

# The AP Instructional Planning Report and Exam Readiness

June 6-8th, 2017

Raphael Curtis Director, State and District Partnerships



A blue-tinted photograph of three students in a classroom. A male student in the center is gesturing with his hands while speaking to two female students on either side of him. They are all looking towards the center. The background is a brick wall.

---

# College Board Mission

The College Board's mission is to connect students to college success and opportunity. We are a not-for-profit membership organization committed to excellence and equity in education.

Every student deserves the opportunity to prepare for, enroll in, and graduate from college. That is what drives us. That is the ethic we share with educators across the globe. People like you.

# The Impact

Research supporting the positive impact of AP courses and exams

## Claims We Can Make:

**Students who earn a 3 or higher on an AP Exam are more likely to earn higher first-year GPAs in college compared to non-AP students of similar ability.**

- Ackerman, P.L., Kanfer, R., & Calderwood, C. (2013)
- Hargrove, L., Godin, D., & Dodd, B.G. (2008)
- Mattern, K., Shaw, E. J., & Xiong, X. (2009)
- Shaw, E. J., Mattern, K. D., & Marini, J. P. (2012)

**Students who earn a 3 or higher on an AP Exam are more likely to earn higher fourth-year GPAs in college compared to non-AP students of similar ability.**

- Ackerman, P.L., Kanfer, R., & Calderwood, C. (2013)
- Hargrove, L., Godin, D., & Dodd, B.G. (2008)

**AP Exam scores are among the best predictors of college performance.**

- Ackerman, P.L., Kanfer, R., & Calderwood, C. (2013)
- Geiser & Santelices (2004)



---

## Objective & Purpose Statement

- This session is designed to provide a flexible framework that can be utilized by teachers, learning communities, instructional leaders and administrators. We will identify and utilize easily accessible reports, resources and tools with the purpose of informing instruction and empowering students in preparation for AP exams.

---

# Let's Begin: Phase 1

# AP Instructional Planning Report

## *Tips for Interpreting the Report Page*

## AP Instructional Planning Report (2015)

✓ Data Updated Aug 20, 2015, Report Run Sep 21, 2015

### Tips for interpreting this report

#### Page 2 - Score and quartile distributions

To compare your students' performance with the global population, we evenly divide the total number of students who took this exam globally into fourths, or quartiles, based on their performance on the multiple-choice and free-response sections of the exam. We then calculate the percentage of your students that fall within each fourth or quartile based on their performance on each section.

- These fourths do NOT correspond with the final AP score of 1, 2, 3, 4 or 5.
- On the three bar graphs on the left side of the page, your students are represented by the blue bars, and the global population is represented by the green bars. For example, the right-most blue bar shows the percentage of your students who fall into the highest fourth or top quartile.
- If your students' score distribution is comparable to the global population, then your students will group evenly (approximately) across the quartiles.
- Grouping of your students in the higher quartiles indicates higher performance than the global population; grouping of your students in the lower quartiles indicates performance below the global population.
- If you are viewing a report for Seminar, the charts will compare your students with the global population on the overall score, the performance tasks, and the end-of-course exam.

#### Page 3 - Detailed quartile distributions by section

The following appear in each table:

- **Number of Questions** - maximum possible score for that content area. The mean score for the content areas will be the average number of multiple-choice questions answered correctly. Also note that individual multiple-choice questions may test more than one content area, so the summation across all content areas may be greater than the number of multiple-choice questions on the exam.
- **Global Mean** - average scores on reportable areas for all AP students globally.\*
- **Group Mean** - average scores on reportable areas for your students.\*
- **Number of Students in Your Group** - for each content area or free response question, this represents the number of your students that fell into a specific fourth or quartile. The quartiles are derived from dividing the total student population equally into four parts based on their performance in each content area.
- **SP (Free Response table only)** - mapping of science practices (listed in the Multiple Choice table) to the question/problem on the Free Response that tests these skills. Only applicable for Biology, Chemistry, Physics 1, and Physics 2.
- **Max Possible Score (Free Response table only)** - maximum possible score for that free-response question.

\*Some AP Exams allow students to choose between two or more free response questions. Mean scores are not provided for those

# Page 1

## Score Distributions

The top bar graph and chart show how this group of students performed overall versus the global population.

The bottom two bar graphs and charts show student performance on multiple-choice and free-response sections.

[Print / Download Options](#)

### AP<sup>®</sup> Instructional Planning Report (2015)

✓ Data Updated Aug 20, 2015, Report Run Sep 21, 2015

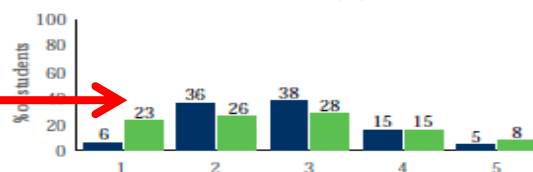
This subject-specific report compares your students' performance on specific topics in this AP Exam with the performance of all students on these same topics, helping teachers target areas for increased attention and focus in the curriculum. Other uses of the report, such as teacher evaluation or institutional ranking, are not warranted. Students who tested on late-testing dates are not included in this report.

High School (000000) - Chemistry

■ Your Group Total Students: 137

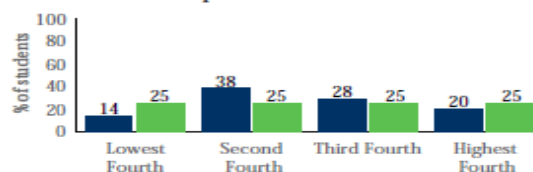
■ Global Total Students: 132,306

Overall Score Distributions



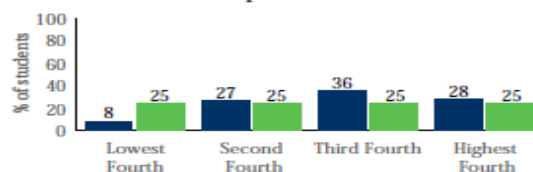
Overall Score Distributions	1	2	3	4	5
Number of Students in Your Group	8	50	52	20	7
% Students in Your Group	5.8	36.5	38.0	14.6	5.1
% Students Globally	22.8	25.5	28.0	15.3	8.4

Multiple-Choice Section



Multiple-Choice Section	Lowest Fourth	Second Fourth	Third Fourth	Highest Fourth
Number of Students in Your Group	19	52	38	28
% Students in Your Group	13.9	38.0	27.7	20.4
% Students Globally	25.0	25.0	25.0	25.0

Free-Response Section



Free-Response Section	Lowest Fourth	Second Fourth	Third Fourth	Highest Fourth
Number of Students in Your Group	11	37	50	39
% Students in Your Group	8.0	27.0	36.5	28.5
% Students Globally	25.0	25.0	25.0	25.0

# Page 2

## Content Area: Detailed Report

Provides a detailed view of students' performance on specific content categories on multiple-choice & free-response sections

### AP<sup>®</sup> Instructional Planning Report (2015)

✓ Data Updated Aug 20, 2015, Report Run Sep 21, 2015

High School (000000) - Chemistry

#### Performance on Multiple-Choice Section (Maximum Possible Score = 50)

Content Area	Number of Questions	Global Mean	Group Mean	Number of Students in Your Group			
				Lowest Fourth	Second Fourth	Third Fourth	Highest Fourth
BI1: ATOMIC STRUCTURE	8	4	4	39	38	24	36
BI2: STRUCTURE AND PROPERTY RELATIONS	15	8	8	14	31	45	47
BI3: TRANSFORMATION	4	**	**	**	**	**	**
BI4: KINETICS	5	3	3	16	35	42	44
BI5: THERMODYNAMICS	9	5	5	25	37	32	43
BI6: EQUILIBRIUM	15	7	7	23	41	37	36
SP1: USES REPRESENTATIONS AND MODELS TO COMMUNICATE SCIENTIFIC PHENOMENA AND SOLVE PROBLEMS	14	7	7	16	37	50	34
SP2: USES MATHEMATICS APPROPRIATELY	13	6	6	26	45	31	35
SP3: ENGAGES IN SCIENTIFIC EXPLANATIONS AND THEORIES	0	**	**	**	**	**	**
SP4: PLANS AND IMPLEMENTS DATA COLLECTION STRATEGIES	10	5	5	15	48	40	34
SP5: PERFORMS DATA ANALYSIS AND EVALUATION OF EVIDENCE	11	6	6	21	48	27	41
SP6: WORKS WITH SCIENTIFIC EXPLANATIONS AND THEORIES	24	13	12	20	40	51	26
SP7: CONNECTS AND RELATES KNOWLEDGE ACROSS SCALES, CONCEPTS, REPRESENTATIONS, AND DOMAINS.	10	5	4	21	49	31	36
<b>Multiple-Choice Summary</b>		26	25	19	52	38	28

#### Performance on Free-Response Section (Maximum Possible Score = 50)

Question/Problem	SP	Max Possible Score	Global Mean	Group Mean	Number of Students in Your Group			
					Lowest Fourth	Second Fourth	Third Fourth	Highest Fourth
ELECTROCHEMISTRY: METAL-AIR CELL	1, 2, 4, 5, 6, 7	10	3.8	4.5	2	43	31	61
STOICHIOMETRY/LEWIS DIAGRAM: ETHANOL DEHYDRATION	1, 2, 5, 6	10	3.9	4.0	5	56	41	35
TITRATION: SORBATE	1, 2, 4, 5, 6, 7	10	3.7	4.9	14	13	47	63
KSP: CALCIUM HYDROXIDE	1, 2, 5, 6, 7	4	1.4	1.5	23	0	51	63
KINETICS: BLEACH AND FOOD COLORING	5, 6	4	2.4	2.5	9	22	34	72
BONDING: MELTING POINTS OF SALT	1, 2, 3, 5, 6, 7	4	2.0	2.4	5	21	47	64
THERMODYNAMICS: ALUMINUM	2, 7	4	1.2	1.5	0	43	31	63
<b>Free-Response Summary</b>			20.0	23.1	11	37	50	39


## Indicates that the distribution is not displayed because more than half of the total AP global group earned the same score.

\*\* Indicates that the distribution is not displayed because there were fewer than five questions in the category.



# Self Analysis Worksheet

Review completed self analysis worksheets



## AP Instructional Planning Report

Self-Analysis

Complete this chart using the two graphs on the back of your AP Instructional Planning report.

What does my APIPR tell me?	Multiple Choice					Free Response				
	Content Area:					Question/ Problem:				
	Number of questions:					Max Poss. Points:				
	Global Mean:					Global Mean:				
	Group Mean:					Group Mean:				
	+ / -					+ / -				
	<u>Analysis</u>	For which content areas above do you have a "+" score (meaning the group scored higher than the global)? What about areas with a "-" score?		How have I been addressing this content area in my class?		<u>Analysis</u>	For which content areas above do you have a "+" score (meaning the group scored higher than the global)? What about areas with a "-" score?		How have I been addressing this problem or question in my class?	
	Success					Success				
	Opp. for growth					Opp. for growth				

*Now that you've compiled the data from your APIPR, thought about your strengths and weaknesses indicated from the data, and identified how you tackle the topic in your class, it's time to collaborate with your colleagues!*

*You've already identified your best practices (your successes) and your weak spots (your opps. for growth). Use this new, data-supported information to create vertical and horizontal teams within your school or district.*

---

# Resources

AP Central is the hub of many, if not all, College Board endorsed AP tools and resources.

- Free Response Samples and Commentary
- [AP Teacher Mentoring](#)
- [AP Insight](#)
- Teaching and Assessing Modules
- Davidson Next – Free Online PD
- AP Teacher Community
- Khan Academy
- [2017 AP Annual](#)
- Advances in AP
- Practice Exams

# Phase II:

*Using the Official Practice Exam to  
Inform Instruction and Exam  
Readiness*

# AP Course Audit

## Secured Documents

- Log into your AP Course Audit accounts
- Select the “secured documents” tab in the left column
- Download the most recent practice exam

**Step 1:** Select “Secure Documents” from the Resources box on the left hand side of the Course Status page.

The screenshot displays the AP Course Audit Teacher interface. On the left sidebar, the 'Resources' menu is expanded, and 'Secure Documents' is highlighted with a red arrow. The main content area shows the 'Course Status' for 'CB-AI Operations S&L'. The status is 'Initial Course Submission Not Complete' and 'Pending School Administrator Approval'. Below this, there are links to 'Submit Syllabus' for Art History, Biology, Calculus AB, and Calculus BC. The Chemistry section has a link to 'Complete Course Audit Form'.

**AP® Course Audit**

HELP | HOME

AP COURSE LEDGER | SIGN OUT

**Teacher**

**Course Status** Click here to select academic year 2015 - 2016

**CB-AI Operations S&L**  
11955 Democracy Drive  
Reston, VA 201905662

School/District Administrators:  
Yearseven Admin, Codetest Apca, Kirsten Aspengren, Kirsten Aspengren, Dba Training Manual Epic, Connie Etchison, Connie Etchison-Bell, Kelli Fortier, joshua garcia, Joshua Garcia, Greg Hughes, Access Iblity, Jody Kirtner, Johnny Midnight, Neil Moyse, Mynew Name, Tris O'Shaughnessy, Testmultiroles Palmer, Jeff Sharp, John Sharp, Trevor Sheldrake, Jaime Weatherhead, Newtestadmin Wilson

**Art History**  
Initial Course Submission Not Complete  
Pending School Administrator Approval  
[Submit Syllabus](#)

**Biology**  
Initial Course Submission Not Complete  
Pending School Administrator Approval  
[Submit Syllabus](#)

**Calculus AB**  
Initial Course Submission Not Complete  
Pending School Administrator Approval  
[Submit Syllabus](#)

**Calculus BC**  
Initial Course Submission Not Complete  
Pending School Administrator Approval  
[Submit Syllabus](#)

**Chemistry**  
Initial Course Submission Not Complete  
[Complete Course Audit Form](#)

**Resources**

- My Syllabi
- Resources to Prepare Your Syllabus
- Secure Documents**
- Teacher Community
- Become an AP Reader



# Official AP Practice Exam

AP<sup>®</sup> Course Audit

HELP | HOME

Communication Center

Roles

Teacher

Profile

Alesha Fox

afox@collegeboard.org

Update My Profile

Resources

My Syllabi

Resources to Prepare Your Syllabus

Secure Documents

Teacher Community

Become an AP Reader

Secure Documents

Please click on the green subject(s) button below to view available resources which could include: Practice Exams, Student Samples, etc.

New

Art History

New

AP Art History Practice Exam and Notes

New

AP Art History Student Samples

New

Biology

New

Calculus AB

New

Calculus BC

New

Chemistry

New

Computer Science A

New

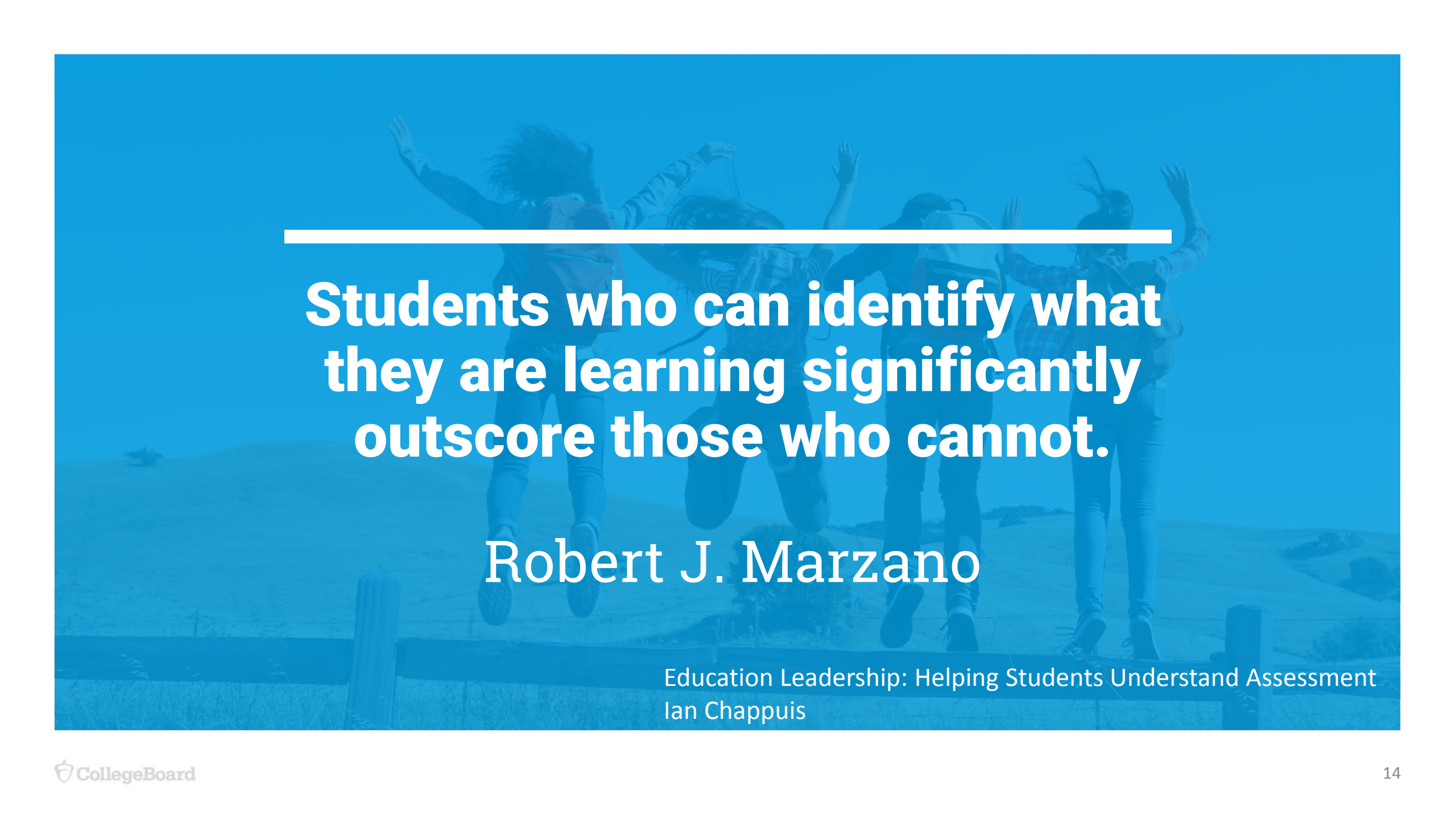
French Language and Culture

New

U.S. Government and Politics

CollegeBoard

AP COURSE LEDGER | SIGN OUT

A blue-tinted photograph of four students jumping over a wooden fence in a grassy field. The students are in mid-air, with their arms and legs spread out, suggesting a moment of triumph or celebration. The background shows rolling hills under a clear sky.

---

**Students who can identify what  
they are learning significantly  
outscore those who cannot.**

**Robert J. Marzano**

Education Leadership: Helping Students Understand Assessment  
Ian Chappuis

---

# Utilizing the Practice Exam to Inform Instruction

# Let's Unpack:

## Worksheet Walkthrough

### Items needed:

- Official AP Practice Exam
- 2016 AP Instructional Planning Report (APIPR)
- APIPR Self- Analysis Worksheet
- Your course syllabus
- Textbook

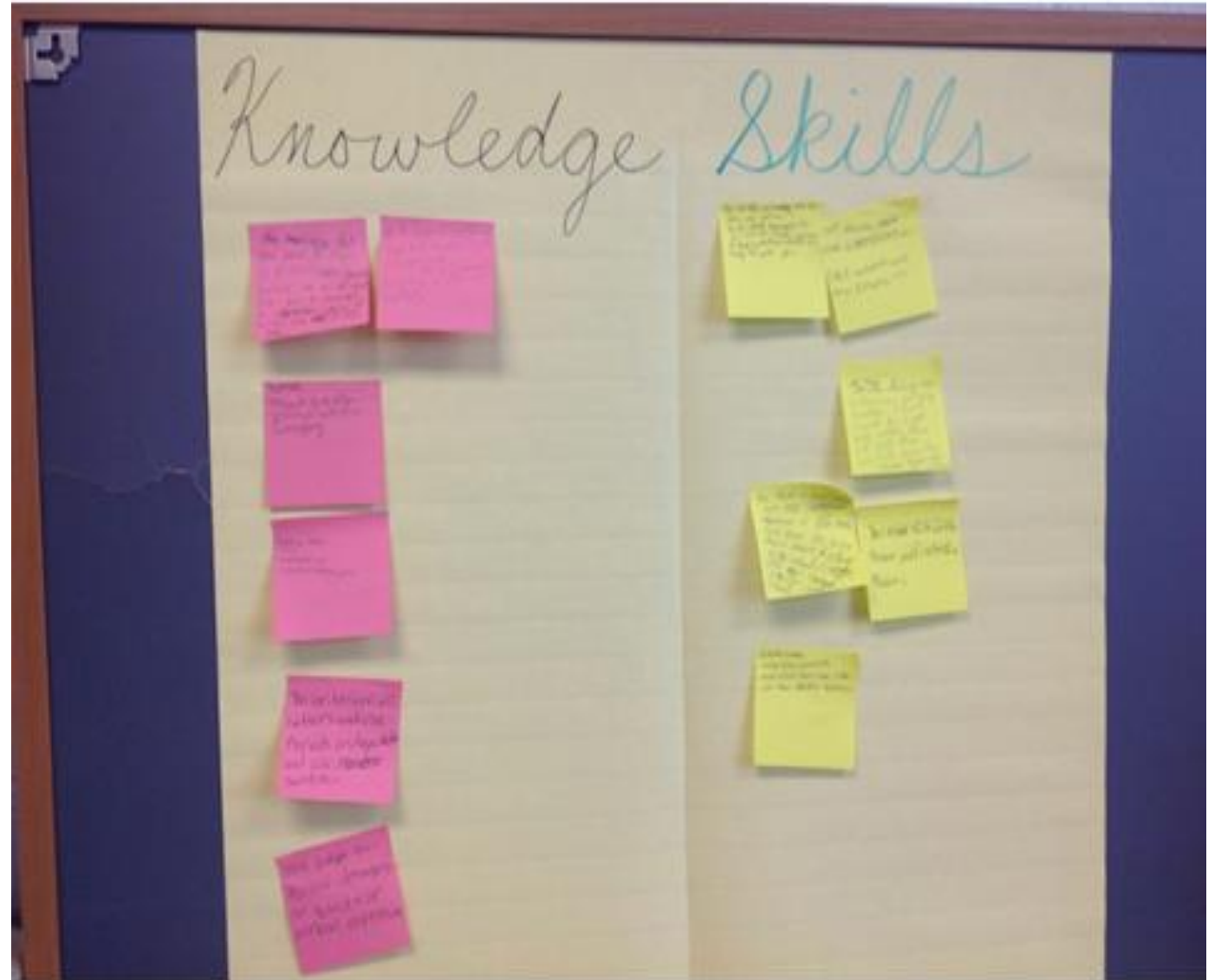
### Unpacking the AP Exam Worksheet

Items needed:				
<ul style="list-style-type: none"><li>• Official Practice Exam</li><li>• 2016 AP Instructional Planning Report (APIPR)</li><li>• APIPR Self-Analysis Worksheet</li><li>• Course Syllabus</li></ul>				
Unpacking the AP Exam	Test Item	Content Area/ Knowledge	Applicable Skills	Sequence and Time

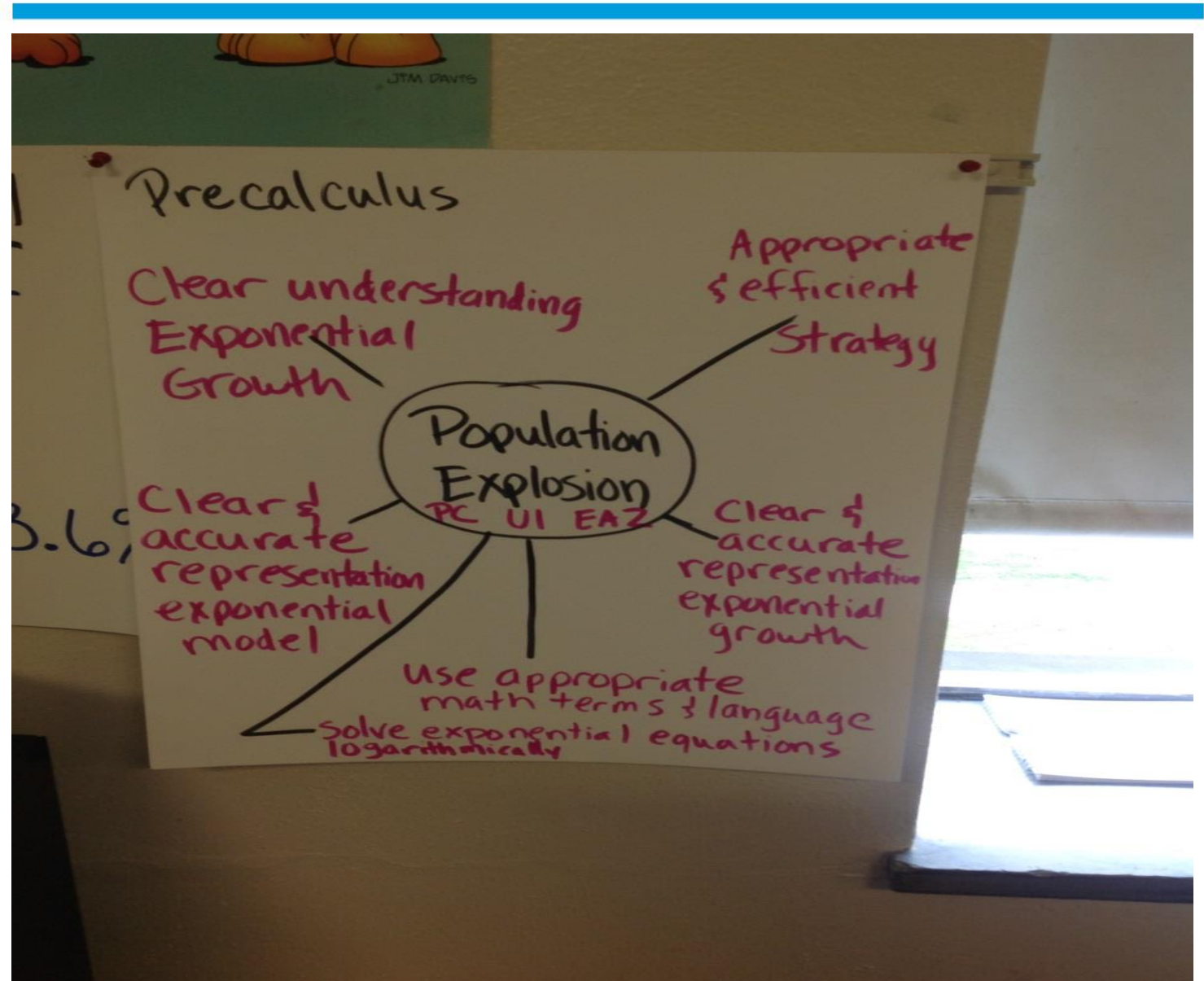


# Step 1: Plan

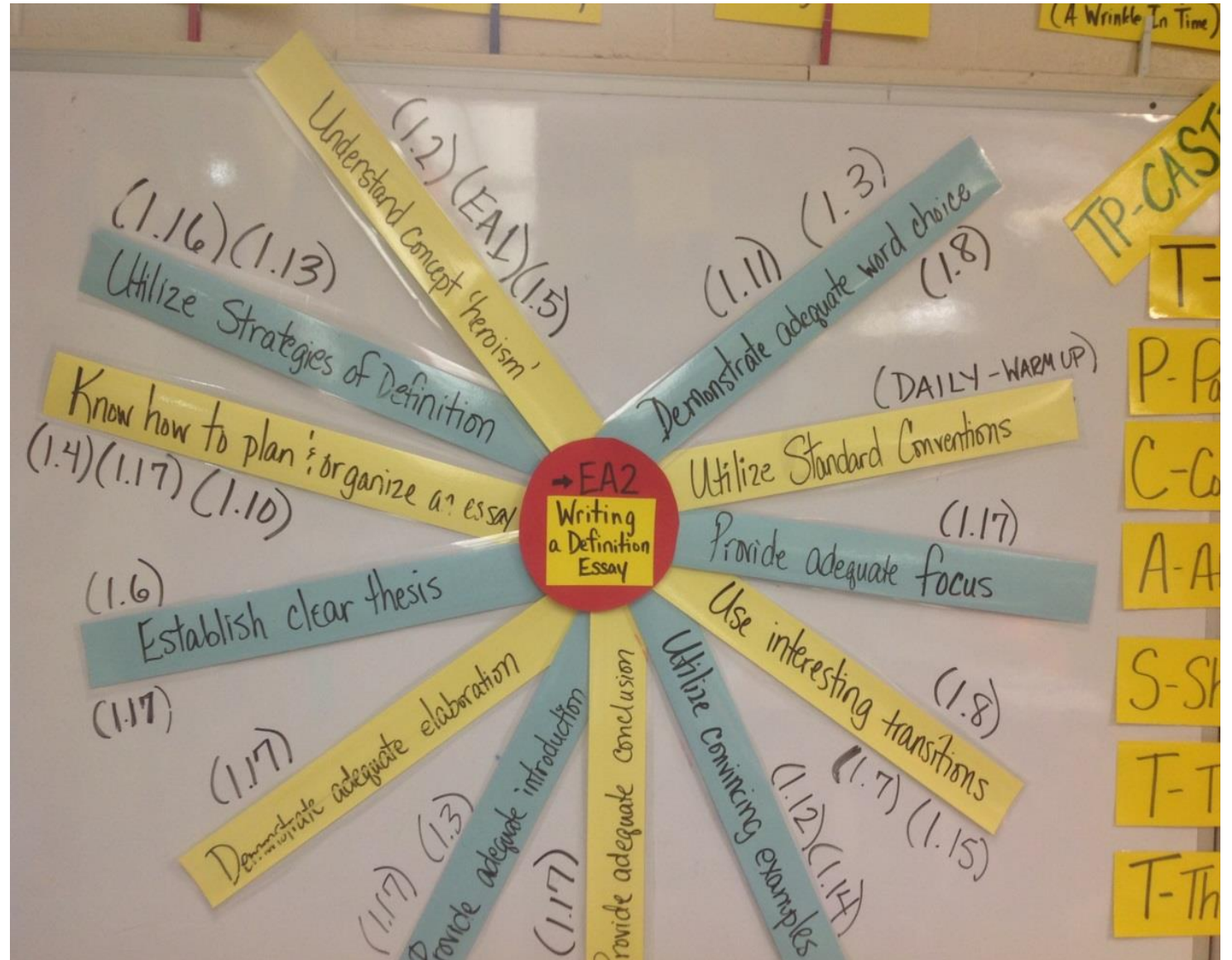
- Use page 2 of the APIPR to complete the knowledge column of the Unpacking the Exam Worksheet
- Now use your syllabus and text to list the skills necessary for success
- Match test items
- Finally, using your syllabus and text identify the “when” and “where”



## Step 2: Collaborate and Plot Your Knowledge Map



# Finally: Be Creative!!





# Yes...You too Math Teachers!





# Best Practices

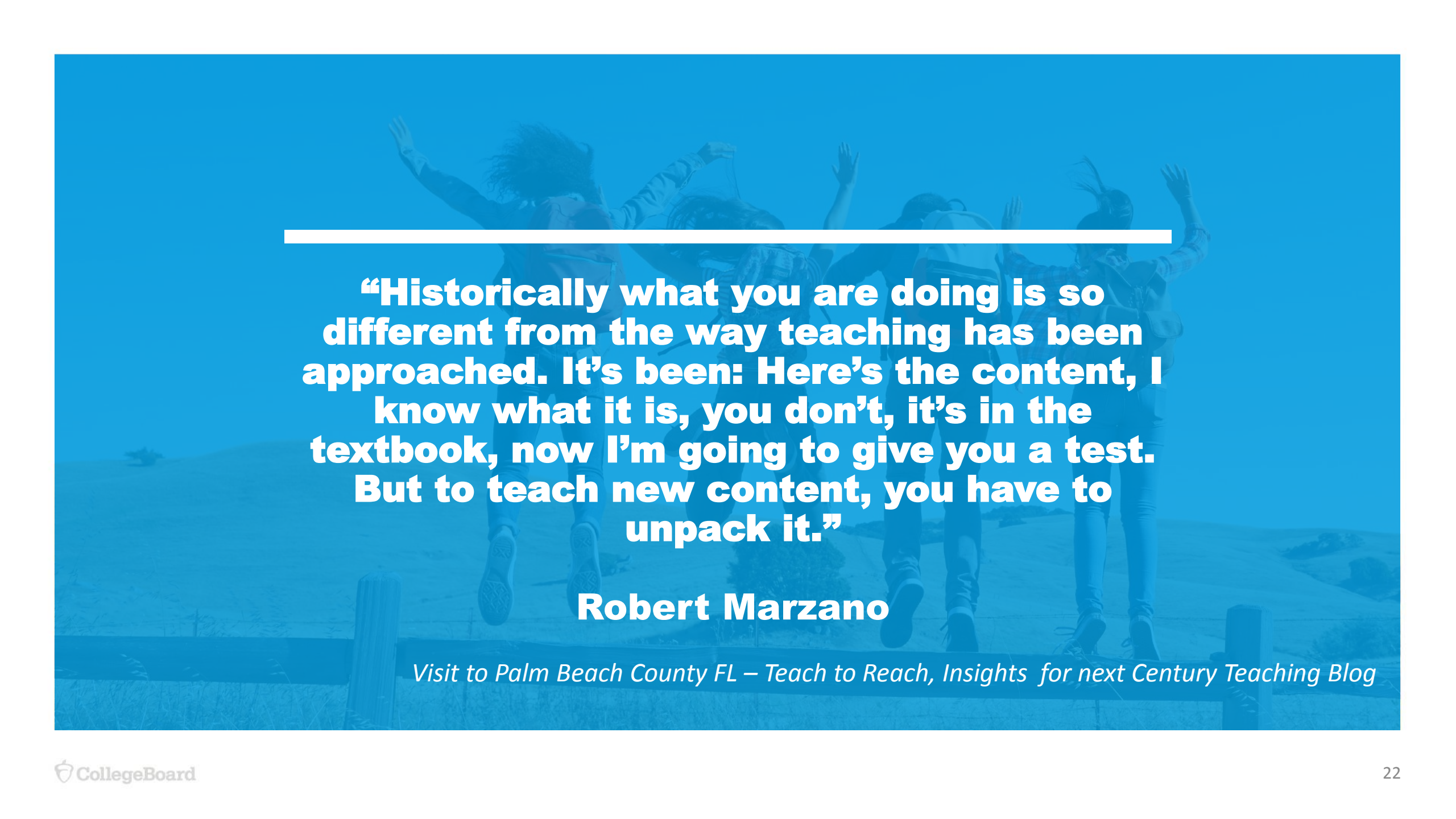
## Your AP<sup>®</sup> Exam Matters

 Show colleges that you're prepared

 Save money on tuition

 Get a true college experience

- Schedule mock exam
- Post and explain knowledge map
- Flip the classroom
- Rally support and excitement i.e. parent letters, T-shirts, weekend and after hours study groups etc.
- Utilize Khan Academy and AP Central resources
- Offer peer and teacher led tutoring sessions
- Utilize the AP Teacher Community for fresh ideas



---

**“Historically what you are doing is so different from the way teaching has been approached. It’s been: Here’s the content, I know what it is, you don’t, it’s in the textbook, now I’m going to give you a test. But to teach new content, you have to unpack it.”**

**Robert Marzano**

*Visit to Palm Beach County FL – Teach to Reach, Insights for next Century Teaching Blog*

---

# Thank You!