Student Achievement Through Performance-Based Learning

Presenters: Amy Elstone, Principal
Sarah Peace, Director of Studies

Mercy Academy
Louisville, Kentucky

Where do I begin?

- Understanding by Design
- Learning for Understanding: Acquire-Transfer-Make Meaning
- Performance-Based Assessments
- Achievement Results
- Alignment to AdvancED Standards and Indicators

What Is Understanding by Design?

Acquire

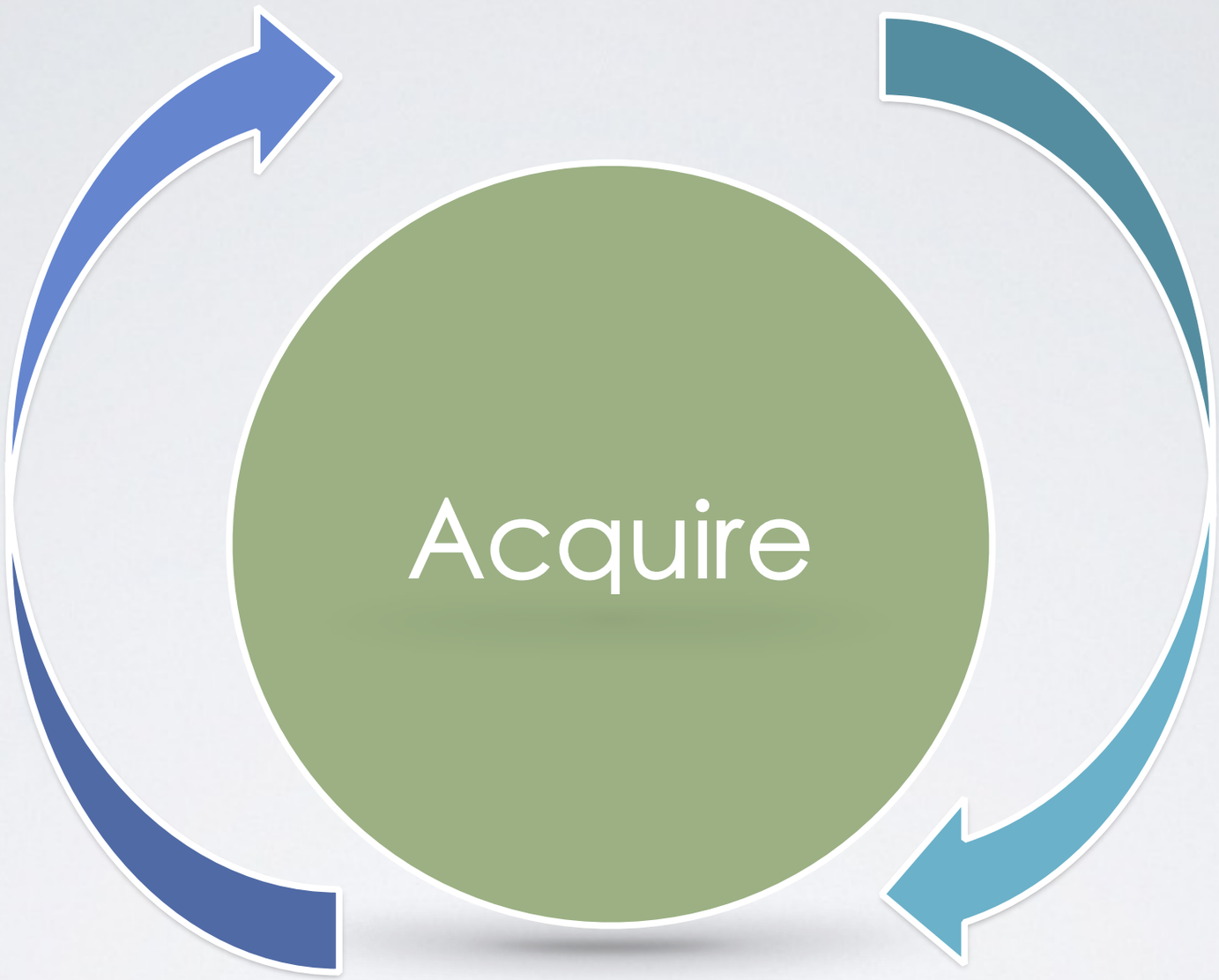
Make Meaning

Learning for Understanding

Transfer

Receive, Encounter

Practice,
Reinforce,
& Extend



Try Out

Refine/
Relearn,
as needed

Get Feedback

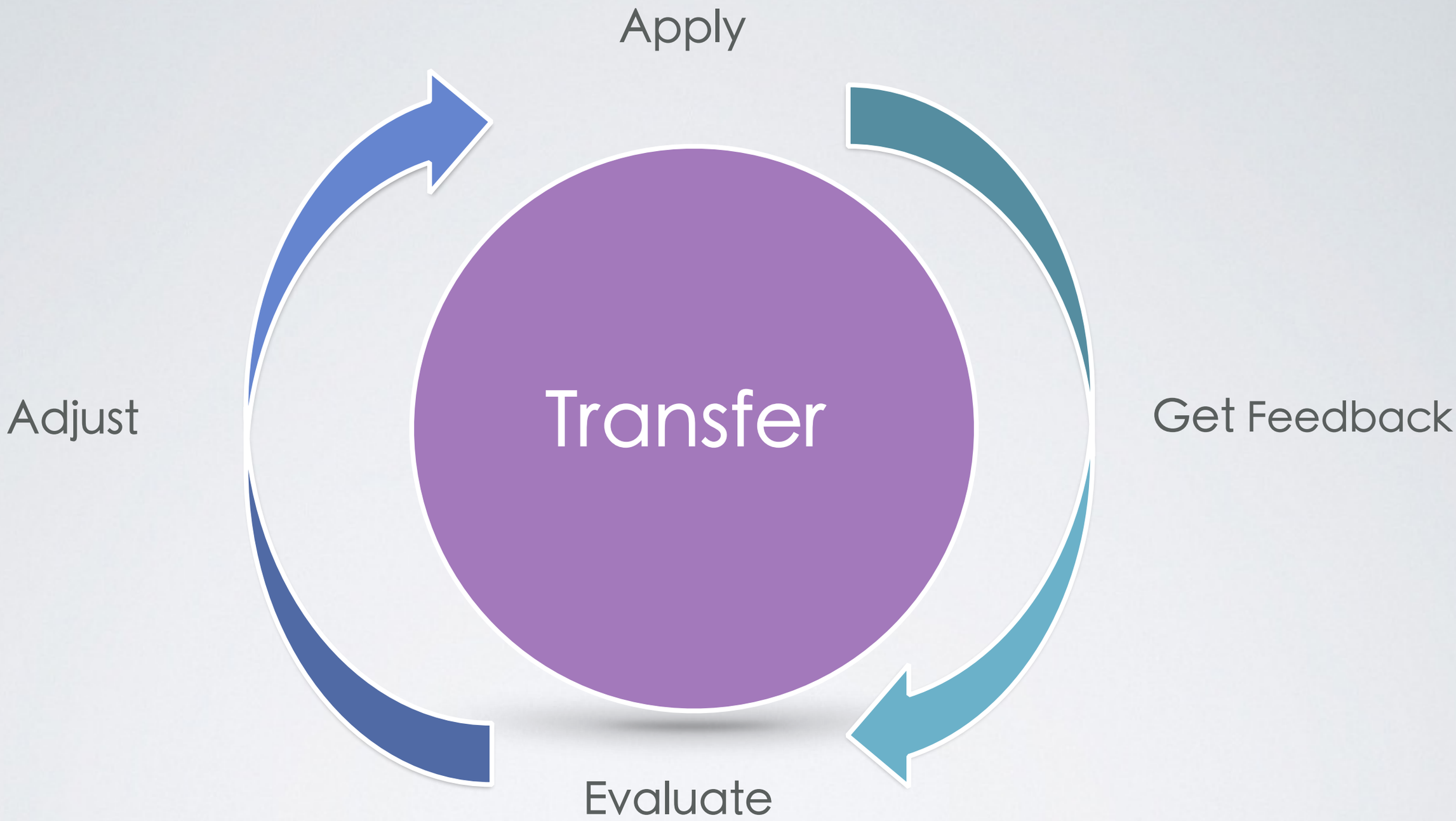
Goal: Internalization and broadening of knowledge and skill; initial apprehension and surface understanding.

Probing and Analysis Evoked (Current Understanding Is Challenged)

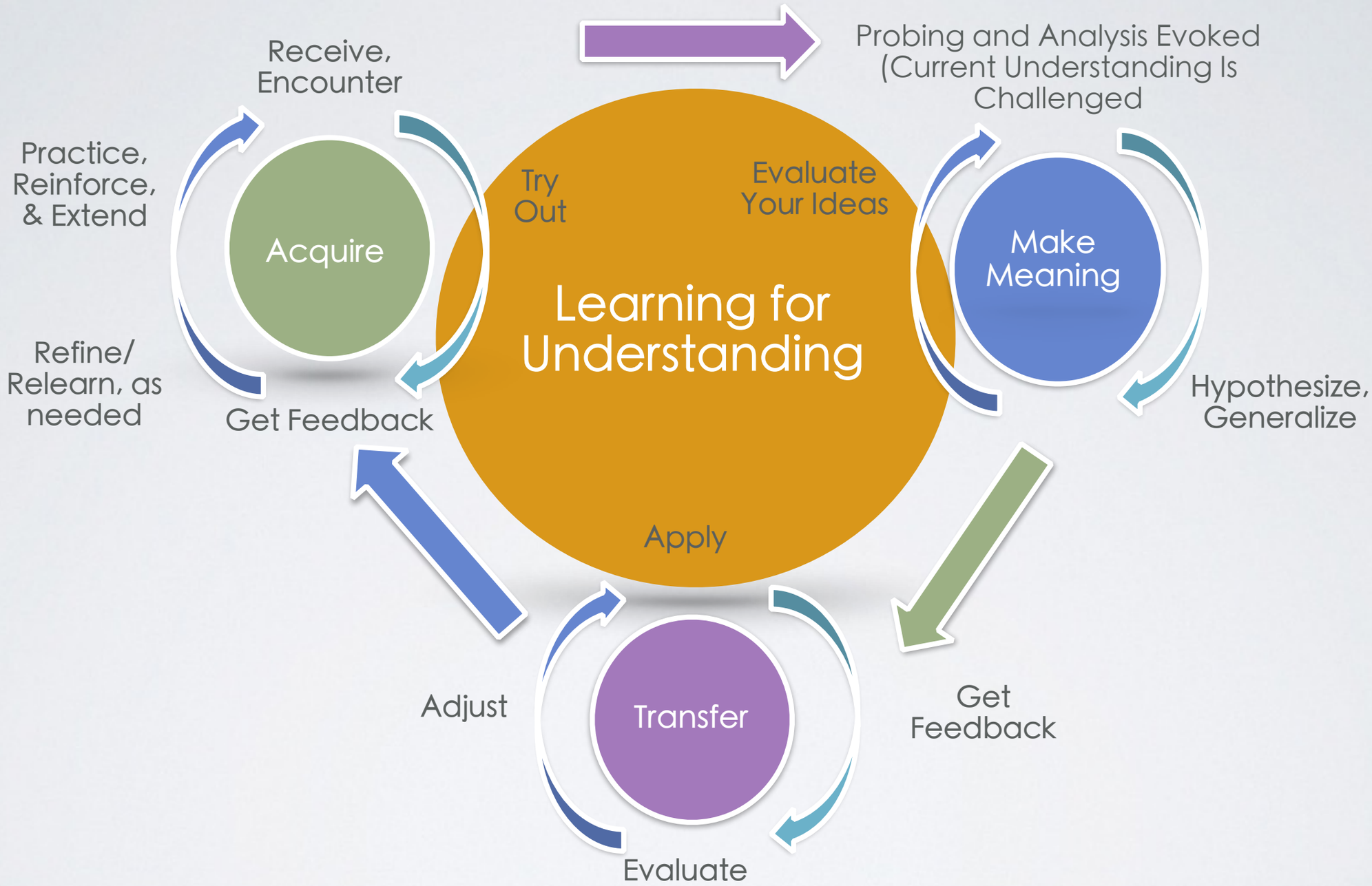
Goal: Learner-made connections, deepened understanding by developing and "testing" ideas, given what was acquired and experienced.

Challenge current understandings in various ways…

1. Provide additional information that requires a student to extend the tentative understanding (broaden and confirm)
2. Provide conflicting information (contradiction, requiring re-thinking)
3. Propose an alternative understanding (challenge, requiring consideration of the same problem in a new light; might ultimately confirm or contradict)
4. Add complexity to the issue (deepen, likely confirming some pieces and contradicting others)
5. Compare this understanding to previous understandings about related issues (connect and synthesize)
6. Provide a problem that cannot be solved with a naïve understanding (contradict and create the need for an alternative understanding)
7. Require a defense (student examines underpinnings of understanding, considering evidence)
8. Introduce a different perspective that must be accounted for by the student
9. Test the understanding against a new problem (may confirm, contradict, or require adjustment)



Goal: Autonomy & fluency of performance in increasingly complex & novel situations, on worthy tasks.


Receive,
Encounter
Probing and Analysis Evoked
(Current Understanding Is
Challenged
Practice,
Reinforce,
& Extend
Acquire
Try
Out
Evaluate
Your Ideas
Make
Meaning
Learning for
Understanding
Refine/
Relearn, as
needed
Get Feedback
Hypothesize,
Generalize
Apply
Adjust
Transfer
Get
Feedback
Evaluate

Acquire

Make Meaning

Transfer

Don't presume a fixed sequence!

In fact, most units should begin with meaning-making.

Math Example

- When *isn't* "the shortest distance" a straight line?

M Discuss: Real world vs. Euchild's world - in the 3D physical world, what assumptions (axioms) ***must*** differ? **(Meaning)**

- Students respond to some prompts e.g.:
  - In our school, the shortest distance between any classroom and the main door is…
  - In flying long distances, the shortest distance between cities in two different countries is…

A Teacher describes spherical and "taxicab" geometry as alternatives, and students read the chapter on other geometries from the textbook **(Acquire)**

M KWL: What do you want to/need to know about this topic? **(Meaning)**

T Write a guidebook for the geometry of your school **(Transfer)**

M Evaluate what we learned and what questions we still have about the text and the issue - KWLQ **(Meaning)**

These learner questions need to be evoked "by design," not by the teacher:

- What is going on here?
- What is this about?
- What should I make of this?
- What is problematic here?
- What is causing that?
- What are the key facts?
- What is the evidence?
- What questions does this raise?
- What is significant here?

These learner questions need to become autonomous...

- What is going on here?
- What is this about?
- What should I make of this?
- What is problematic here?
- What is causing that?
- What are the key facts?
- What is the evidence?
- What questions does this raise?
- What is significant here?

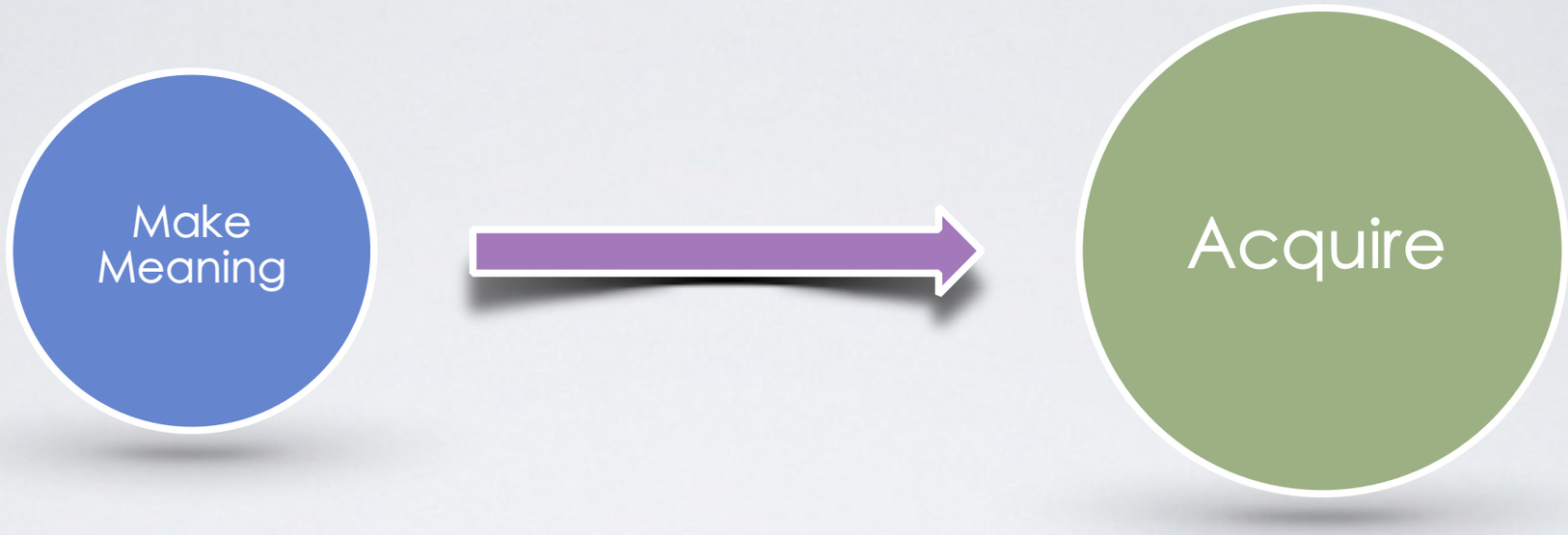
Transfer Stages:

- BEGINNING: Highly scaffolded and teacher prompted
- LATER: Some scaffold, limited teacher prompting
- BY THE END: No scaffold or teacher prompt; student must activate and employ the learning on their own from a repertoire

Example: "Tall Tales" and Storytelling

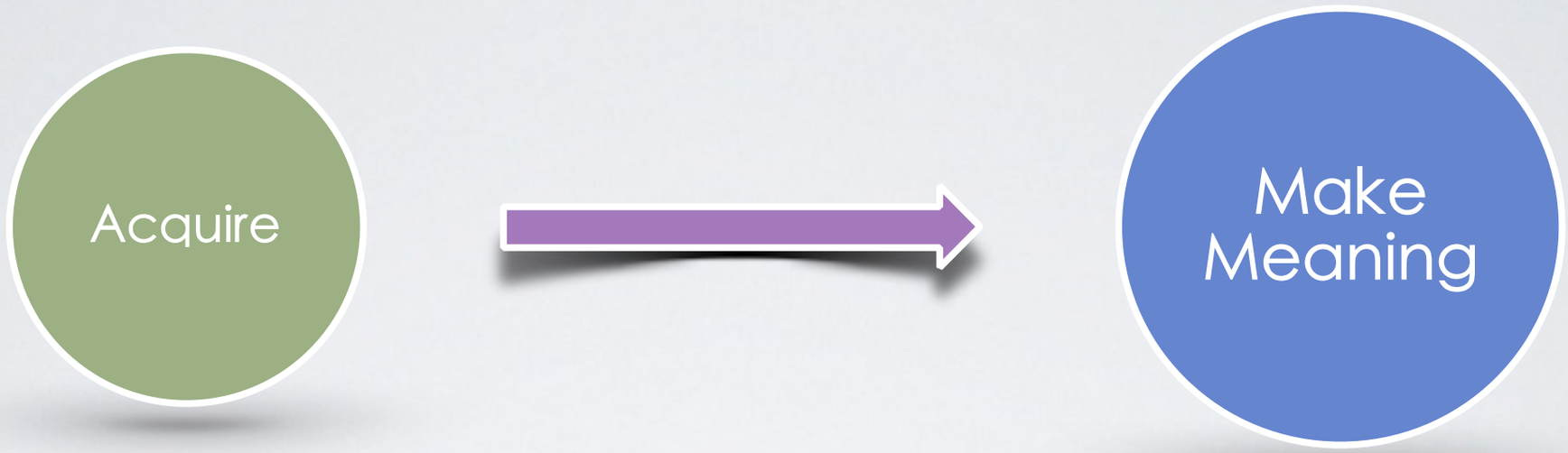
- When is it “exaggeration” and when is it “lying” in telling a story? How much liberty does a storyteller have to stretch the truth?
- Ask students to offer their ideas in response to the questions, in light of the story read in class. What “tall tales” have they experienced?
- Pose essential questions for unit.

Example: "Tall Tales" and Storytelling



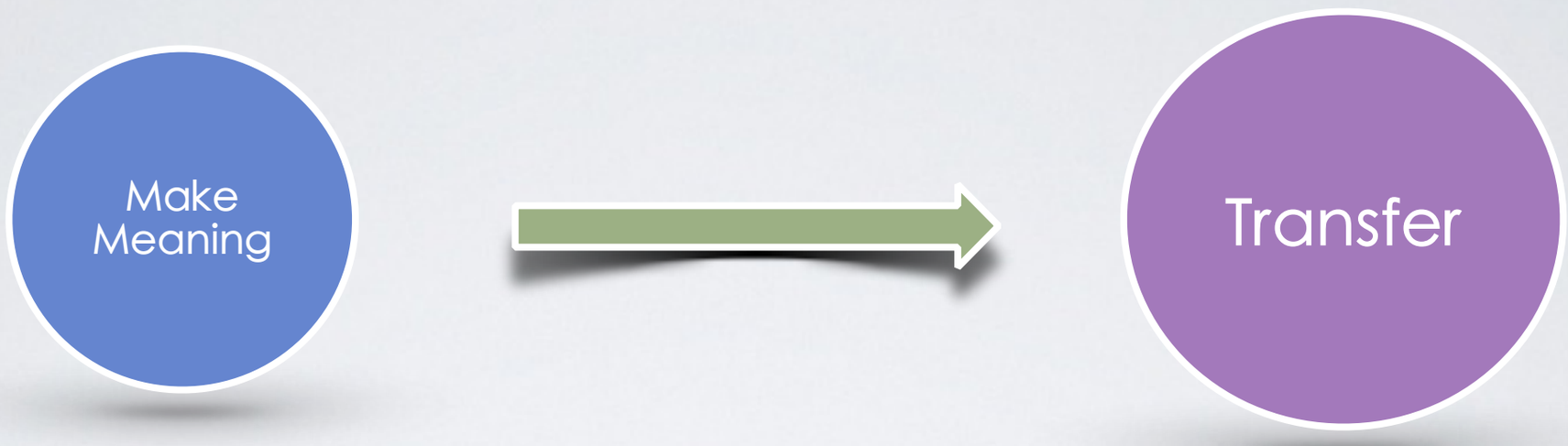
- Then, acquire to grasp the plot of the story. Have students:
  - Identify plot
  - Use the text hints/scaffolds
  - Summarize the story in their own words
  - Teach background knowledge, as needed

Example: "Tall Tales" and Storytelling



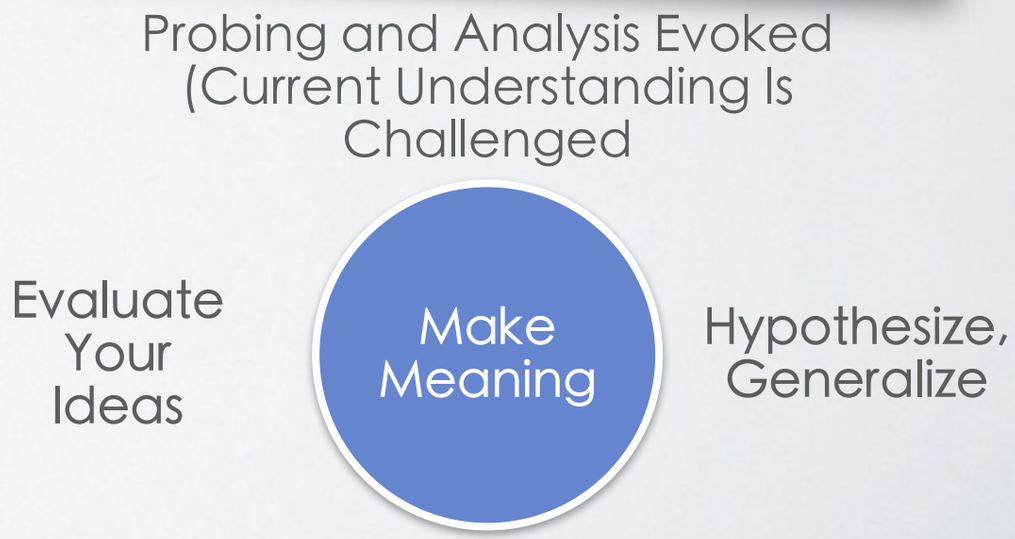
- Use questioning sheets to link the story to the essential question
- Meaning is further enhanced and understanding deepened by reading 1-2 more stories that offer other points of view on the same question and/or that suggest different answers than the ones tentatively reached thus far
- Follow-up the new readings with the questions: Have you changed your mind? If so, why? If not, why not?

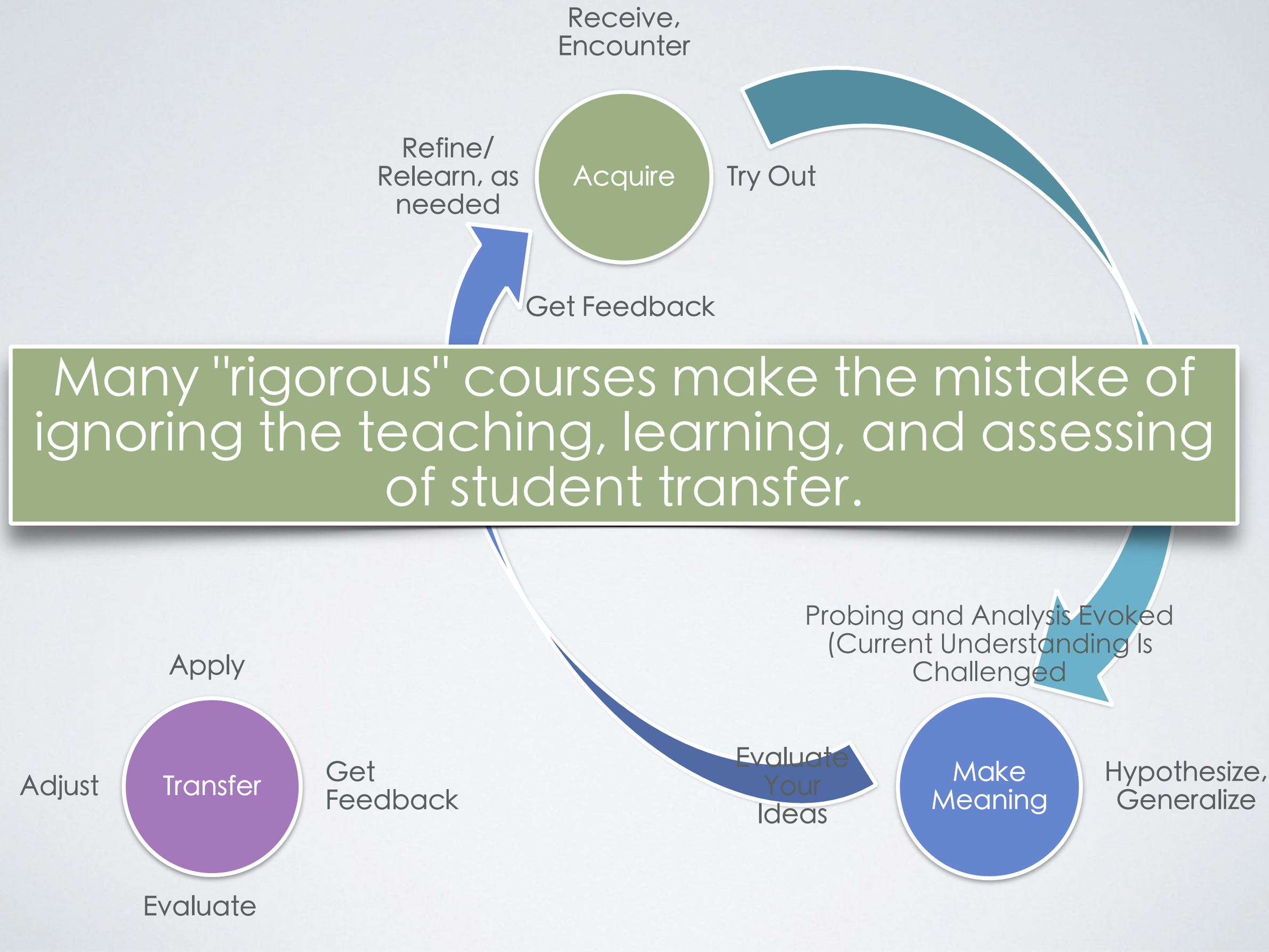
Example: "Tall Tales" and Storytelling

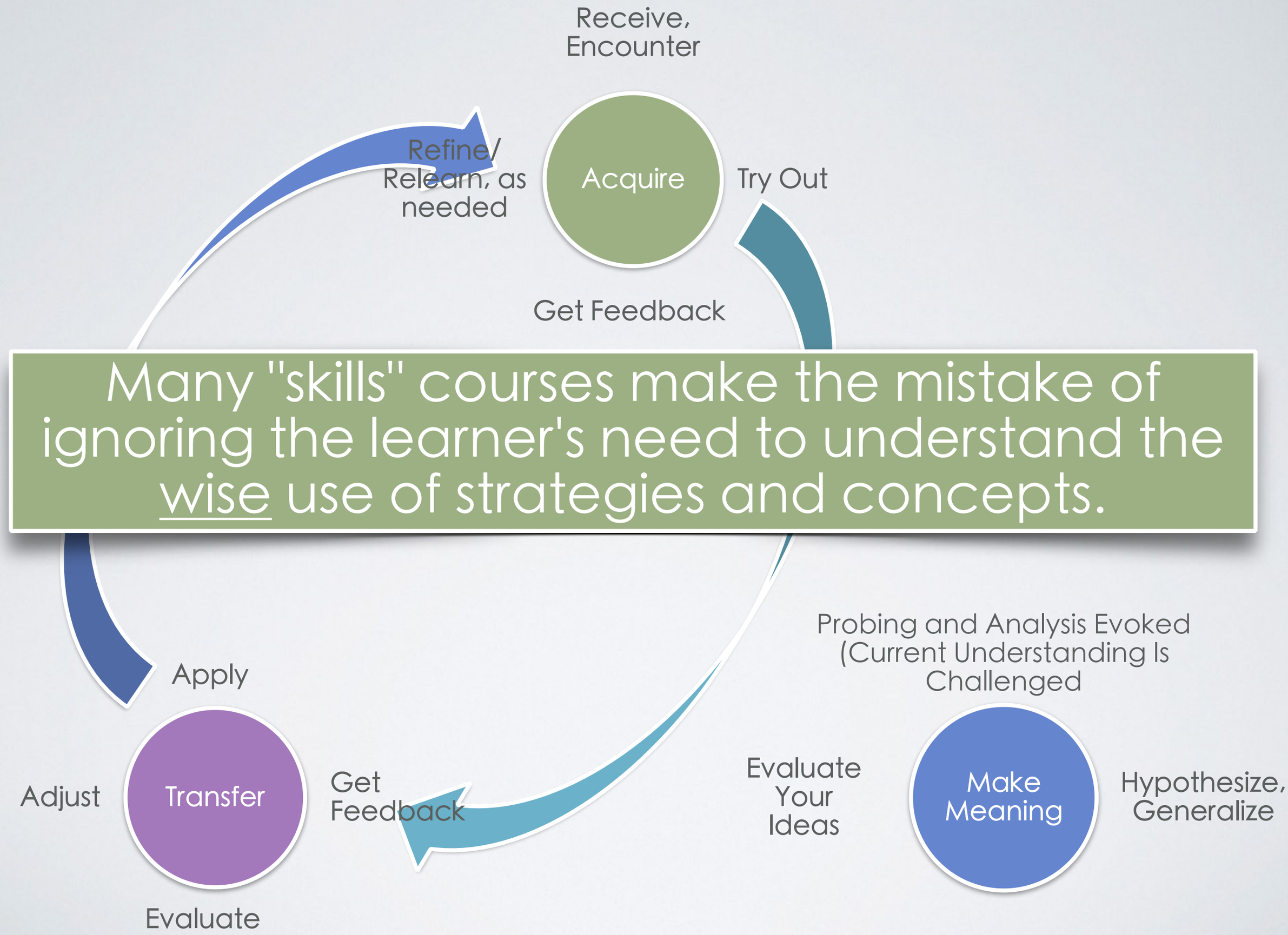


- Students will create a story with the same exaggeration in it
- Peer/teacher feedback and adjust as necessary
- Listen to other's stories
- Discuss: Which exaggeration is okay and which is not? Which ones work and which do not? Why?

Traditional "coverage" makes the mistake of going through endless acquisition loops without sufficient opportunities to make meaning or transfer learning.




Receive,
Encounter
Refine/
Relearn, as
needed
Acquire
Try Out
Get Feedback
Many "rigorous" courses make the mistake of ignoring the teaching, learning, and assessing of student transfer.
Probing and Analysis Evoked
(Current Understanding Is
Challenged
Apply
Adjust
Transfer
Get
Feedback
Evaluate
Evaluate
Your
Ideas
Make
Meaning
Hypothesize,
Generalize


Receive,
Encounter
Refine/
Relearn, as
needed
Acquire
Try Out
Get Feedback
Many "skills" courses make the mistake of ignoring the learner's need to understand the wise use of strategies and concepts.
Apply
Adjust
Transfer
Get
Feedback
Evaluate
Probing and Analysis Evoked
(Current Understanding Is
Challenged
Evaluate
Your
Ideas
Make
Meaning
Hypothesize,
Generalize

English 1

Unit Plan POETRY

UNIT GOAL: To read, interpret, and comprehend poetry from various genres.

UNIT OBJECTIVES: Students will be able to…

- Relate a poem to personal experience
- Identify rhyme scheme
- Respond to poem through writing, speaking, listening
- Recognize literary elements used in selections
- Determine themes
- Evaluate multicultural traits in comparison to other poetry
- Respond to "How to Make an American Quilt"

LESSON TOPICS:

- "Hope is a Thing with Feathers"
- "Uphill"
- "The Bells"
- "Seven Ages of Man"
- "Ecclesiastes"
- "The Eagle"
- "I Wandered Lonely as a Cloud"
- "Woman's Work"
- "Eulogy of a Hermit Crab"

ASSESSMENT:

- Unit Test
- Quiz
- Activities
- Participation
- Poetry Entry in Portfolio

Maybe (if reworked)

?

Desired Results

Assessment Evidence

Learning Plan

Unit Plan

Subject/Course:	
Unit:	**Grade Level:**
Stage 1 - Desired Results	
Established Goals:	
Understandings: *Students will understand that…*	**Essential Questions:**
Students will know…	*Students will be able to…*
Stage 2 - Assessment Evidence	
Performance Tasks:	**Other Evidence:**
Stage 3 - Learning Plan	
Learning Activities:	

Desired Results	Assessments	Learning Plan
what the student should know and be able to do as a result of the unit.	ability to apply learning in new, varied, and realistic situations.	focuses on what we teach and how we teach to reach stage one

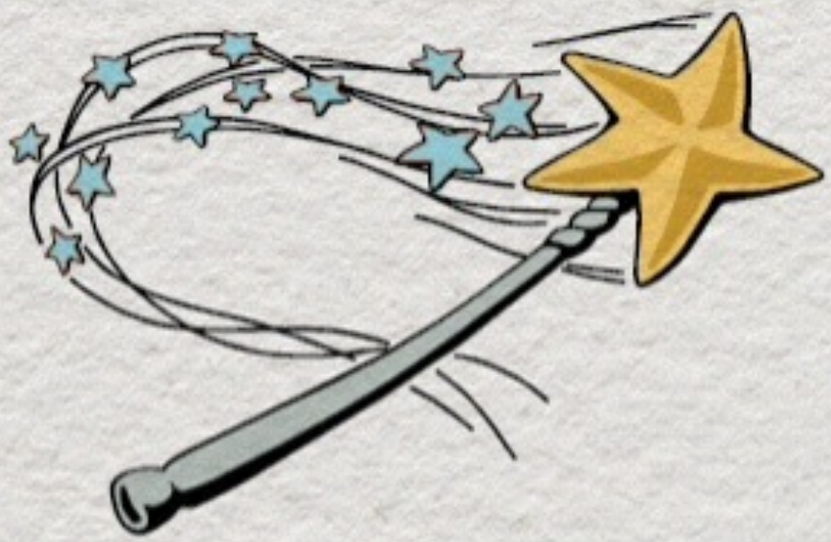
Assessments

ability to apply learning in new, varied, and realistic situations.

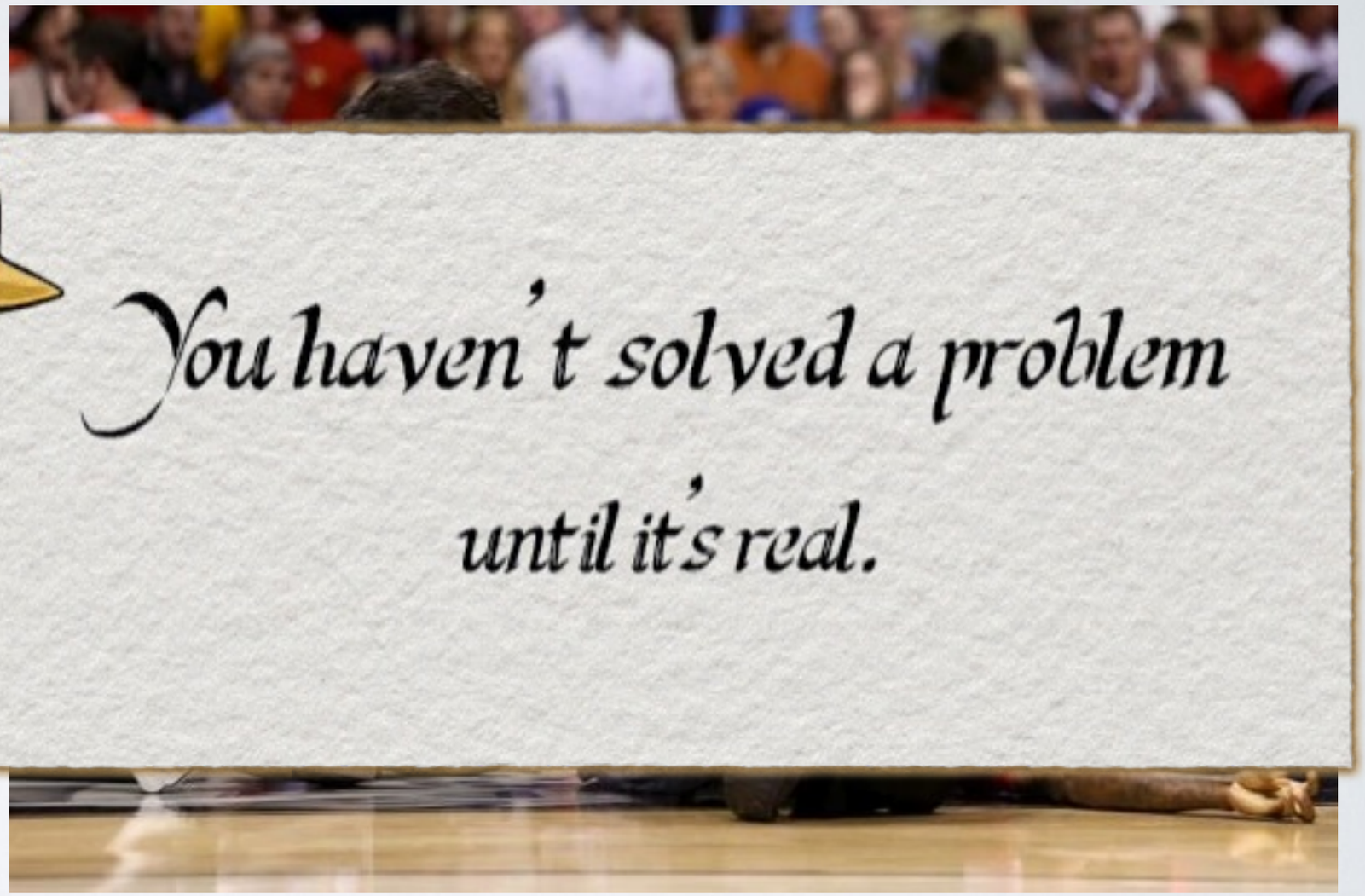
What does a performance-based assessment look like?

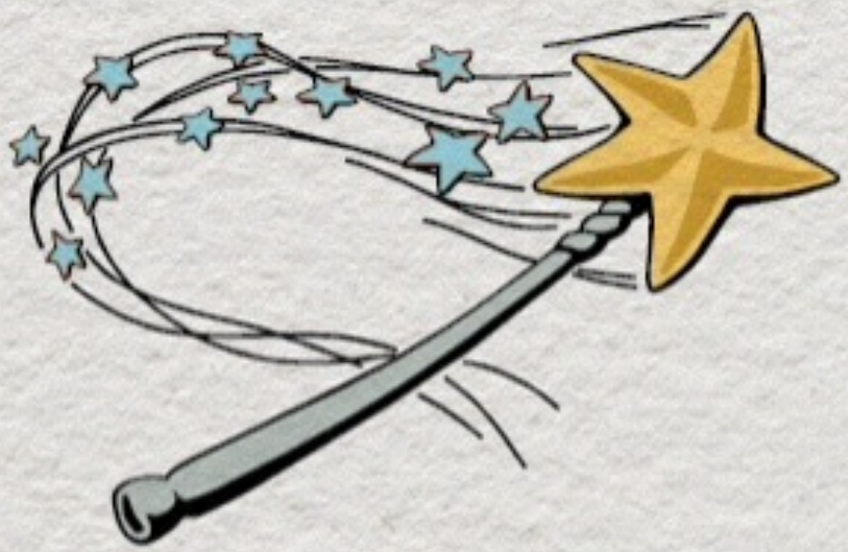
Traditional Assessments	vs.	Performance Assessments
Happen after the "real" learning has occurred and are just the "dessert."	→	Are how students do real learning.
Can be done at home without teacher guidance or team collaboration.	→	Require teacher guidance and team collaboration.
Are closed: every project has the same goal or outcome.	→	Are open: students make choices that determine the outcome and path.
Do not resemble work done in the real world.	→	Are parallel to work done in the professional field.

Are parallel to work done in the professional field.



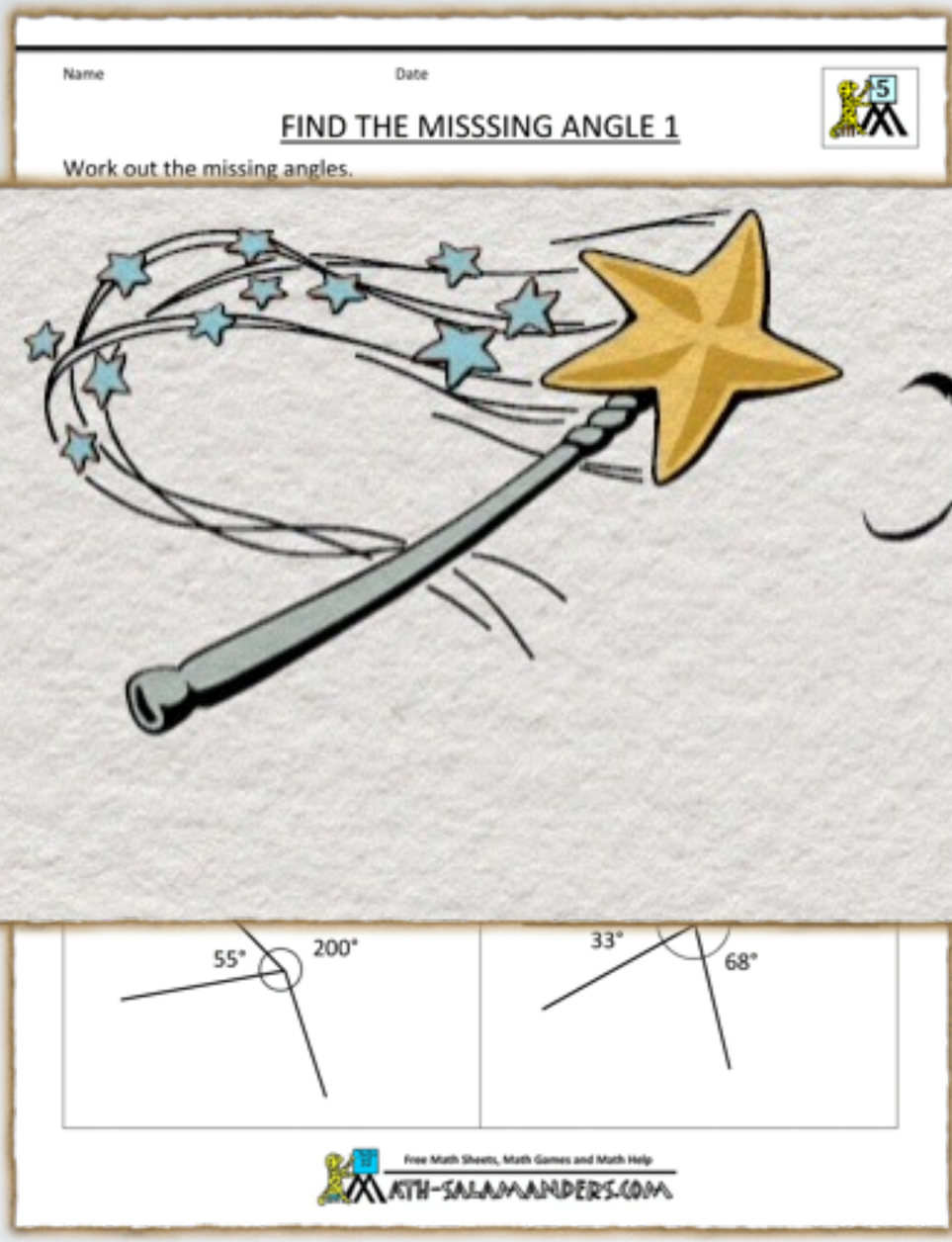
You haven't solved a problem until it's real.

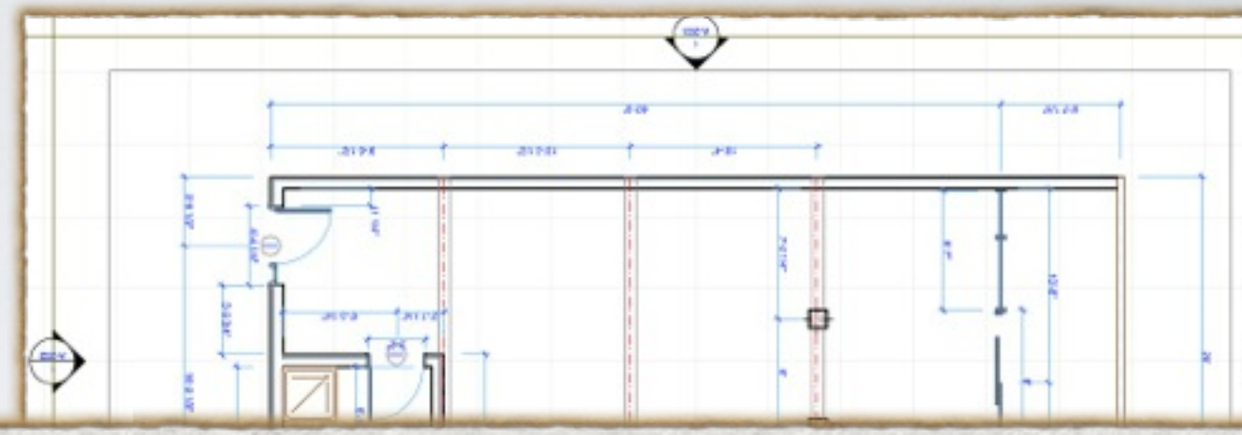


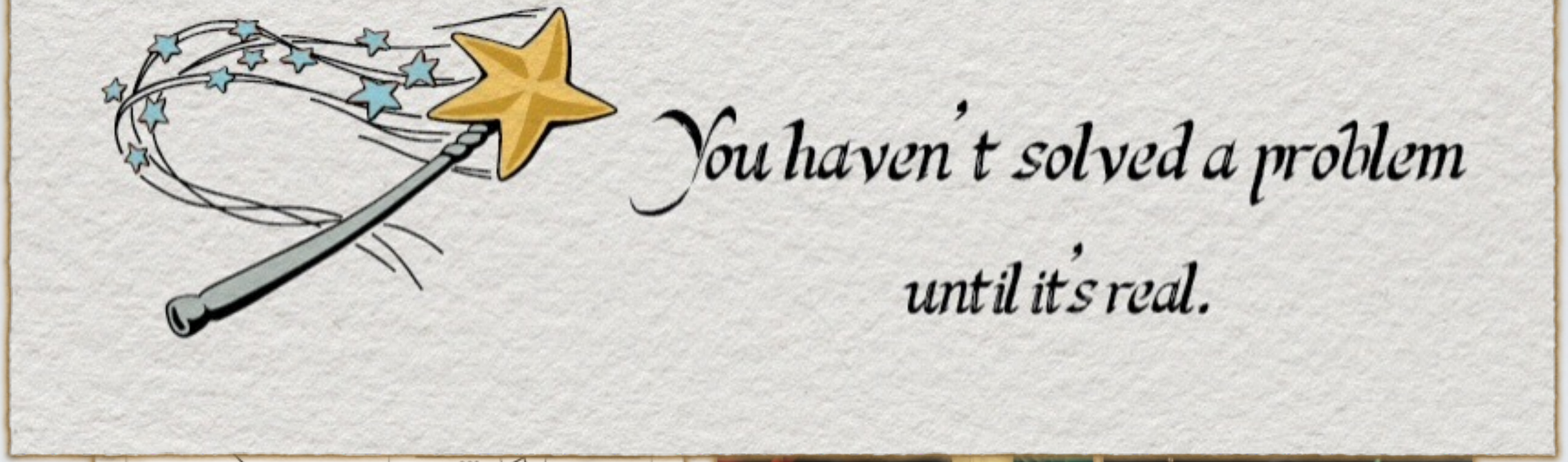


You haven't solved a problem

until it's real.


Name
Date
FIND THE MISSSING ANGLE 1
Work out the missing angles.
55°
200°
33°
68°
Free Math Sheets, Math Games and Math Help
MATH-SALAMANDERS.COM




You haven't solved a problem
until it's real.

How do I know if it is truly a performance assessment and not just a project?

Performance Task Essential Elements Checklist

Does the Performance Task…?
DEVELOP 21ST CENTURY LEARNING SKILLS *Students build skills valuable for today's world, such as critical thinking, creativity, collaboration, and communication, which are taught and assessed.*
ENGAGE STUDENTS IN IN-DEPTH INQUIRY *Students are engaged in a rigorous, extended process of asking questions, using resources, and developing answers.*
ORGANIZE TASKS AROUND AN ESSENTIAL QUESTION *The performance task is focused by an open-ended question that passes the "B.I.T.E." reliability test.*
ESTABLISH A NEED TO KNOW *Students see the need to gain knowledge, understand concepts, and apply skills in order to answer the Essential Question and create performances/products.*
ENCOURAGE VOICE AND CHOICE (DIFFERENTIATION) *Students are allowed to make choices within the pre-approved guidelines about the product/performance to be created, how they work, and how they use their time. Student choice determines the outcome and path of research.*
INCORPORATE 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*

How do I build a rubric for a performance assessment?

COLLABORATION RUBRIC for PBL

(for grades 6-12; CCSS ELA aligned)

Individual Performance	**Below Standard**	**Approaching Standard**	**At Standard**	**Above Standard ✔**
Takes Responsibility for Oneself	▸ is not prepared, informed, and ready to work with the team ▸ does not use technology tools as agreed upon by the team to communicate and manage project tasks ▸ does not do project tasks ▸ does not complete tasks on time ▸ does not use feedback from others to improve work	▸ is usually prepared, informed, and ready to work with the team ▸ uses technology tools as agreed upon by the team to communicate and manage project tasks, but not consistently ▸ does some project tasks, but needs to be reminded ▸ completes most tasks on time ▸ sometimes uses feedback from others to improve work	▸ is prepared and ready to work; is well informed on the project topic and cites evidence to probe and reflect on ideas with the team (CC 6-12.SL.1a) ▸ consistently uses technology tools as agreed upon by the team to communicate and manage project tasks ▸ does tasks without having to be reminded ▸ completes tasks on time ▸ uses feedback from others to improve work	
Helps the Team	▸ does not help the team solve problems; may cause problems ▸ does not ask probing questions, express ideas, or elaborate in response to questions in discussions ▸ does not give useful feedback to others ▸ does not offer to help others if they need it	▸ cooperates with the team but may not actively help it solve problems ▸ sometimes expresses ideas clearly, asks probing questions, and elaborates in response to questions in discussions ▸ gives feedback to others, but it may not always be useful ▸ sometimes offers to help others if they need it	▸ helps the team solve problems and manage conflicts ▸ makes discussions effective by clearly expressing ideas, asking probing questions, making sure everyone is heard, responding thoughtfully to new information and perspectives (CC 6-12.SL.1c) ▸ gives useful feedback (specific, feasible, supportive) to others so they can improve their work ▸ offers to help others do their work if needed	
Respects Others	▸ is impolite or unkind to teammates (may interrupt, ignore ideas, hurt feelings) ▸ does not acknowledge or respect other perspectives	▸ is usually polite and kind to teammates ▸ usually acknowledges and respects other perspectives and disagrees diplomatically	▸ is polite and kind to teammates ▸ acknowledges and respects other perspectives; disagrees diplomatically	

©2013 BUCK INSTITUTE FOR EDUCATION

CRITICAL THINKING RUBRIC for PBL

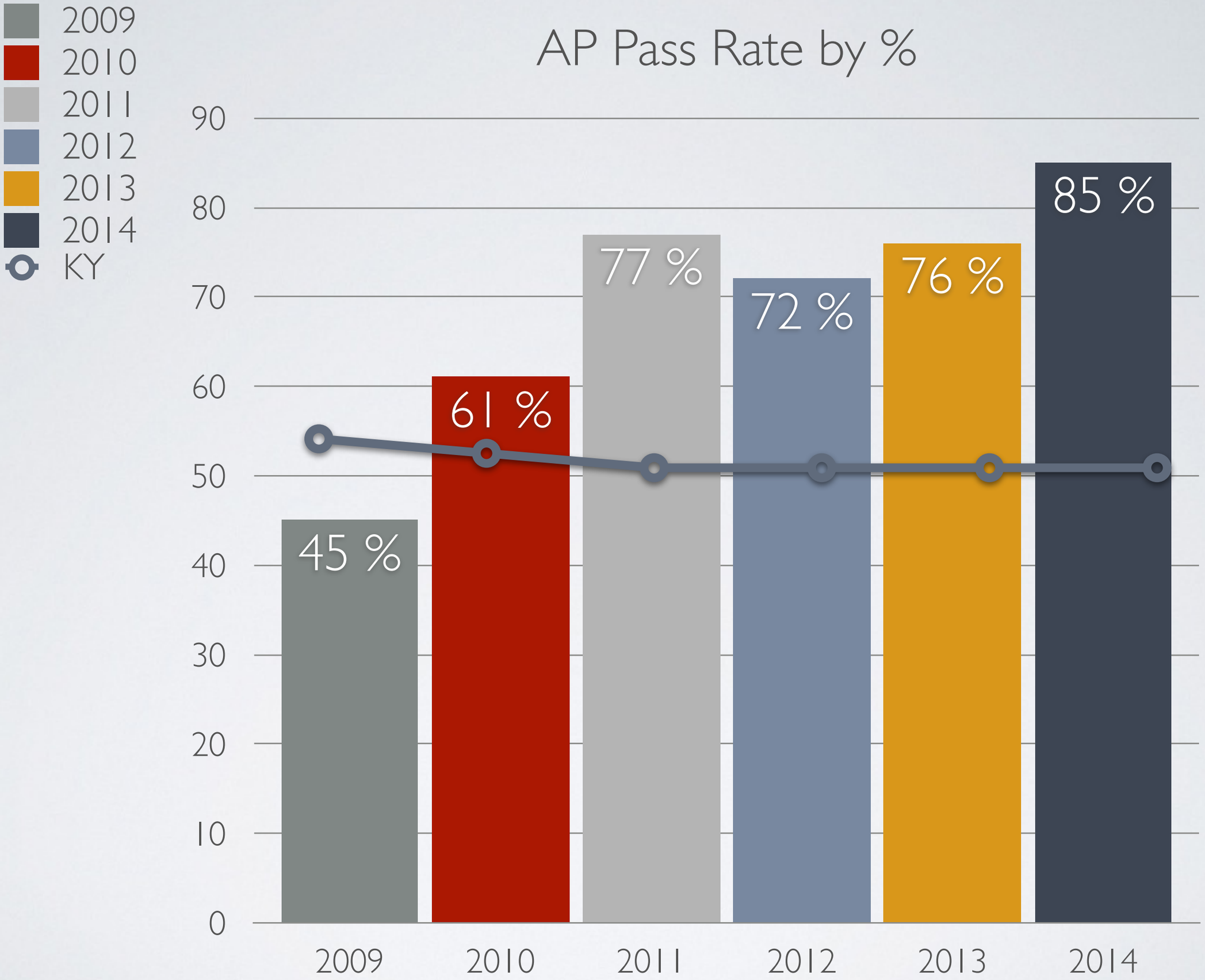
(for grades 6-12; CCSS ELA aligned)

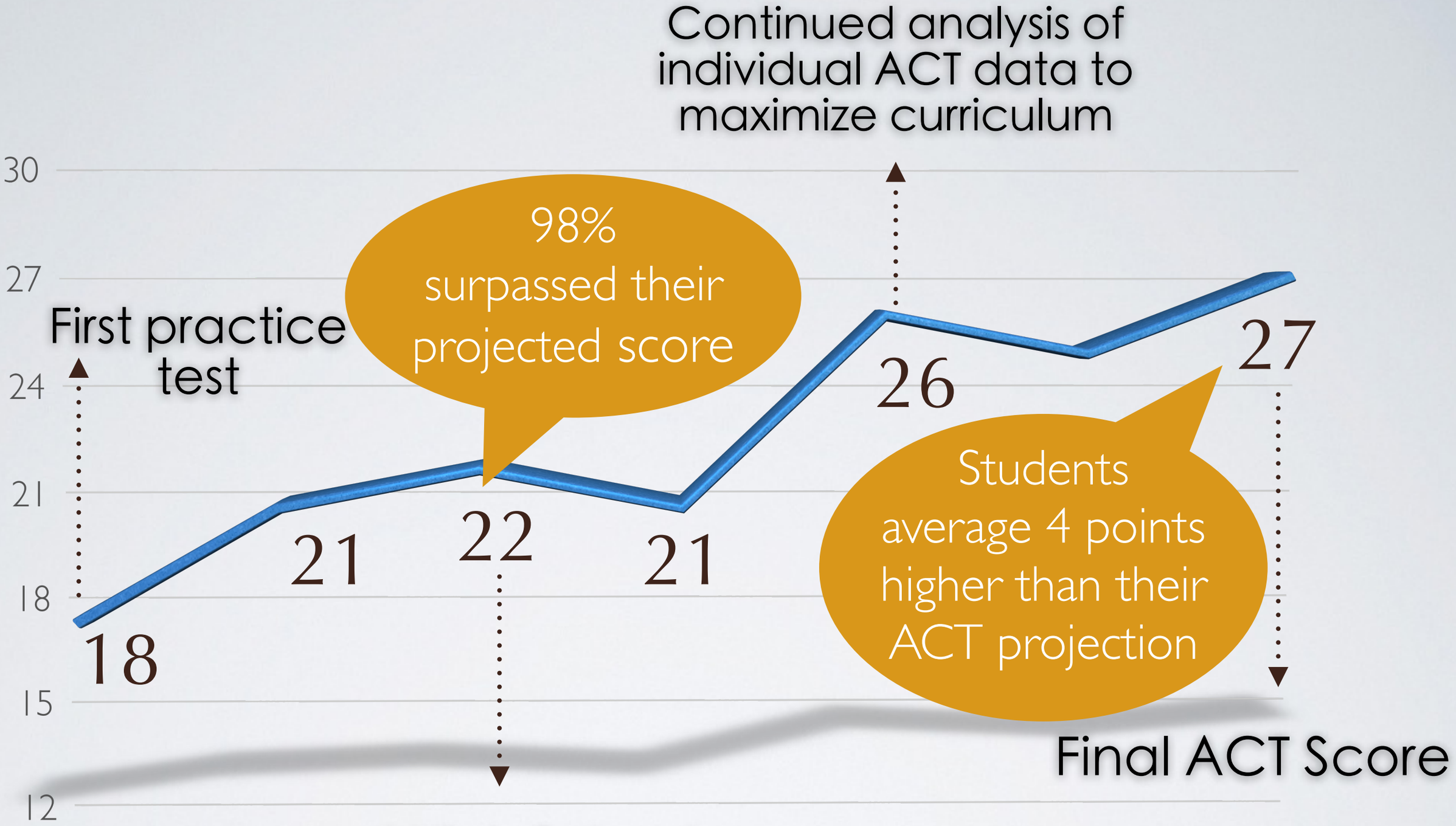
Critical Thinking Opportunity at Phases of a Project	**Below Standard**	**Approaching Standard**	**At Standard**	**Above Standard ✔**
Launching the Project: **Analyze Driving Question and Begin Inquiry**	▸ sees only superficial aspects of, or one point of view on, the Driving Question	▸ identifies some central aspects of the Driving Question, but may not see complexities or consider various points of view ▸ asks some follow-up questions about the topic or the wants and needs of the audience or users of a product, but does not dig deep	▸ shows understanding of central aspects of the Driving Question by identifying in detail what needs to be known to answer it and considering various possible points of view on it ▸ asks follow-up questions that focus or broaden inquiry, as appropriate (CC 6-12.W.7) ▸ asks follow-up questions to gain understanding of the wants and needs of audience or product users	
Building Knowledge, Understanding, and Skills: **Gather and Evaluate Information**	▸ is unable to integrate information to address the Driving Question; gathers too little, too much, or irrelevant information, or from too few sources ▸ accepts information at face value (does not evaluate its quality)	▸ attempts to integrate information to address the Driving Question, but it may be too little, too much, or gathered from too few sources; some of it may not be relevant ▸ understands that the quality of information should be considered, but does not do so thoroughly	▸ integrates relevant and sufficient information to address the Driving Question, gathered from multiple and varied sources (CC 6,11-12.RI.7) ▸ thoroughly assesses the quality of information (considers usefulness, accuracy and credibility; distinguishes fact vs. opinion; recognizes bias) (CC 6-12.W.8)	
Developing and Revising Ideas and Products: **Use Evidence and Criteria**	▸ accepts arguments for possible answers to the Driving Question without questioning whether reasoning is valid ▸ uses evidence without considering how strong it is ▸ relies on "gut feeling" to evaluate and revise ideas, product prototypes or problem solutions (does not use criteria)	▸ recognizes the need for valid reasoning and strong evidence, but does not evaluate it carefully when developing answers to the Driving Question ▸ evaluates and revises ideas, product prototypes or problem solutions based on incomplete or invalid criteria	▸ evaluates arguments for possible answers to the Driving Question by assessing whether reasoning is valid and evidence is relevant and sufficient (CC 6-12.SL.3, RI.8) ▸ justifies choice of criteria used to evaluate ideas, product prototypes or problem solutions ▸ revises inadequate drafts, designs or solutions and explains why they will better meet evaluation criteria (CC 6-12.W.5)	
Presenting Products and Answers to Driving Question: **Justify Choices, Consider Alternatives & Implications**	▸ chooses one presentation medium without considering advantages and disadvantages of using other mediums to present a particular topic or idea ▸ cannot give valid reasons or supporting evidence to defend choices made when answering the Driving Question or creating products ▸ does not consider alternative answers to the Driving Question, designs for products, or points of view ▸ is not able to explain important new understanding gained in the project	▸ considers the advantages and disadvantages of using different mediums to present a particular topic or idea, but not thoroughly ▸ explains choices made when answering the Driving Question or creating products, but some reasons are not valid or lack supporting evidence ▸ understands that there may be alternative answers to the Driving Question or designs for products, but does not consider them carefully ▸ can explain some things learned in the project, but is not entirely clear about new understanding	▸ evaluates the advantages and disadvantages of using different mediums to present a particular topic or idea (CC 8.RI.7) ▸ justifies choices made when answering the Driving Question or creating products, by giving valid reasons with supporting evidence (CC 6-12.SL.4) ▸ recognizes the limitations of an answer to the Driving Question or a product design (how it might not be complete, certain, or perfect) and considers alternative perspectives (CC 11-12.SL.4) ▸ can clearly explain new understanding gained in the project and how it might transfer to other situations or contexts	

© 2013 BUCK INSTITUTE FOR EDUCATION
For more **FreeBIEs** visit **bie.org**

What are the results?

AP Pass Rate by %




Continued analysis of individual ACT data to maximize curriculum
30
27
24
21
18
15
12
First practice test
98% surpassed their projected score
18
21
22
21
26
27
Students average 4 points higher than their ACT projection
Final ACT Score
Met High School Placement Test ACT projection by January of sophomore year

How does this method align to the AdvancED standards and indicators?

Indicator: 1.2	The school leadership and staff commit to a culture that is based on shared values and beliefs about teaching and learning and supports challenging, equitable educational programs and learning experiences for all students that include achievement of learning, thinking, and life skills.
Indicator: 3.1	The school's curriculum provides equitable and challenging learning experiences that ensure all students have sufficient opportunities to develop learning, thinking, and life skills that lead to success at the next level.
Indicator: 3.3	Teachers engage students in their learning through instructional strategies that ensure achievement of learning expectations.

Resources

- AdvancED
- Authentic Education
- Buck Institute for Education
- Mayer, A. The Original Wow! Academy. FriEdTechnology.
- The Partnership for 21st Century Skills

Don't wait for a prince.

Be able to rescue yourself.

Prepare for real life.

MercyAcademy.com

MERCY Academy