 2.95
AP Chemistry	1.80 to 2.02
AP United States Government	2.38 to 2.66
AP Psychology	2.53 to 2.90
AP United States History	2.10 to 2.63
AP World History	2.49 to 2.63

Percent of Students Passing AP Tests by dose of PBL Exposure, Cohorts 2005 - 2011



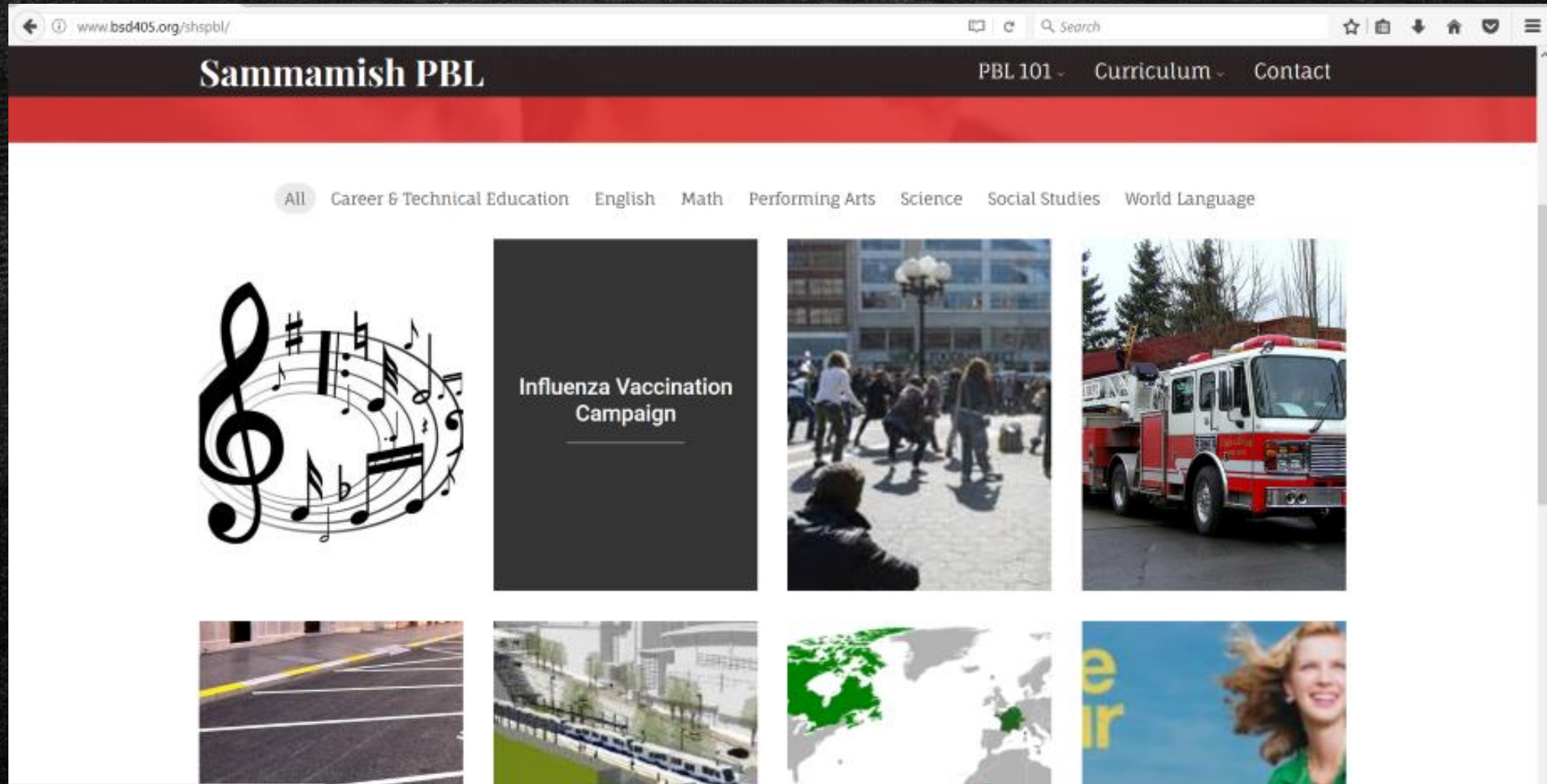
0-3 PBL Courses  
37% Pass Rate

7 or more PBL Courses  
67% Pass Rate

**An Evaluation Report: i3 Development Grant Dev07 – Sammamish High School**

**“Re-imagining Career and College Readiness:  
STEM, Rigor, and Equity in a Comprehensive High School”**

Challenge Cycles: [www.bsd405.org/shspbl](http://www.bsd405.org/shspbl)



The screenshot shows the website [www.bsd405.org/shspbl/](http://www.bsd405.org/shspbl/). The header features the title "Sammamish PBL" and navigation links for "PBL 101", "Curriculum", and "Contact". Below the header is a horizontal menu with categories: "All", "Career & Technical Education", "English", "Math", "Performing Arts", "Science", "Social Studies", and "World Language". The main content area displays a grid of challenge cycle thumbnails. The first row includes a treble clef with musical notes, a dark grey box with the text "Influenza Vaccination Campaign", a photo of a group of people in a public square, and a photo of a red and white fire truck. The second row shows a parking lot, a modern building with a blue sky, a green map of the world, and a photo of a smiling woman with blonde hair.

# Course Development – Lessons from AP HUG

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- Tools for collaboration: [Teacher Guide](#) [Student Materials](#)
- Reflection and Revision: [Continuous Improvement](#)
- Effective Norms: [Staying Together](#)
- Keeping What Works: [Mind Maps](#)

# Course Development – Lessons from AP Science

## Directory: Faculty

A | B | C | D | F | G | H | J | K | L | M | N | R | S | T | V | Z |

A

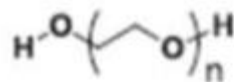


**Andersen, Niels H.** Professor  
(Biophysical, Bioorganic, and Medicinal Chemistry)  
Chemistry Building 204E  
206-543-7099  
[Email](#)

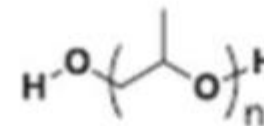
B



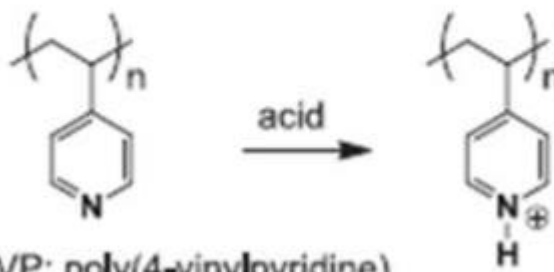
**Boydston, Andrew J. (AJ)** Associate Professor  
(Organic, Organometallic, and Polymer Chemistry)  
Chemistry Building 204C  
206-616-8195  
[Email](#)



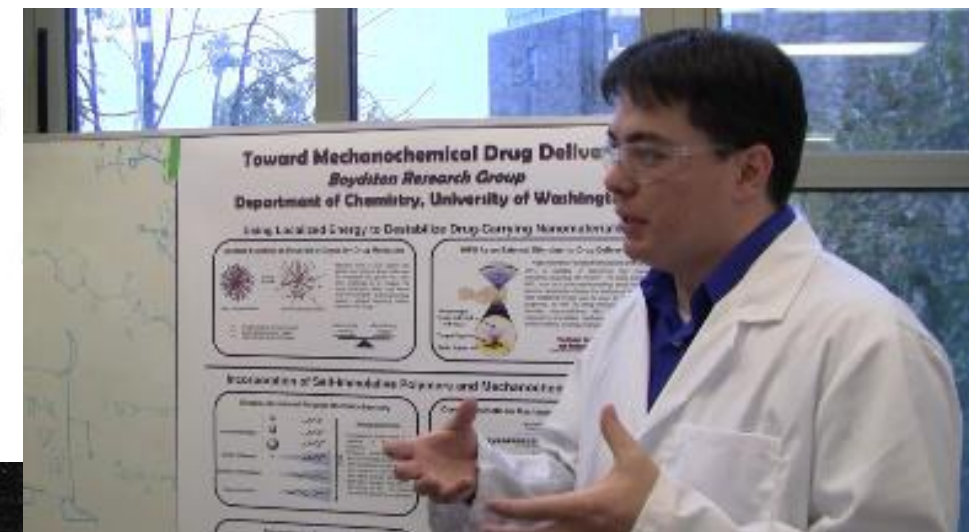
PEO/PEG: poly(ethylene oxide) aka poly(ethyleneglycol)  
hydrophilic  
unreactive



PPO: poly(propylene oxide)  
hydrophobic  
unreactive



P4VP: poly(4-vinylpyridine)  
hydrophobic at neutral and high pH  
hydrophilic at low pH



We need experts, we need problems

Authenticity

I know people do  
this outside of  
school but I could  
care less about ...

This is a real  
problem and this  
problem matters  
to me

Do I care?  
Does it matter?

Super fun but who  
does this?

Relevance

# Group 3 map for feedback

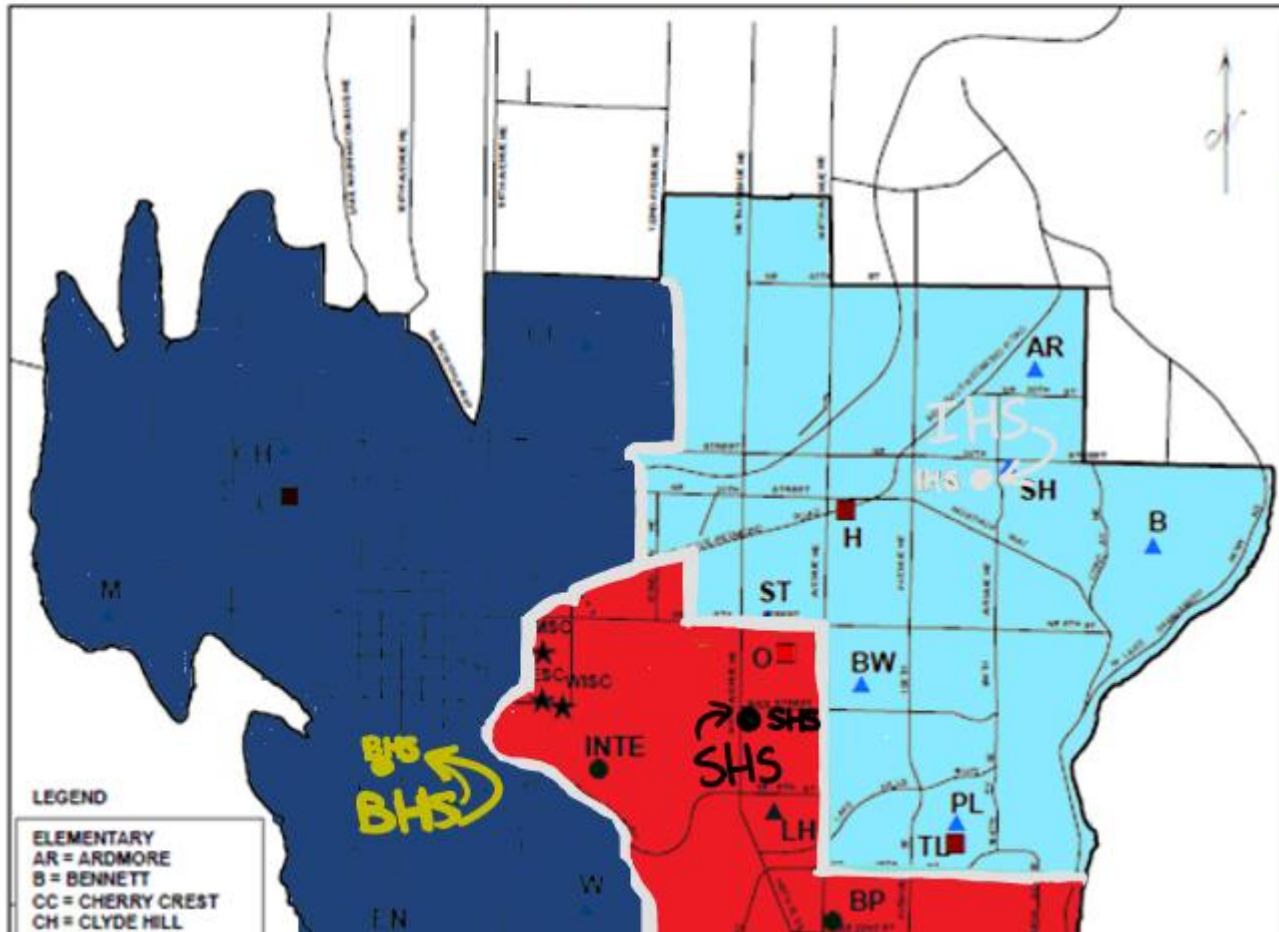
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district map

## BELLEVUE SCHOOL DISTRICT #405 ALL DISTRICT SCHOOL LOCATIONS



IHS 1443 students

BHS 1424 students

SHS 1421 students

NHS 1394 students

# Starting Point - Bellingham

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Paying attention to skill development

Learning together – developing expertise

One step at a time

# Questions

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- How do you make sense of AP enrollment and scores increasing with a shift to PBL?
- Where do you see meaningful collaboration happening in your building?