# Engaging High School Students in Academic Work

A 10 Session Professional Development Series

EVERYONE GRADUATES CENTER

JOHNS HOPKINS SCHOOL of EDUCATION

The first step in leading students to learn the academic content for which both students and teachers are held accountable is to ENGAGE them in the learning process.

This is a real challenge, particularly for adolescents who have not experienced academic success in the past. Many students come to us already disengaged from school. They may have had life experiences that have interfered with attendance or academic effort. They may not have experienced instruction that met their needs in prior schools.

This series is designed to engage teachers in collaborative learning and reflection about the process of engaging students in the rigorous academic work required in high school. It focuses teachers' attention on what motivates students and how they can create classroom environments and learning experiences that will draw students into the learning process so that they will exert the effort required to be successful learners. The series involves interactive teacher experiences and practical tools organized around these themes:

- Building Relationships that Motivate Students
- Motivating Students for Academic Work
- Assessment Strategies that Motivate Students (Parts 1 and 2)
- Building a Community of Learners: Strategies for Effective Cooperative Learning and Small Group Work
- Connecting the Work to Students' Future Work Lives: Creating Assignments with Student Products for Real Audiences
- Reflecting on Assessment Strategies
- Engaging Students in Critical Reading Skills in the Content Areas
- Using Project-Based Learning to Deepen Learning and Engagement
- Reflecting on Student Work, Student Progress, and Next Steps for Continuous Improvement

It also includes an optional "Passion Profiles" icebreaker session.

A Facilitator Guide and associated materials for conducting the PD sessions can be found on the website: http://engage.every1graduates.org

The website contains all materials in editable form so they can be adapted for local contexts.

This development of this resource was supported by the Institute of Education Sciences, U.S. Department of Education, through Grant R305A150449 to the Johns Hopkins University. The opinions expressed are those of the authors and do not represent views of the Institute or the U.S. Department of Education.

For more information, contact Martha Abele Mac Iver at mmaciver@jhu.edu

# What Motivates Students to Do Academic Work?

EVERYONE GRADUATES CENTER

JOHNS HOPKINS SCHOOL of EDUCATION

# Guiding Questions

- How do we motivate students to engage in rigorous academic work?
- How can we adapt our classroom instructional practices to tap into students' intrinsic motivation?
- How can we do this as a collaborative community?

# What motivates your students?

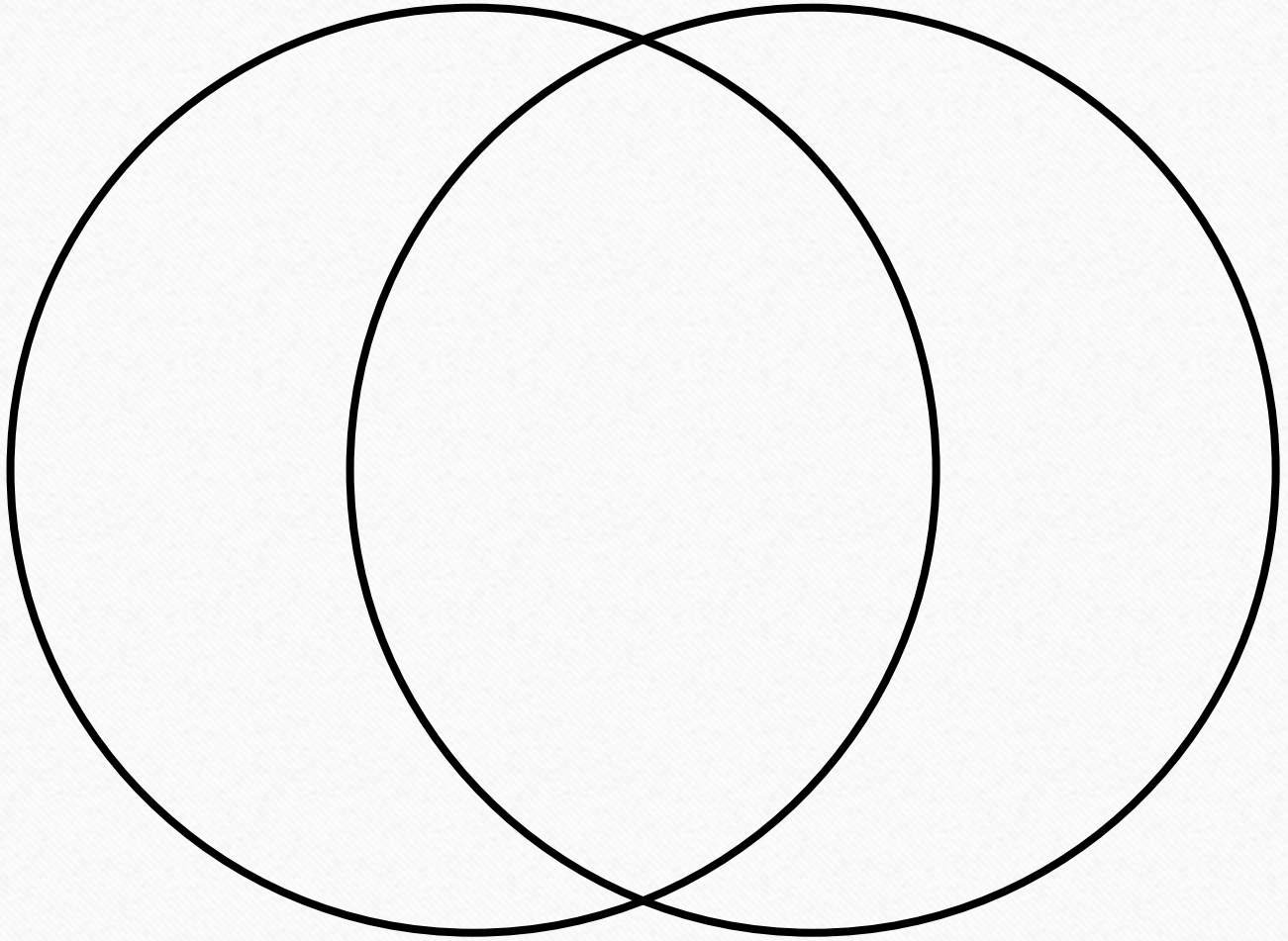
## What motivates high school teachers?

# Brainstorming Exercise

As a group using the large Venn diagram, brainstorm what motivates teachers to do their work, what motivates students to learn, and what, if any, overlap exists between these?

Teacher Motivation

Student Motivation



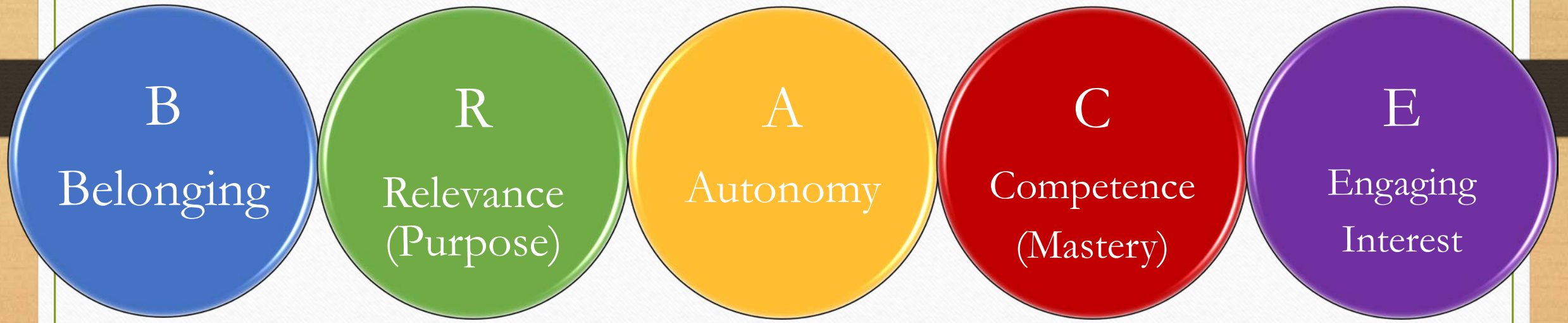
# Rules for Brainstorming

| | |
|---|---|
| One Conversation at a Time | Encourage Wild Ideas |
| Go for Quantity | Be Visual |
| Headline! | Stay on Topic |
| Build on the Ideas of Others | Defer Judgment – NO Blocking |

# Brainstorming Debrief

- What are some themes that emerge around motivation?
- How do themes in the overlap look different for teachers and students?

# Motivation Components – BRACE



# Belonging

Communication
Community
Belonging
Caring
Friends
Relationships
Conversation
Connections
Learning
Sharing
WordItOut

# Hunger for Relationships

Listen to some students from a recent study of student perspectives on positive relationships with teachers …

I feel like if anything ever happens, I can go to see him outside of class, and I know he'll always take a minute from what he's doing and talk to me in private about whatever it is.

If I ask her a question she'll really make sure I understand it before letting me go and trying to do it on my own and that's just really nice because some teachers will be like, "Okay do you have it now?" or "Okay here's the answer go see if you can do it" but she'll be like, "Okay do you actually know or do you have any more questions?"

He always has something—some good advice to give you about whatever problems you have. And if he doesn't then he'll point you to someone who does.

(from Yu et al., "She Calls Me by My Last Name": Exploring Adolescent Perceptions of Positive Teacher-Student Relationships, *Journal of Adolescent Research*, 2018, 33, 332-362)

# A Vision of Belonging

VIDEO about Restorative Circles

(Shortened version of https://www.youtube.com/watch?v=RdKhcQrLD1w)

# Small Group Discussion Questions

What are your reactions to this classroom experience?

Have you ever experienced this in your own classroom?

What do you see as the pros and cons of using this approach?

What is your favorite way of building classroom community?

# Ideas/Resources for Relationship Building

(see binder and website)

- First-day activities that help you to get to know students – and students to get to know each other
- The Power of Personal Relationships article (link on website)
- Power of the Circle article (link on website)

# Teacher Reflection

- What will you do in the first week of classes that will create a community in which students feel safe and engaged?
- What will you do to build trust and show caring and respect?
- What will you do to sustain this community?

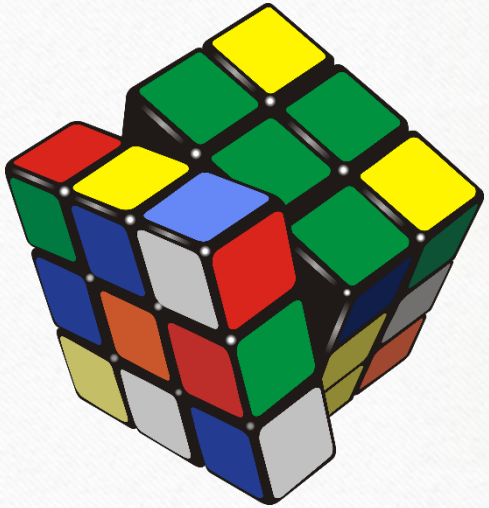
# What Motivates Students to Do Academic Work?

EVERYONE GRADUATES CENTER

JOHNS HOPKINS SCHOOL of EDUCATION

# Icebreaker – What is your passion?

# Passion Profiles



Passion 1: The Child

Passion 2: The Curriculum

Passion 3: Content Knowledge

Passion 4: Teaching Strategies and Techniques

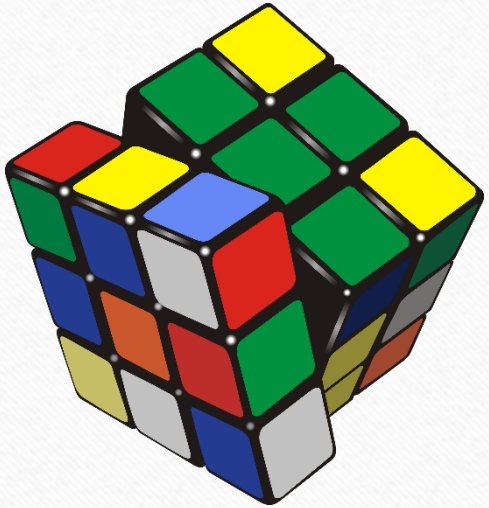
Passion 5: The Relationship Between Beliefs and Professional Practice

Passion 6: The Intersection Between Your Personal and Professional Identities

Passion 7: Advocating Equity and Social Justice

Passion 8: Context Matters

# Passion Profiles



1. Determine your passion
2. Meet passion team @ station
3. Share highlights with large group

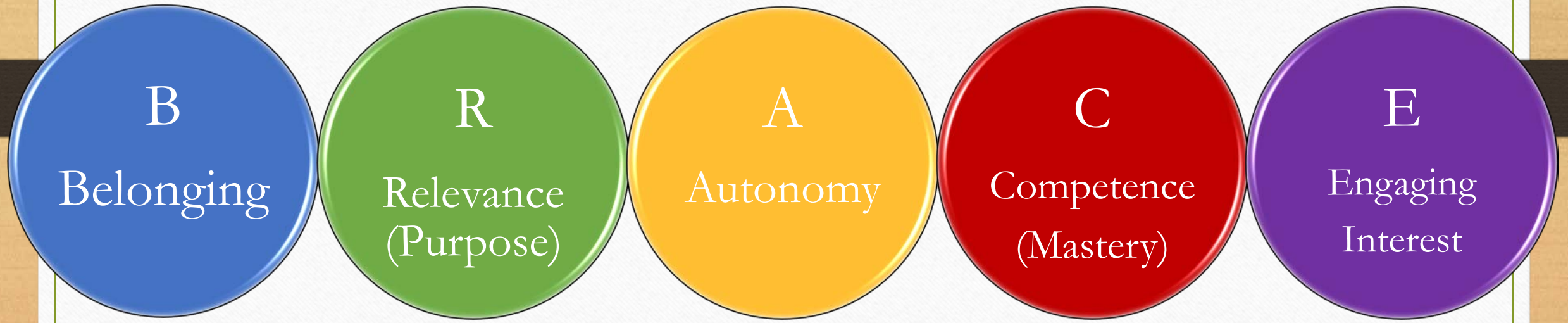
# Motivated by Mastery:

## Helping Students See and Celebrate Their Progress

EVERYONE GRADUATES CENTER

JOHNS HOPKINS SCHOOL of EDUCATION

# Motivation Components – BRACE

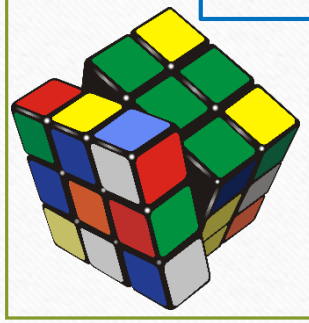


# Session Goals

- How do we focus students on mastery goals?
- How can we help students track their progress?
- How can we celebrate success?

# Self-goals

| | | |
|---|---|---|
| 1 **MASTERY** | 2 **PERFORMANCE** | 3 **SOCIAL** |
| Students aim to develop their competences, and consider ability to be something that can be developed by increasing effort | Students aim to demonstrate their competences particularly by outperforming peers considering ability to be fixed | Students are most concerned about how they interact with, and relate to others in the class |



Visible Learning For Teachers
Maximizing Impact on Learning
John Hattie

When people are only faced with their failures, they tend to want to give up. **They need help to see their own progress, so that they don't only see how bad they are doing.** They need to see the fun in it, and to see some reward in completing the task.

Iona, teenager consultant for
*Fires in the Mind: What Kids Can Tell Us About Motivation and Mastery*

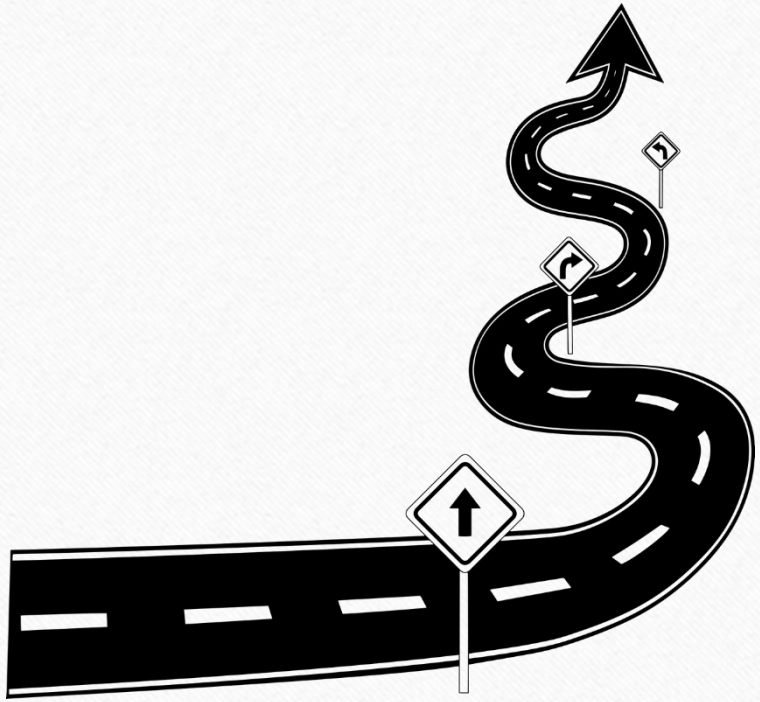
# The Challenge

Many student have not experienced success in the past and seem to have given up

# Additional Challenges

- How do we link mastery goals to specific content standards in a way that motivates students?
- How do we find time to help students see the big picture and systematically monitor and reflect on how they are doing at meeting goals?

# Strategies for Ensuring that Students Can See Where They are Going and Track Their Progress Along the Way



# Examples of Giving Students a Roadmap

# FUNCTIONS AND EQUATIONS

roadmap to ALGEBRA I

1 getting started

algebraic reasoning

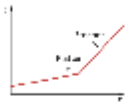
foundations of algebra

problem solving strategies

2 represent mathematical relationships in multiple ways

rate of change

3



unit rates

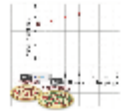
rate of change

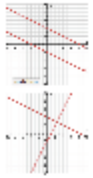
speed and rate

distance vs. time

linear functions

4 use slopes and intercepts





explore properties of parallel and perpendicular lines

statistical modeling

5

represent and analyze data

linear equations and inequalities

6

solve problems using linear equations and inequalities

calculate car payments

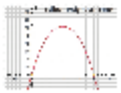
systems of linear equations

7

solve problems with equations containing two different variables

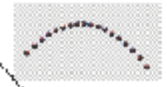
use:
-number sense
-modeling
-graphs
-tables
-equations

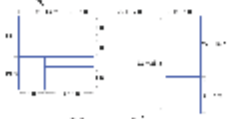
quadratic functions and equations



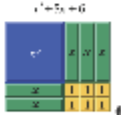
use quadratic functions to model problem situations

8





combine and multiply polynomials



factor

other non-linear relationships

9

exponents and exponential functions

# roadmap to GEOMETRY

## TRIANGLES

properties

special lines and points

trigonometry

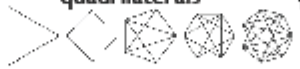
right triangles

congruent triangles and their postulates

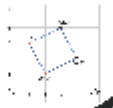
pythagorean theorem

## OTHER POLYGONS

polygons and special quadrilaterals

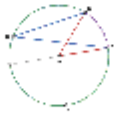


coordinate proofs



## CIRCLES

algebraic representations

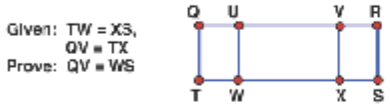


chords, arcs, sectors, and inscribed angles

lines and segments

## INDUCTIVE AND DEDUCTIVE REASONING

Proofs and constructions

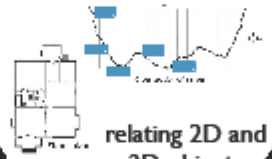



reasoning and logic

conditional statements and converses

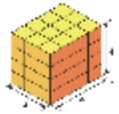
## MODELING

estimating area

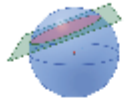


relating 2D and 3D objects

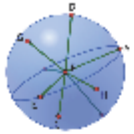
## 3D



prisms and cylinders



pyramids and cones



spheres

What about a roadmap with specific learning targets and a way to track progress?

# American Government Bill of Rights Learning Targets Roadmap

(Copy in Binder)

## American Government Bill of Rights Unit
## Learning Targets Roadmap

**Understanding the Bill of Rights is crucial for participating as an engaged U.S. citizen and seeking greater justice in our society.**

| | | How well can I do this? 1= Not at all 2= A little 3= Very well | | | Evidence that I can do this | |
|---|---|---|---|---|---|---|
| | Learning Target | Unit Start | Unit Midpoint | Unit End | | Goal Met? |
| **Knowledge/Reasoning Targets**<br>"What do I need to know?"<br>"What can I do with what I know?" | 1. I can explain how the Bill of Rights is relevant to me personally and to those I care about. | | | | | ☐ |
| | 2. I can summarize the key debates over the ratification of the Constitution. | | | | | ☐ |
| | 3. I can cite examples of limited government in the Bill of Rights | | | | | ☐ |
| | 4. I can explain how the first nine amendments protect individual rights. | | | | | ☐ |
| | 5. I can explain how the 10th Amendment addressed limited government and federalism | | | | | ☐ |
| | 6. I can compare the arguments of Federalists and Anti-Federalists on adding individual freedoms to the Constitution | | | | | ☐ |
| | 7. I can draw connections between amendments in the Bill of Rights and arguments over the principle of limited government. | | | | | ☐ |
| **Skill/Product Targets**<br>"What can I demonstrate?"<br>"What can I produce to show my learning?" | 8. I can participate actively in a class debate about the 2nd Amendment | | | | | ☐ |
| | 9. I can engage in a "silent (written) discussion" about a Bill I of Rights issue with a small group of my classmates | | | | | ☐ |
| | 10. I can write an essay setting forth an argument about guns in contemporary society in the context of the 2nd Amendment | | | | | ☐ |
| | 11. I can demonstrate my knowledge about the Bill of Rights on the unit test. | | | | | ☐ |

Adapted from Myron Dueck, *Grading Smarter Not Harder*, pp. 79-80. Dueck credits his colleague Karl Koehler from Humble, TX

# How viable is this Learning Targets Roadmap tool for helping students to:

- Get the big picture of "where are we going?"
- See what the learning targets are (and how they are linked to a bigger purpose)
- Monitor their progress in achieving goals

# Analysis Challenge

- Get in groups of 4 to 6 with at least one other colleague from your department
- Spend a couple of minutes looking over the Bill of Rights Unit "Learning Targets Roadmap" tool (adapted from a similar example in Myron Dueck, *Grading Smarter, Not Harder*)
- Discuss the following questions as a group (from next slide)

# Questions for Department Group Discussion

What do you think about how this tool communicates learning targets to students? Helps them track their progress? What strengths and weaknesses do you see with it?

Have you ever tried anything similar? How did it work?

How do you think something like this could be adapted to your subject matter?

SHARE

# Taking Next Steps for Using These Ideas

- How can I help students understand the big picture of where we are going and how it is relevant to their lives?
- How can I help students track progress in meeting specific learning targets that are relevant to students' lives?
- How do I help students take the lesson of crafting goals and tracking progress and apply it to their own personal goals?
- How can I plan to check in with my colleagues to discuss how this is going in our classrooms and what next steps we can take?

Hard copy in binder

Editable Word version available on website

## Unit Learning Targets Roadmap

**Overarching learning goal that addresses current and future relevance....**

| | | How well can I do this? 1= Not at all 2= A little 3= Very well | | | Evidence that I can do this | |
|---|---|---|---|---|---|---|
| | Learning Target | Unit Start | Unit Midpoint | Unit End | | Goal Met? |
| Knowledge/Reasoning Targets<br>"What do I need to know?"<br>"What can I do with what I know?" | 1. | | | | | ☐ |
| | 2. | | | | | ☐ |
| | 3. | | | | | ☐ |
| | 4. | | | | | ☐ |
| | 5. | | | | | ☐ |
| | 6. | | | | | ☐ |
| | 7. | | | | | ☐ |
| Skill/Product Targets<br>"What can I demonstrate?"<br>"What can I produce to show my learning?" | 8. | | | | | ☐ |
| | 9. | | | | | ☐ |
| | 10. | | | | | ☐ |
| | 11. | | | | | ☐ |

Adapted from Myron Dueck, *Grading Smarter Not Harder*, pp. 79-80. Dueck credits his colleague Karl Koehler from Humble, TX

# Additional Resources

- It Starts with a Spark
- Practicing Toward Mastery

From firesinthemind.org

# Teacher Reflection and Planning

- How could I adapt the Learning Targets Roadmap tool for my subject area?
- If this particular tool doesn't seem relevant or usable, in what other ways can I help students see the big picture and their progress in mastering learning goals?
- How can I plan to check in with my colleagues to discuss how this is going in our classrooms and what next steps we can take?

# Alternative Reflection Strategy To Use If Helpful:

Use the tool to map out and reflect on your own learning today.

## Unit Learning Targets Roadmap

**Overarching learning goal that addresses current and future relevance....**

| | | How well can I do this? 1= Not at all 2= A little 3= Very well | | | Evidence that I can do this | |
|---|---|---|---|---|---|---|
| | Learning Target | Unit Start | Unit Midpoint | Unit End | | Goal Met? |
| Knowledge/Reasoning Targets<br>"What do I need to know?"<br>"What can I do with what I know?" | 1. | | | | | ☐ |
| | 2. | | | | | ☐ |
| | 3. | | | | | ☐ |
| | 4. | | | | | ☐ |
| | 5. | | | | | ☐ |
| | 6. | | | | | ☐ |
| | 7. | | | | | ☐ |
| Skill/Product Targets<br>"What can I demonstrate?"<br>"What can I produce to show my learning?" | 8. | | | | | ☐ |
| | 9. | | | | | ☐ |
| | 10. | | | | | ☐ |
| | 11. | | | | | ☐ |

Adapted from Myron Dueck, *Grading Smarter Not Harder*, pp. 79-80. Dueck credits his colleague Karl Koehler from Humble, TX

# Assessment Strategies that Motivate Students

EVERYONE GRADUATES CENTER

JOHNS HOPKINS SCHOOL of EDUCATION

# Focus Questions

- What are our goals for giving grades and how do grades influence future student performance?
- How might we design grading scales that support student motivation?

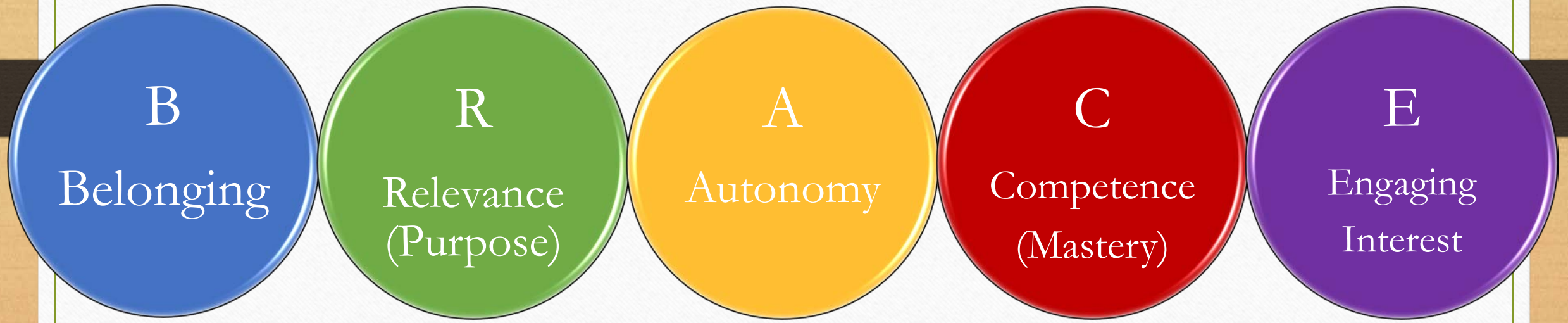
# What are our goals for giving grades?

**Start the presentation to activate live content**

If you see this message in presentation mode, install the add-in or get help at PollEv.com/app

Poll Everywhere

# Motivation Components – BRACE



# Grading Policy Exercise

Scenario – A teacher has unfortunately taken ill and had to take an unexpected leave of absence. You have been given that teacher's gradebook and asked to assign grades for the semester.

| GRADES |
| --- |
| C |
| C |
| Missing Assignment |
| D |
| C |
| B |
| Missing Assignment |
| Missing Assignment |
| B |
| A |

Calculate the final grade for this student who received the following 10 grades during first semester.

# What's Your Grade?

Share with your table partners and discuss any differences in grading decisions noticed.

# How many tables had complete agreement?

Our next activities will explore some of the reasons behind divergent views.

# Meaningful Grading

## Modified Jigsaw

Informally group yourselves in 3's or 4's

Identify members as A – B – C

A's read: Practice

B's read: Problems with Percentage Grades

C's read: Missing Assignments – The Distortion of Zero

# "Zeroing" in on the Assessment Issues

Large Group Discussion

- What did you see about the impact of specific grading scales and weighting policies?
- Should improvement over time be taken into account in grading (earlier, low grades thrown out?)
- How should missing/late assignments be handled in grading?

# The Great Grading Debate

# Agree – Disagree Directions

- Everyone stand up!
- There are three posters along a line in the room – AGREE, DISAGREE, and NOT SURE/NEUTRAL.
- I will post a statement and read it aloud. When I do so, silently move to the poster that reflects your opinion on the statement (Agree, Disagree, Not Sure/Neutral)
- Once you are there, either independently or with others around you, craft persuasive arguments for your position – be prepared to share out!
- If your opinion changes based on what someone else says – move!

Statement:

Missing assignments should receive a 0 on a 100 point scale.

# Statement:

Teachers should take account of improvement over time in assigning the final grade (by dropping or giving less weight to earlier low grades).

# Statement:

There should be few if any opportunities to redo assessments or tests for a higher grade.

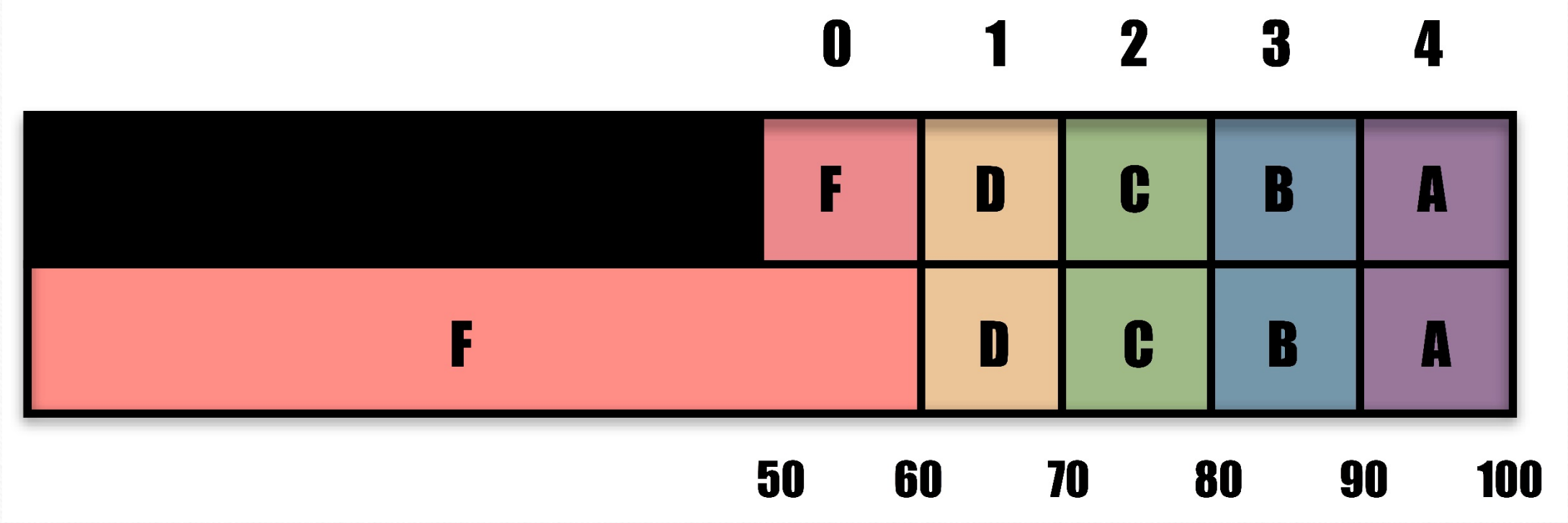
# Statement:

Averaging grades on a 0 to 4 point (F to A) grading scale is more fair than using a straight 100 point scale.

# How the 100 Point Scale and the 5 Point Scale Lead to Different Final Grades

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Grade (100 pt) | 0 | 93 | 93 | 93 | 93 | 93 | 0 | 0 | | **56** | **F** |
| Grade (5 pt) | 0 | 4 | 4 | 4 | 4 | 4 | 0 | 0 | | **2.4** | **C** |
| Weight | 10% | 10% | 10% | 10% | 10% | 20% | 20% | 10% | | | |

# Scaling Differences



# Self-Reflection

- Based on the conversation and debate, what new thoughts do you have about grading? Which of your ideas about assessment practices have been confirmed, challenged or changed?
- Given our conversation, what might you do differently this school year?

# Assessment that Motivates Students

## Part 2

EVERYONE GRADUATES CENTER

JOHNS HOPKINS SCHOOL of EDUCATION

# The Big Question

How can grading systems help motivate students to exert the effort needed to grow in mastery of course learning objectives?

# How does a grading system address these critical questions?

"Students should be able to answer the following three critical questions during any learning phase:

1. Where am I going?
2. Where am I now?
3. How can I close the gap?"

Rick Stiggins, quoted in Dueck, 2014, p. 91

# Where am I going?

**American Government Bill of Rights Unit**
**Learning Targets Roadmap**

**Understanding the Bill of Rights is crucial for participating as an engaged U.S. citizen and seeking greater justice in our society.**

| | | How well can I do this? 1= Not at all 2= A little 3= Very well | | | Evidence that I can do this | |
|---|---|---|---|---|---|---|
| | Learning Target | Unit Start | Unit Midpoint | Unit End | | Goal Met? |
| Knowledge/Reasoning Targets<br>"What do I need to know?"<br>"What can I do with what I know?" | 1. I can explain how the Bill of Rights is relevant to me personally and to those I care about. | | | | | ☐ |
| | 2. I can summarize the key debates over the ratification of the Constitution. | | | | | ☐ |
| | 3. I can cite examples of limited government in the Bill of Rights | | | | | ☐ |
| | 4. I can explain how the first nine amendments protect individual rights. | | | | | ☐ |
| | 5. I can explain how the 10th Amendment addressed limited government and federalism | | | | | ☐ |
| | 6. I can compare the arguments of Federalists and Anti-Federalists on adding individual freedoms to the Constitution | | | | | ☐ |
| | 7. I can draw connections between amendments in the Bill of Rights and arguments over the principle of limited government. | | | | | ☐ |
| Skill/Product Targets<br>"What can I demonstrate?"<br>"What can I produce to show my learning?" | 8. I can participate actively in a class debate about the 2nd Amendment | | | | | ☐ |
| | 9. I can engage in a "silent (written) discussion" about a Bill I of Rights issue with a small group of my classmates | | | | | ☐ |
| | 10. I can write an essay setting forth an argument about guns in contemporary society in the context of the 2nd Amendment | | | | | ☐ |
| | 11. I can demonstrate my knowledge about the Bill of Rights on the unit test. | | | | | ☐ |

Adapted from Myron Dueck, *Grading Smarter Not Harder*, pp. 79-80. Dueck credits his colleague Karl Koehler from Humble, TX

Learning Target Roadmap

(from previous session)

Called a "Unit Plan" in

*Grading Smarter Not Harder*

# Where am I now?

- Use frequent formative assessments
- Give concrete feedback on how to improve and grow
- Consider not giving formal grades for formative assessments

# How do I close the gap?

# Table Discussion of "Retesting"

## Using 4 A's Text Protocol in "Silent Discussion" Format

# Reading "Retesting" Excerpt

- Get into groups of no more than 3 or 4
- Read the Retesting excerpt from *Grading Smarter Not Harder*
- Review the 4 A's Discussion Protocol

# After Reading "Retesting" excerpt …

- Follow the protocol with a SILENT DISCUSSION
- Each person writes for 2 minutes about any of the 4 A's
- Each person passes paper to colleague on left, and responds to what has been written before
- Continue until you get your original paper back
- You can choose which comments to respond to (not enough time to respond to everything!)

# 4 A's Text Protocol

- What **Assumptions** does the author of the text hold?
- What do you **Agree** with in the text?
- What do you want to **Argue** with in the text?
- What parts of the text do you want to **Aspire** to?

# Quick Group Poll on “Retesting”

I do this already

I may consider trying it

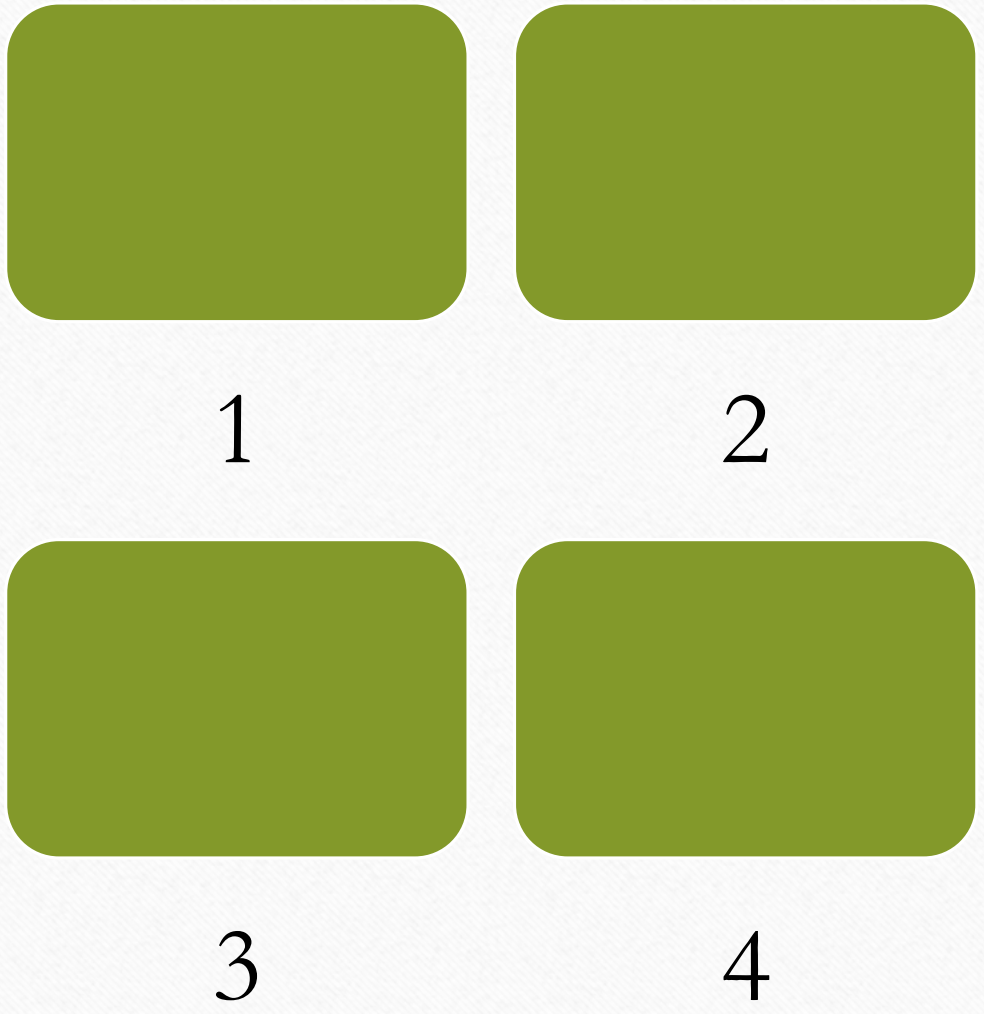
I’m back with Myron Dueck in 1998 – No Way!

# Four Corners Activity

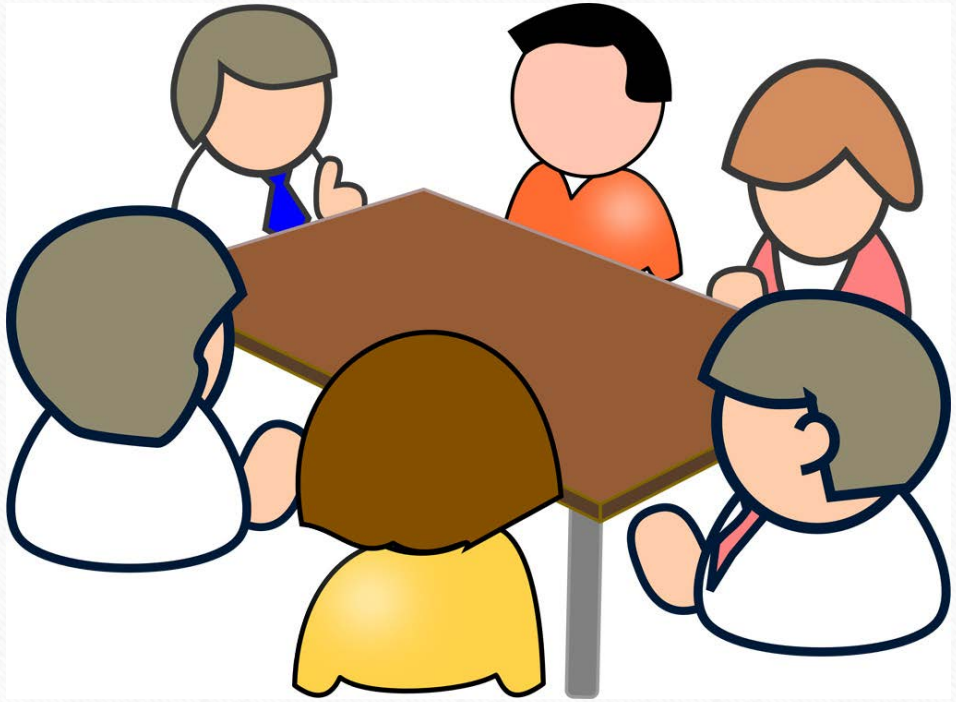
# My Own HS Experience

# 4 Corners Activity

- 1 – Did most homework and succeeded
- 2 – Did most homework and did not do as well as I wanted
- 3 – Blew off my homework but still succeeded
- 4 – Blew off my homework and did not do well



Feel free to mix up your groups so you get to discuss with other people



- What did you notice about the size of the groups in the corners?
- Were you surprised by anything?

# How do we provide opportunities to recover from failure?

- Do we force students to take an entire course over again?
- Or can we find ways to help students recover from failure before it has left a permanent negative impact on their postsecondary options?

# Diamond's Story

Read the short excerpt from *Failing at School (*in your binder).

Questions for group discussion are on the handout.

# Table Discussion

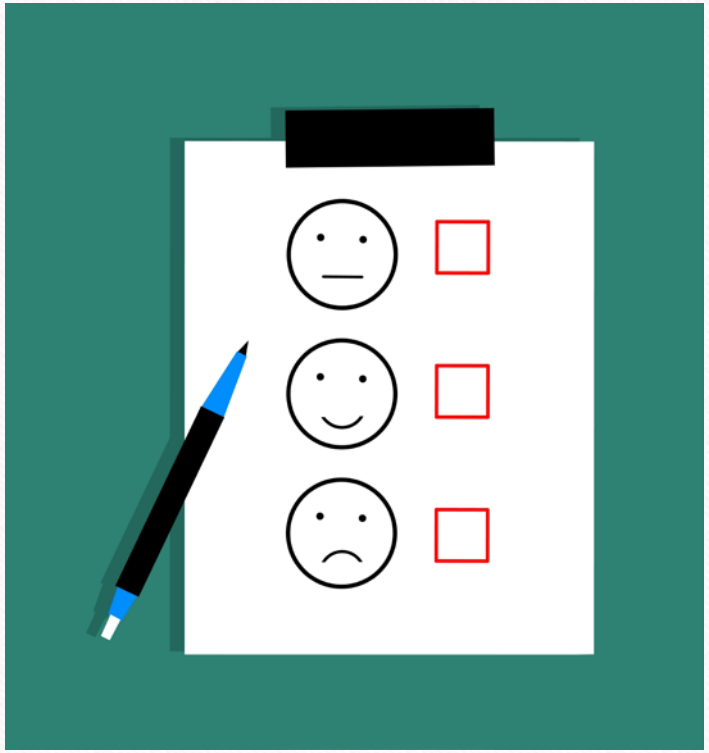
- How typical is Diamond's situation at our school?
- What are our strategies for responding to students in Diamond's position?
- How useful is this kind of failure experience in their lives? Is it the same kind of failure as things we've experienced (like failing to make a team or production cast, or get into a selective college)? Or is it qualitatively different?
- Is seeking to reduce our failure rate a good goal – and if so, what steps could we take to help prevent course failure? In particular – how can adapted grading practices help students to recover before they fail a course?

# Teacher Self-Reflection

- In what ways will I organize my grading system to help motivate students to keep pursuing growth and mastery?
- What questions do I still have? With whom will I discuss this more?
- How can I work with colleagues in a collaborative community around the issue of assessment?

# Time for Feedback

Thanks for completing the Evaluation Form!



# Using Small Group Learning to Engage Students

EVERYONE GRADUATES CENTER

JOHNS HOPKINS SCHOOL of EDUCATION

# Today's Agenda

- Understand benefits of small group learning activities
- Experience a small group learning activity
- Debrief and discuss planning steps for implementing small group activities effectively
- Reflect on applying this experience to own classrooms

# Small Group Learning Addresses Needs for …

- Autonomy
- Belonging/Connection
- Active Engagement

# Small Group Learning Addresses CCSS Standards as Students Learn To:

- Build on others' ideas
- Express their ideas clearly and persuasively
- Work with peers to set rules for collegial discussions and decision-making
- Pose and respond to questions
- Clarify, verify, or challenge ideas and conclusions
- Summarize points of agreement and disagreement
- Qualify or justify their own views and understanding

Adapted from CCSS.ELA-Literacy.SL.9-10 Standards

# Group Learning Activity

# Six Hats (Glasses) Thinking

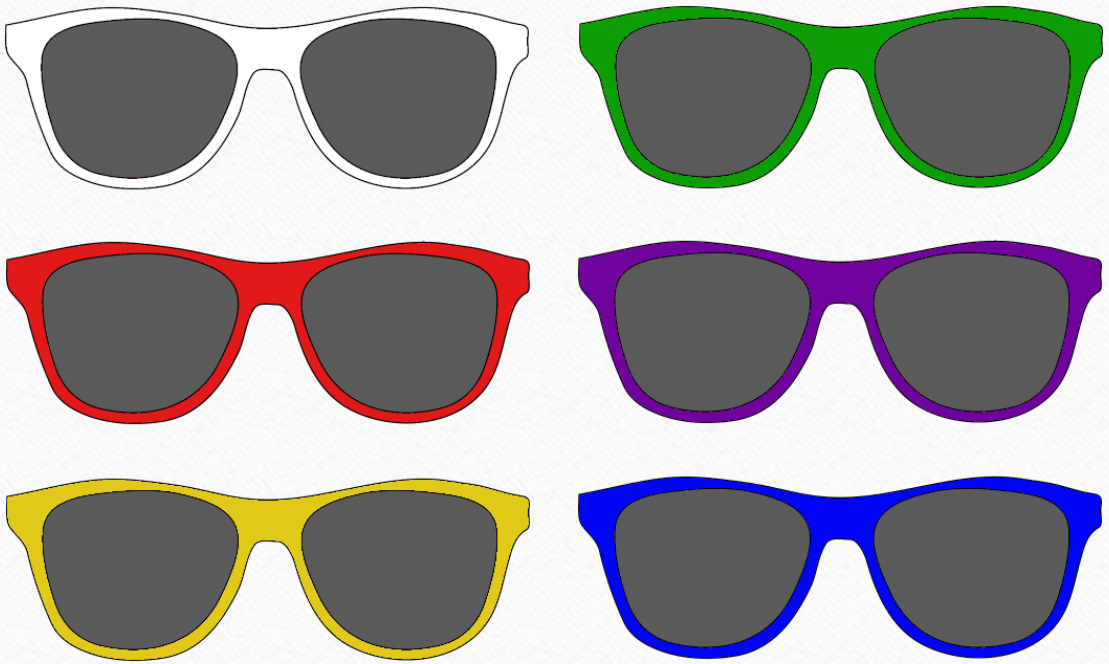
- Teachers experience the role of a student in an activity designed to help students:
  - Develop skills in analyzing informational text
  - Examine text from different perspectives
  - Express their ideas clearly and persuasively
  - Clarify, verify, or challenge ideas and conclusions
  - Qualify or justify their own views and understanding

# Six Hats (Glasses) Thinking

In this activity the group will read an article related to genetic engineering and each group member will respond to the article from a different perspective:

- **White glasses – focused on information:** What are the facts?
- **Red glasses – focused on feelings:** How do I feel about this?
- **Yellow glasses – optimistic:** What's the upside?
- **Green glasses – focused on growth and where an idea could go in the future**
- **Purple glasses – focused on judgment and potential negative consequences**
- **Blue glasses – focused on the thinking process:** What are the implications?

Teachers engage in Six Glasses Activity using handouts and instructions



- Group members read article silently, highlighting words/phrases relevant to their color's perspective and making notes as needed.
- When all are ready, each person then reflects out loud to the group from the perspective of their glasses color, beginning with the white glasses and proceeding in order. (You can skip colors if you have a smaller group than 6.)
- We will follow rest of directions as a large group.

# Debrief

- What do you see as the benefits of an activity like this for teaching your subject matter?
- What possible problems do you foresee in having students do this activity? What could be done to prevent or address these potential problems?
- In what ways could you adapt this activity to a future lesson?

# Addressing Challenges of Small Group Learning Through Careful Planning and Preparation

# Learning Targets

- What are the learning targets for students?
- How does a small group activity/learning task help students to reach those learning targets?
- How will students demonstrate their learning?

# Structural Dimensions of Small Group Learning

- Size of group
- How students will be assigned to groups
- Degree of structure in the activity
- Length of time for the activity
- How students will be held accountable for their participation in group activity

# Getting Students Ready for Collaborative Learning

- Model the strategy (and the roles within the group)
- Establish team among students working together
- Ensure students understand both individual and corporate responsibility for the project

# For those new to implementing successful small group learning:

Start with very **small** groups (**pairs**)

doing **highly structured** activities

for a **short duration** of time.

GRADUALLY INCREASE

Group size

Length of small group time

Freedom and choice within activity structure

Start Small

Gradually Increase Complexity

# Teacher's Role During Small Group Learning

- Circulate and gauge how groups are functioning, redirect as necessary
- Implement the system or plan (prepared in advance) for how to support dysfunctional groups
- Pose questions to groups to deepen their thinking

# Small Group Activity Ideas from Prior Sessions

- Venn Diagram Activity
- Small Group Analysis Challenge
- Silent Discussion Using 4 A's Protocol
- Text-Based Small Group Discussion with Guiding Questions
- Analysis Challenge (Critique of Learning Targets/Unit Plan Tool)

# Other Small Group Activities Available

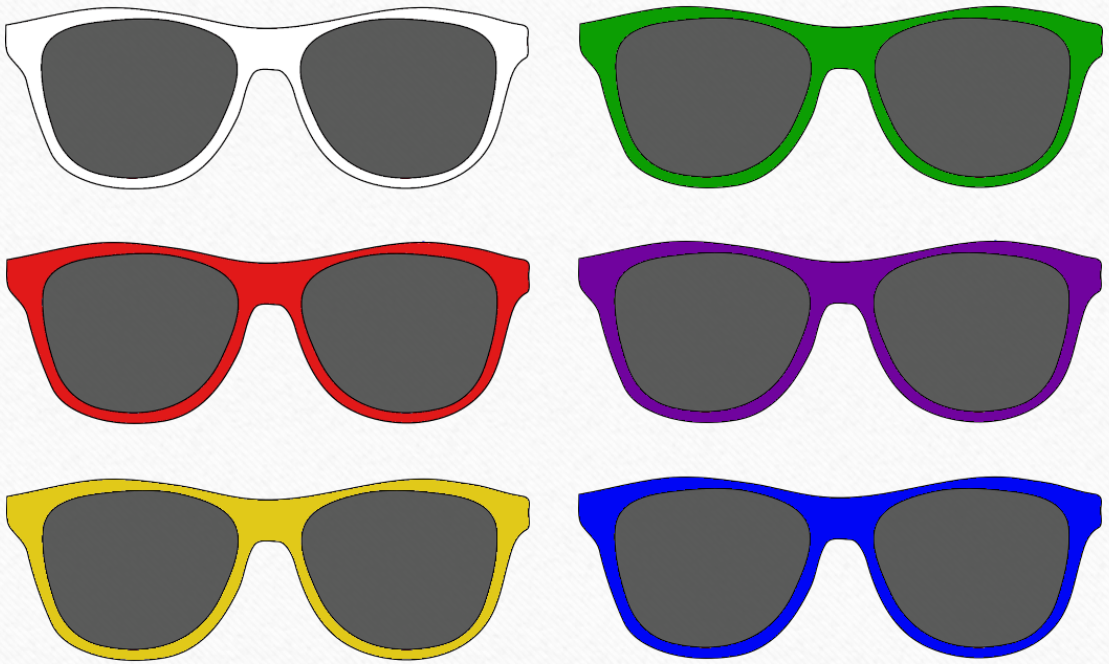
- Group writing activity (English, History/Government)
- Science article discussion activity
- Political cartoon analysis activity

Available on website

See handout for website access instructions

# Drawing for Glasses Set

Submit your name if you are willing to try the activity (and share glasses sets with other teachers!)



# Teacher Self-Reflection

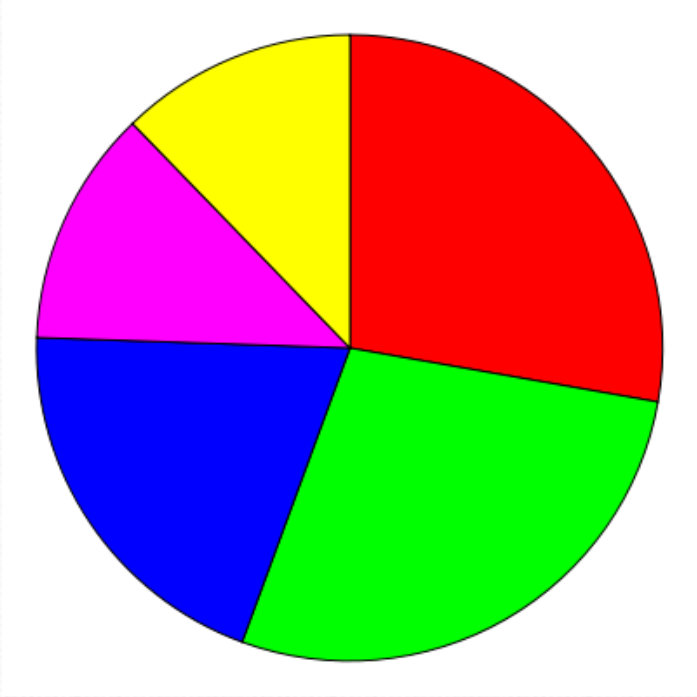
- How might I incorporate small group learning into an upcoming lesson/class session? Is there any way I can adapt the Six Glasses activity for one of my upcoming lessons?
- What are the challenges I could encounter in using a small group lesson activity, and how could I plan ahead to address these?
- How can a small group learning experience make the content more engaging for students? Help to develop students' higher order thinking skills?
- When and with which colleague(s) will I plan to discuss these ideas more?

# Additional Teacher Activities for Small Group Learning

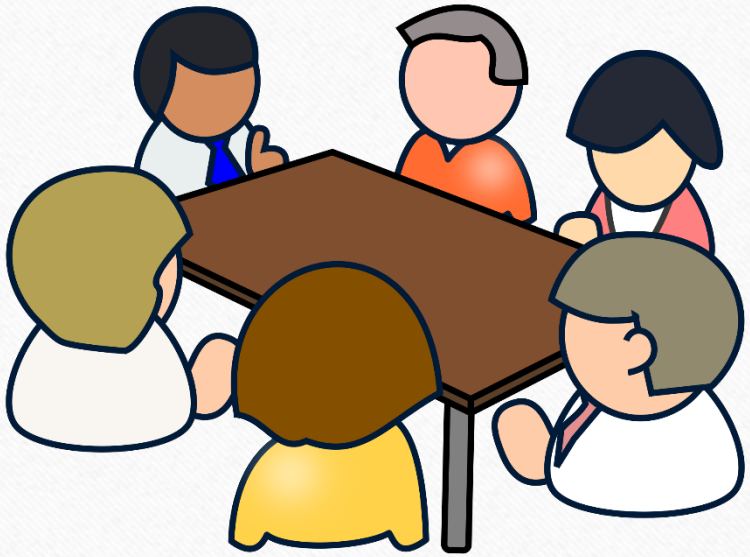
To be used or substituted as needed

# How Do Students Spend Time in Classroom?

Teachers graph how students spend time in their classrooms (see sheets with categories)



# Small Group Discussion



In your small group, compare your graphs with each other.

How much variation is there across teachers?

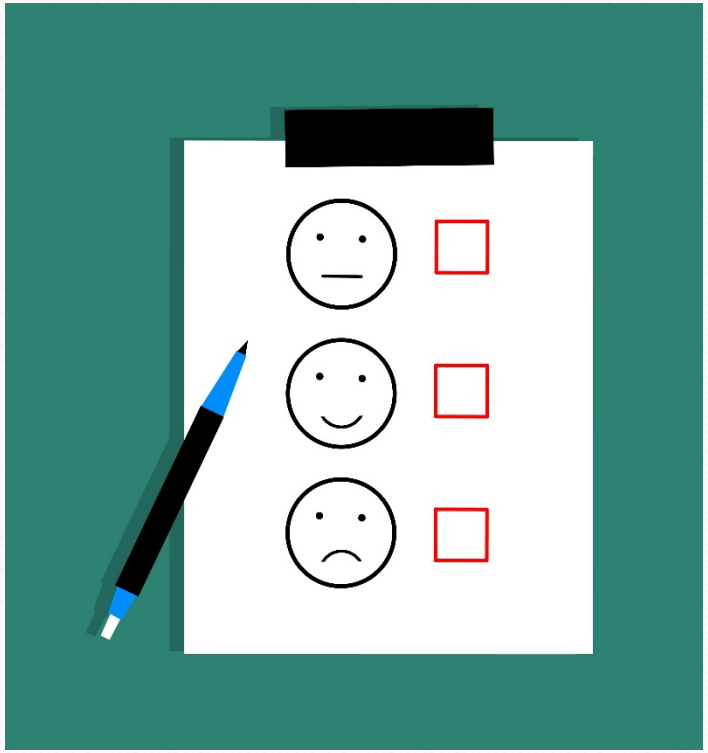
What possible explanations do you see for the level of variation?

# Teachers Share Experiences Using Small Group Activities in Classroom

Teacher volunteers (at least 3) form panel to address these questions before full group:

- What small group classroom activity have you tried out in the past month?
- What was the learning objective for students?
- How did the small group activity work for engaging student interest and effort?
- What evidence can you describe of student learning during the activity?
- Did anything surprise you?
- What challenges did you encounter, and how did you (or would you in future) address them?

Thanks for participating and for your feedback!



# Connecting the Work to Students' Future Work Lives

## Creating Assignments with Student Products for Real Audiences in English, Social Studies, and World Languages

EVERYONE GRADUATES CENTER

JOHNS HOPKINS SCHOOL of EDUCATION

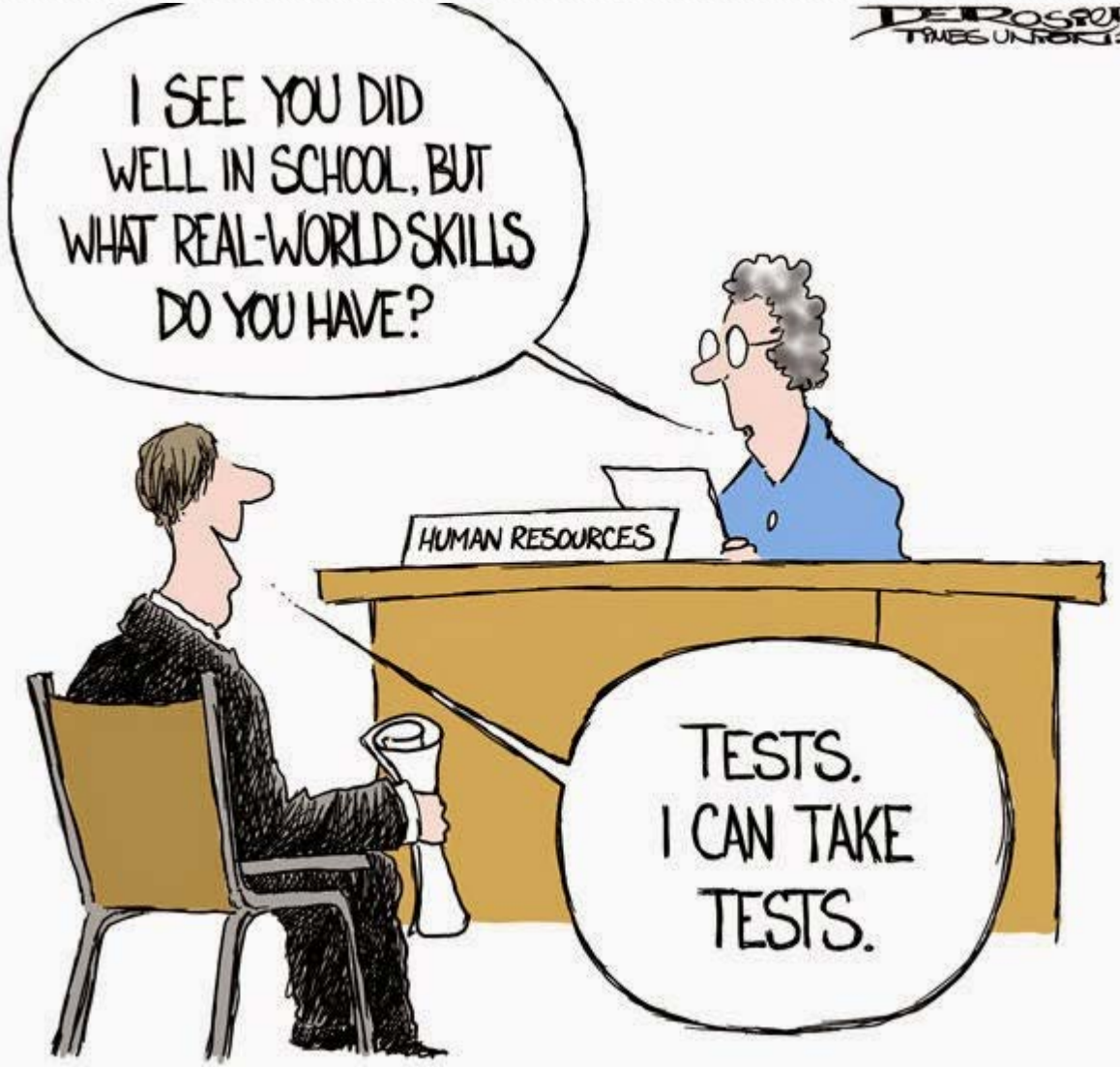



Image credit: John DeRosier, https://www.timesunion.com/opinion/slideshow/Cartoon-Gallery-John-DeRosier-s-View-7780.php

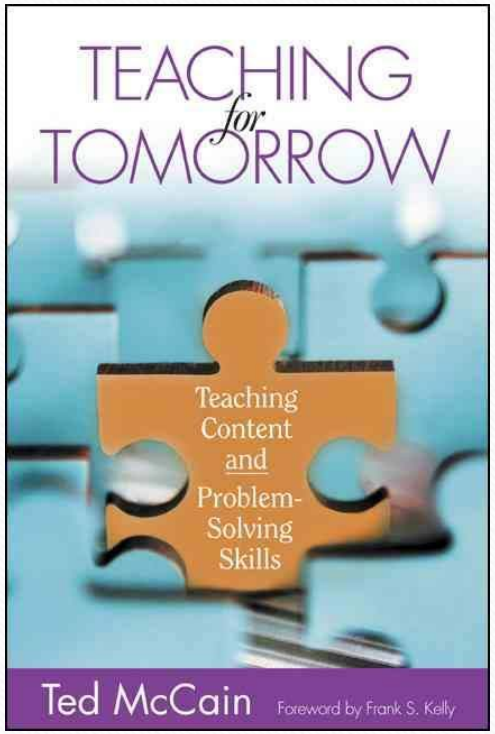
How can we create experiences for students that are relevant, engaging and more like the real world?

# Agenda

- Silent conversation activity and debrief
- What are Authentic Assignments (and how often do we give them)?
- Giving students a framework for attacking authentic assignments – 4 Ds of Problem Solving

# Reading Excerpt from Ted McCain

- Read the excerpt from *Teaching for Tomorrow*
- Think about:
  - **ASSUMPTIONS** the author holds
  - Things you **AGREE** with
  - Things you want to **ARGUE** with
  - Things you want to **ASPIRE** to

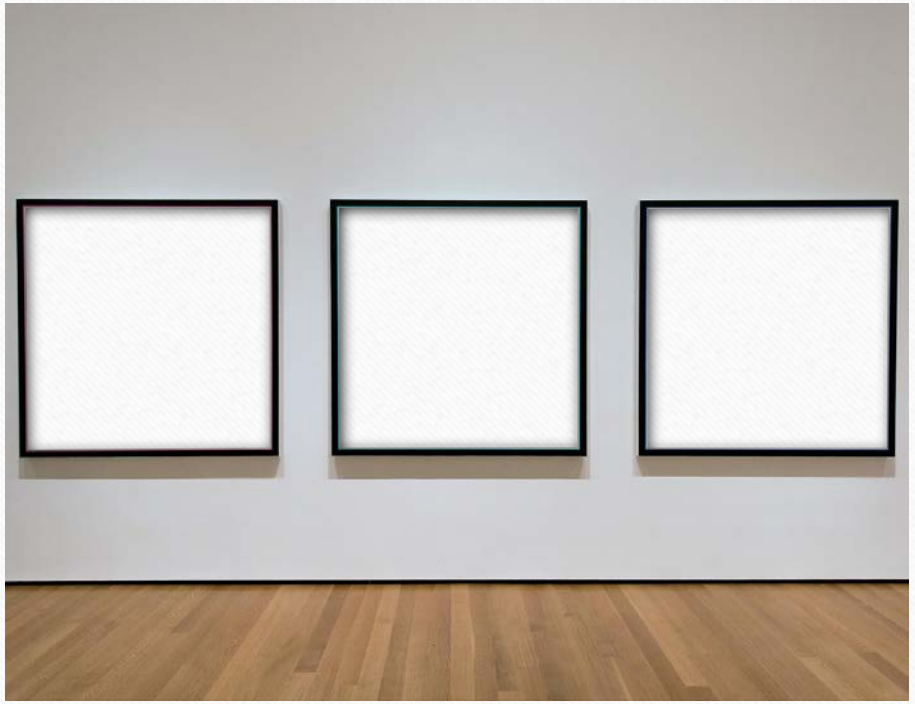


# Silent Conversation Steps

1. Use the large post-it sheets to write a reaction to the text (**assumptions**, something you **agree** with, something you want to **argue** with, something you want to **aspire** to)
2. Post your comments on the appropriate large sheet on the wall
3. Read the comments of others
4. Respond in writing to comments of others as you feel led

# Gallery Walk

Read and reflect on the conversations generated



# Large Group Debrief

What were some themes that emerged in the conversation?

Did interacting with others' opinions influence any of your original opinions?

# Debrief on the Activity Strategy

- What did you like about the silent conversation activity? Anything you did not like?
- How do you think a silent conversation activity would work with students?
- What might you need to change/adapt to make this work in your classroom?
- How likely are you to try something similar (with a text or visual representation from your specific curriculum)?

Taking smaller steps before plunging into McCain-style real world scenarios…

# Authentic, Real World Assignments Involve at Least One of the Following:

- Authentic problem – a problem or situation that can and will occur in the real world
- Authentic task – a task that people perform in the work world
- Authentic process – a set of instructions and parameters that are similar to a real world or work experience
- Authentic audience – a product or performance shared with a particular group of people (outside the classroom)

# How Frequently Do Your Assignments Involve an ..

- Authentic problem
- Authentic task
- Authentic process
- Authentic audience

Use handout sheet to estimate

# Examples of Authentic Assignments

# Volunteers?

# How Can Assignments Resemble Real World Job Assignments?

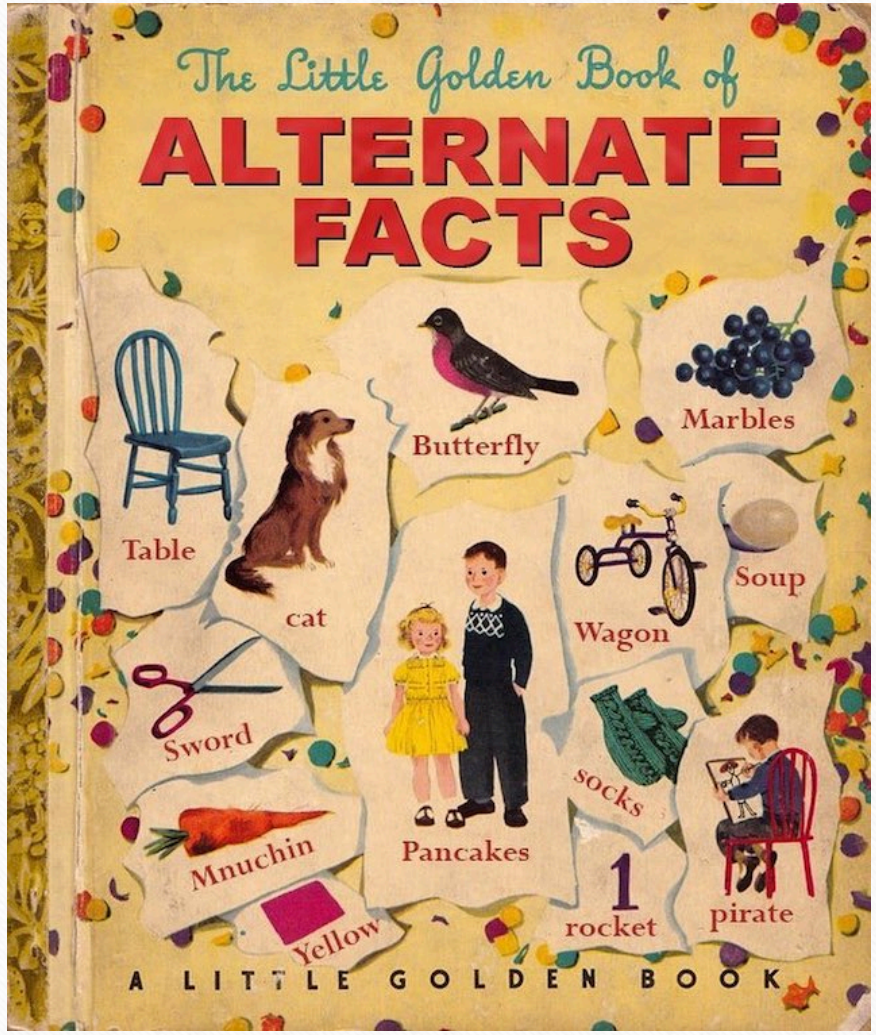
Some Examples

Presentation to City Council (either PRO or CON) regarding expansion of acreage zoned for growing marijuana for medical use

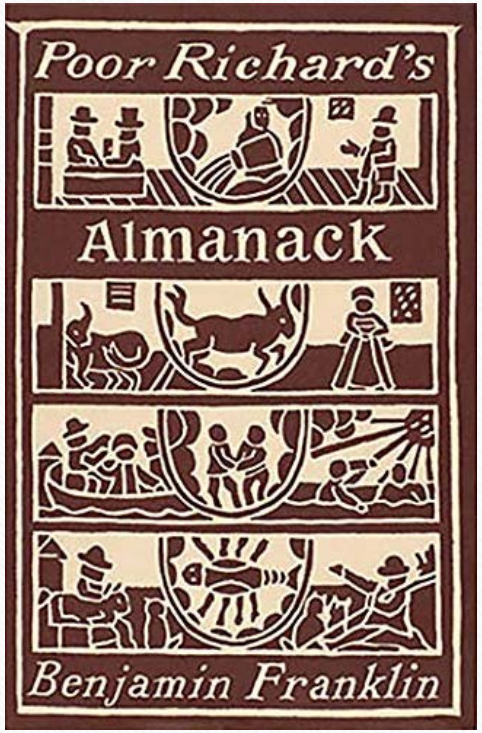
Newspaper story with real world length and time constraints

A children's book for a real audience –

Can be used in almost any subject area



# One Example Shared by a H.S. Teacher




Craft a children's book – to share with kindergarten and first-grade students at a nearby elementary school – that helps them to understand some sayings from *Poor Richard's Almanack*.

Bethany Whinnem (@Drama_Chick)
http://talkswithteachers.com/authenticwriting

Editing assignment for a literary magazine

(fix a piece that is too long and has grammatical and organizational problems)

# Authentic Assignments in History

Students can demonstrate history knowledge and skills through:

- Museum exhibit
- Podcast
- Children's story
- Historical travel brochure
- Planning a tour focused on a particular historical event/period
- Designing an art exhibit focused on a particular historical event
- Creating a model of a battle scene or everyday life in another historical period

# Authentic Assignments in World Languages

Students can demonstrate language knowledge and skills through:

- Podcast about immigrant from country where language spoken
- Travel brochure featuring a planned tour of several cities in the country where language spoken
- Children's story
- Planning and conducting an evening event with dinner and program featuring food and music from country where language spoken

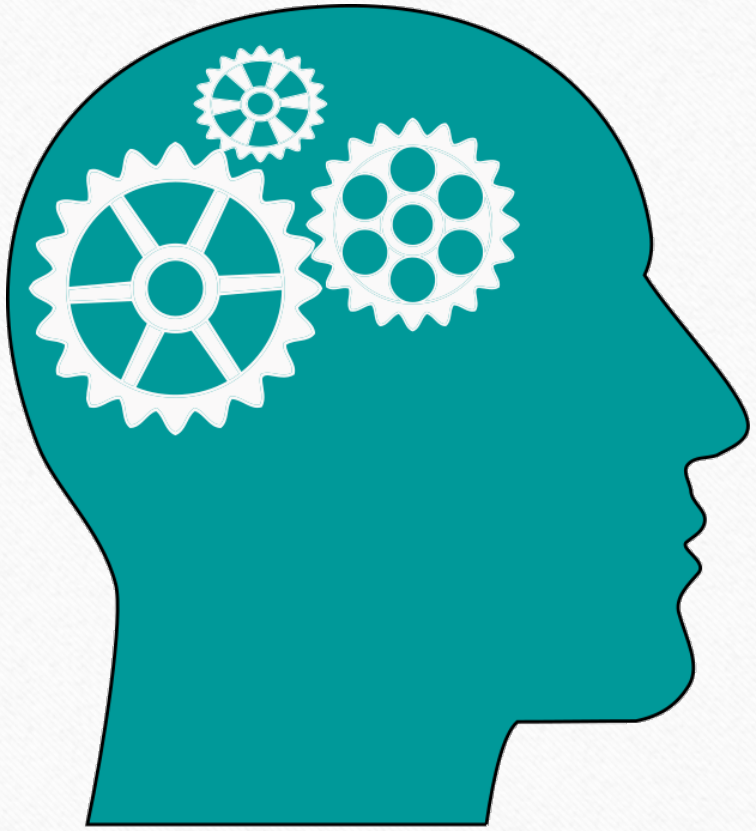
Other ideas for written, verbal, and artistic authentic assignments on handouts

# A Real-World Task (History/World Language)

Your company has been hired to create a brochure describing a 7 day tour of at least 3 cities in a country where [World Language] is spoken. The tour should include visits of historical interest each day. The brochure should indicate realistic costs for air travel, ground transportation, lodging, and food.

But students need a framework for tackling such a nebulous, multi-step task

Giving students a framework for problem solving is authentic learning that prepares them for the real world.



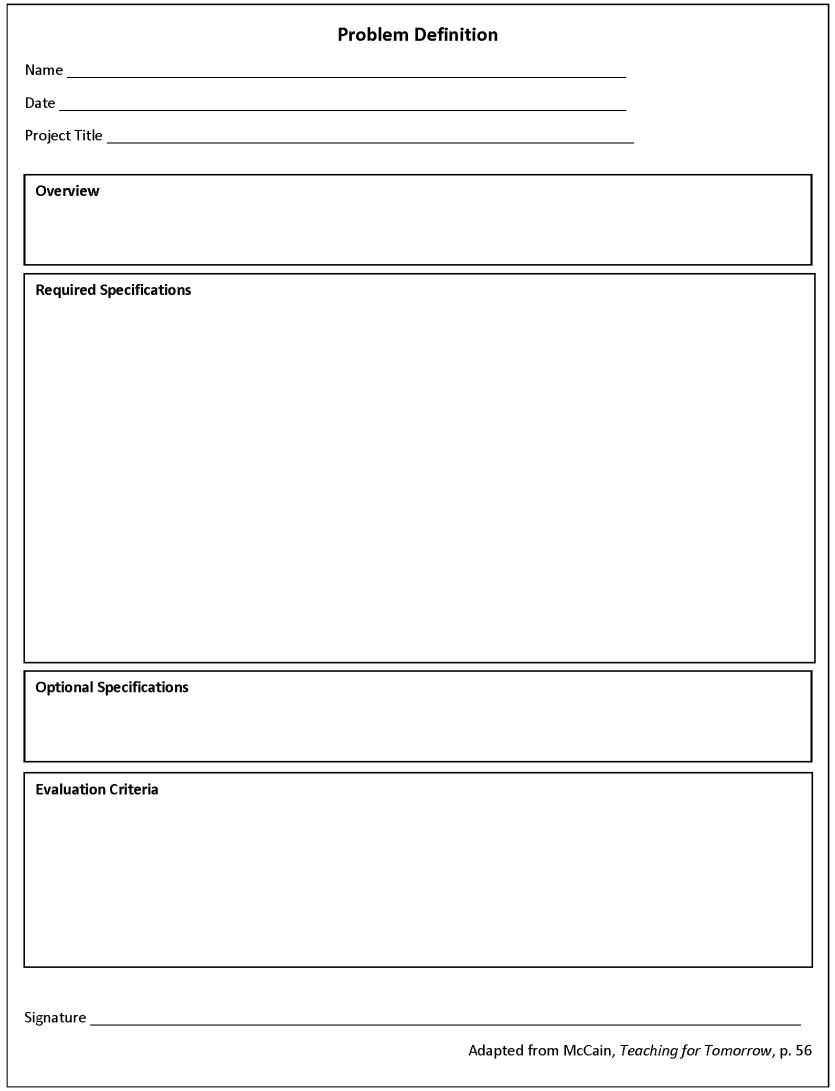
# The Four Ds of Problem Solving

- Define
- Design
- Do
- Debrief

From Ted McCain, *Teaching for Tomorrow*

# Define

- Overview
- List of criteria or specifications for completing the task (required and optional)
- Criteria for evaluating the product



**Problem Definition**

Name _____

Date _____

Project Title _____

**Overview**

**Required Specifications**

**Optional Specifications**

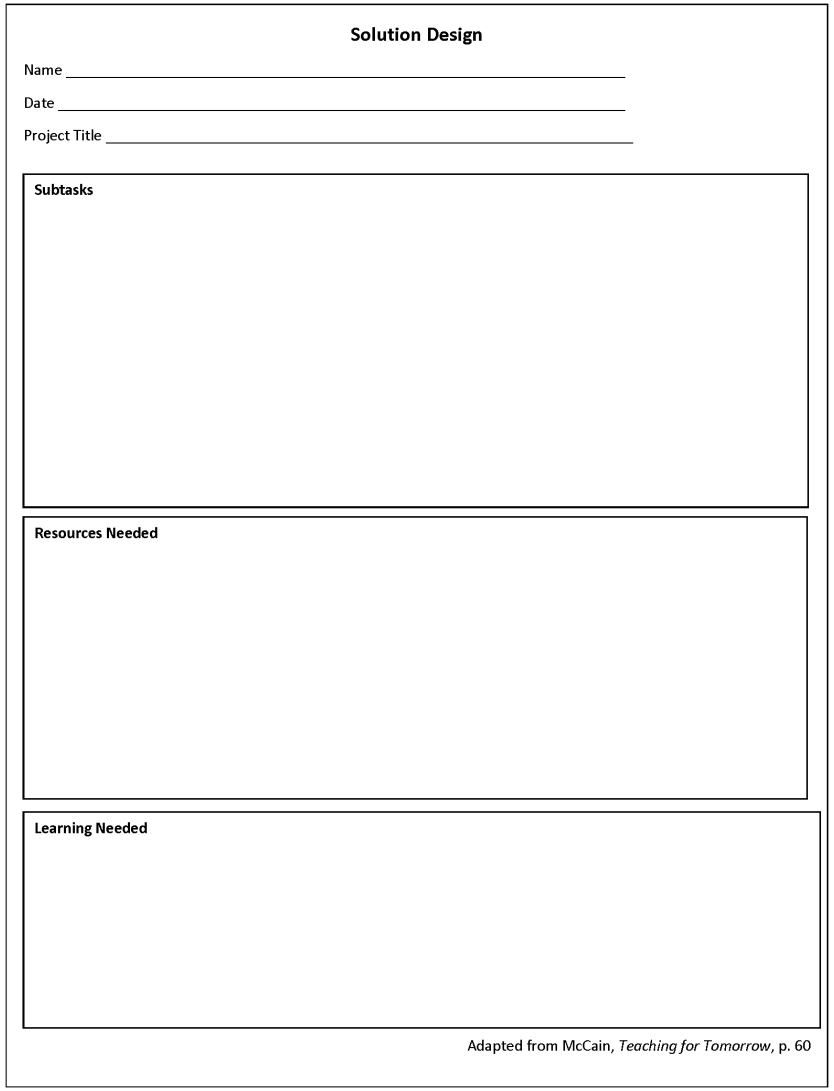
**Evaluation Criteria**

Signature _____

Adapted from McCain, *Teaching for Tomorrow*, p. 56

# Design

- Outline subtasks
- List of resources needed
- Specify learning needed



**Solution Design**

Name _____

Date _____

Project Title _____

**Subtasks**

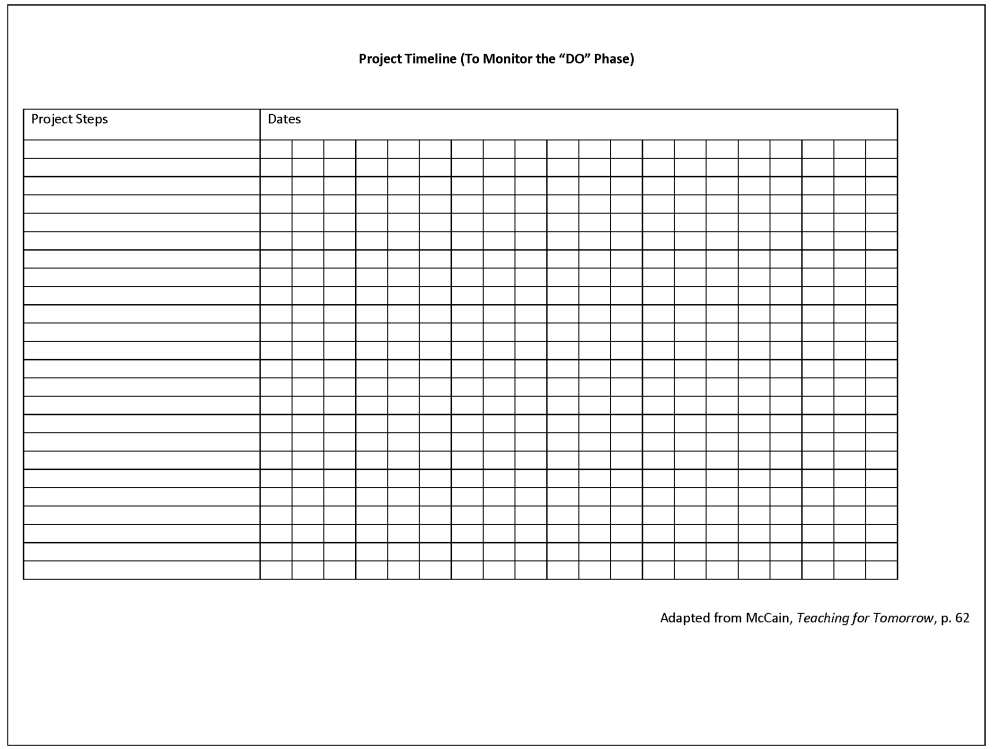
**Resources Needed**

**Learning Needed**

Adapted from McCain, *Teaching for Tomorrow*, p. 60

# Do

- Implement the plan from Design phase
- Are we keeping up with the timeline outlined in the design phase?
- If difficulties with execution, what could we change about our design plan?



**Project Timeline (To Monitor the "DO" Phase)**

| Project Steps | Dates |
|---|---|
| | |

Adapted from McCain, *Teaching for Tomorrow*, p. 62

**Invoice**

Name _____

Date _____

Project Title _____

| Item | Maximum Points | Points Awarded |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| TOTAL | 100 | |

**Project Manager Comments**

**Customer (Teacher) Comments**

Adapted from McCain, *Teaching for Tomorrow*, p. 74

# Debrief

- Both teacher and student evaluate the final product, based on specifications outlined in the define phase
- How well has the project met the criteria outlined in the define phase?

# The Four Ds of Problem Solving

| | |
|---|---|
| Define | • create a list of criteria for completing the task |
| Design | • identify subtasks, skills and knowledge needed to complete the project |
| Do | • implement the plan outlined in the Design phase |
| Debrief | • have both teacher and student evaluate the final product, based on the specifications outlined in the Define phase of the project |

From Ted McCain, *Teaching for Tomorrow*

# Other Frameworks for Tackling Complex Tasks?

Teachers share other frameworks they may already be using

See handouts for additional ideas for alternative assignments

# Teacher Small Group Reflection and Share-Out

- What upcoming course content would be appropriate for an assignment that has a real audience or resembles a real-world work assignment – or both?
  - What standards need to be assessed in such an assignment?
  - What alternative ways of assessing skills will students find relevant and engaging?
- What are the barriers to implementing this idea in my class? How can I overcome those barriers?
- How could I use the 4 D's of Problem Solving concepts and tools to provide scaffolding for students to attack an authentic task that requires them to work more independently?
- How will I know if my authentic assignment for students is successful?

# Connecting the Work to Students' Future Work Lives

## Creating Assignments with Student Products for Real Audiences in Science and CTE

EVERYONE GRADUATES CENTER

JOHNS HOPKINS SCHOOL of EDUCATION

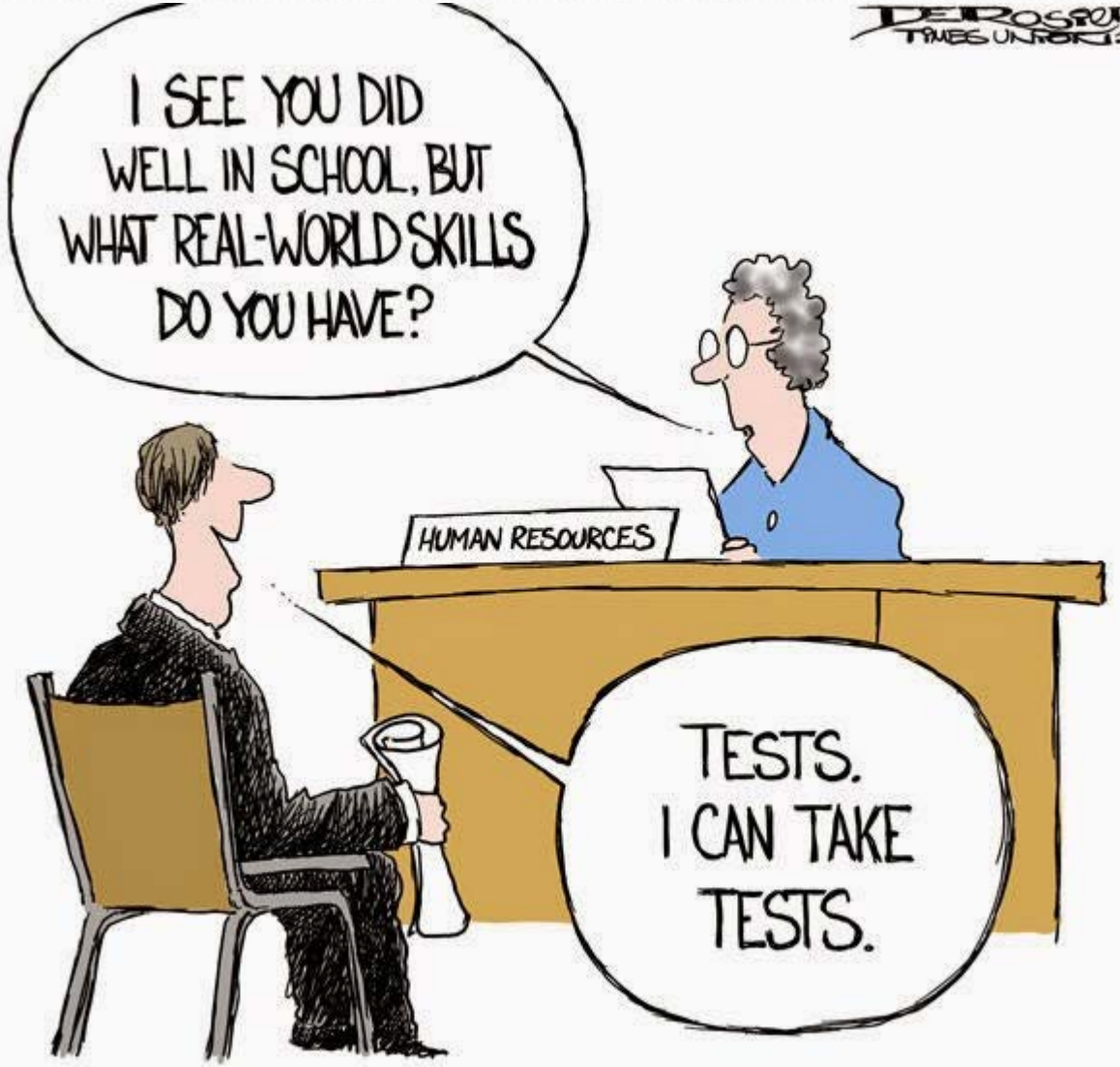



Image credit: John DeRosier, https://www.timesunion.com/opinion/slideshow/Cartoon-Gallery-John-DeRosier-s-View-7780.php

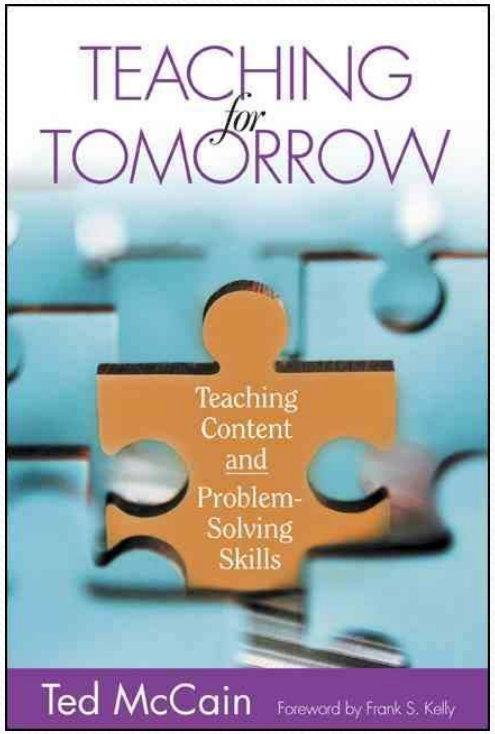
How can we create experiences for students that are relevant, engaging and more like the real world?

# Agenda

- Silent conversation activity and debrief
- What are Authentic Assignments (and how often do we give them)?
- Giving students a framework for attacking authentic assignments – 4 Ds of Problem Solving

# Reading Excerpt from Ted McCain

- Read the excerpt from *Teaching for Tomorrow*
- Think about:
  - **ASSUMPTIONS** the author holds
  - Things you **AGREE** with
  - Things you want to **ARGUE** with
  - Things you want to **ASPIRE** to

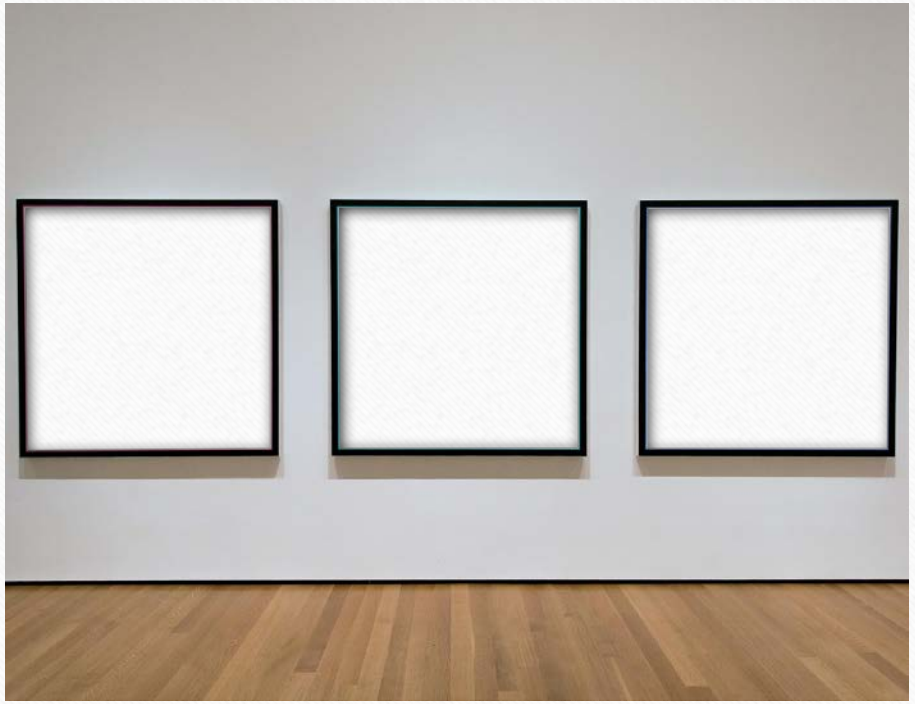


# Silent Conversation Steps

1. Use the large post-it sheets to write a reaction to the text (**assumptions**, something you **agree** with, something you want to **argue** with, something you want to **aspire** to)
2. Post your comments on the appropriate large sheet on the wall
3. Read the comments of others
4. Respond in writing to comments of others as you feel led

# Gallery Walk

Read and reflect on the conversations generated



# Large Group Debrief

What were some themes that emerged in the conversation?

Did interacting with others' opinions influence any of your original opinions?

# Debrief on the Activity Strategy

- What did you like about the silent conversation activity? Anything you did not like?
- How do you think a silent conversation activity would work with students?
- What might you need to change/adapt to make this work in your classroom?
- How likely are you to try something similar (with a text or visual representation from your specific curriculum)?

Taking smaller steps before plunging into McCain-style real world scenarios…

# Authentic, Real World Assignments Involve at Least One of the Following:

- Authentic problem – a problem or situation that can and will occur in the real world
- Authentic task – a task that people perform in the work world
- Authentic process – a set of instructions and parameters that are similar to a real world or work experience
- Authentic audience – a product or performance shared with a particular group of people (outside the classroom)

# How Frequently Do Your Assignments Involve an ..

- Authentic problem
- Authentic task
- Authentic process
- Authentic audience

Use handout sheet to estimate

# Examples of Authentic Assignments

# Volunteers?

# How Can Assignments Resemble Real World Job Assignments?

Some Examples

Presentation to City Council (either PRO or CON) regarding expansion of acreage zoned for growing marijuana for medical use

Proposal specifying work to be completed (like a construction or repair project)

# Personal trainer's fitness plan proposal and justification for client

Newspaper story with real world length and time constraints

Needs assessment outlining top priorities for needs in a municipality, company or school regarding such issues as:

- Building maintenance
- Environmental pollution
- Aesthetic issues
- Resolving relational conflicts
- Food service

A children's book for a real audience –

Can be used in almost any subject area

Other ideas for written, verbal, and artistic authentic assignments on handouts

# Addressing Issue of Using Animals to Test Cosmetics

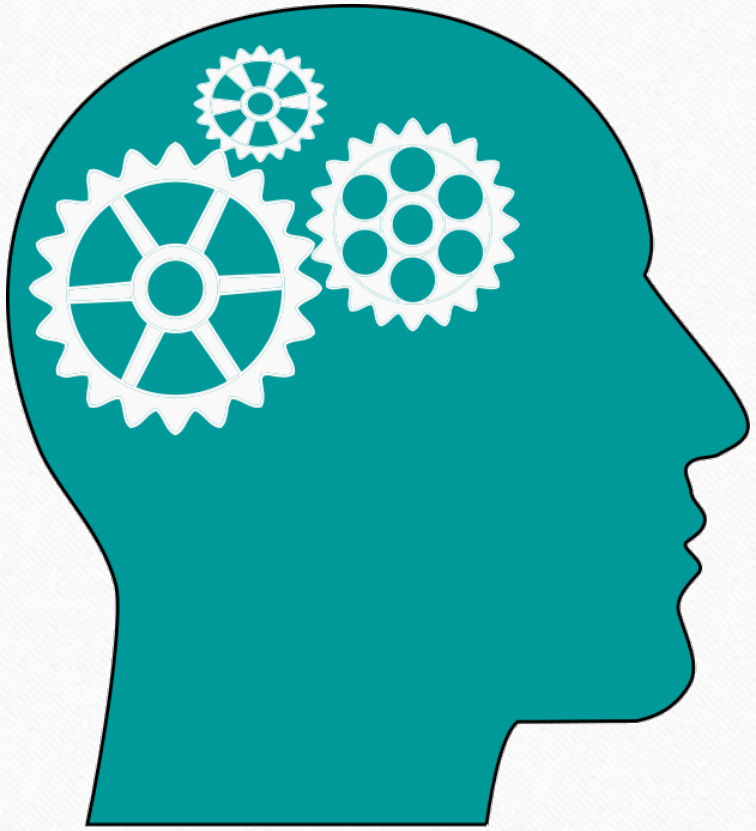
# The Real-World Task

Concerned Citizens for Animals (CCFA) wants your company to craft a website that will promote public awareness about the cruel use of animals in cosmetic testing and advocate for a law that will outlaw it. At a minimum, it should include:

- a creative homepage with an interactive element to catch viewer attention
- a page explaining the dangers of animal-tested cosmetics
- a page on how companies can perform these tests to make them safe for human use without using animals
- a page that details the chemistry behind the tests – what toxicity is, how chemists define it, and the reactions of different chemicals used in testing

But students need a framework for tackling such a nebulous, multi-step task

Giving students a framework for problem solving is authentic learning that prepares them for the real world.



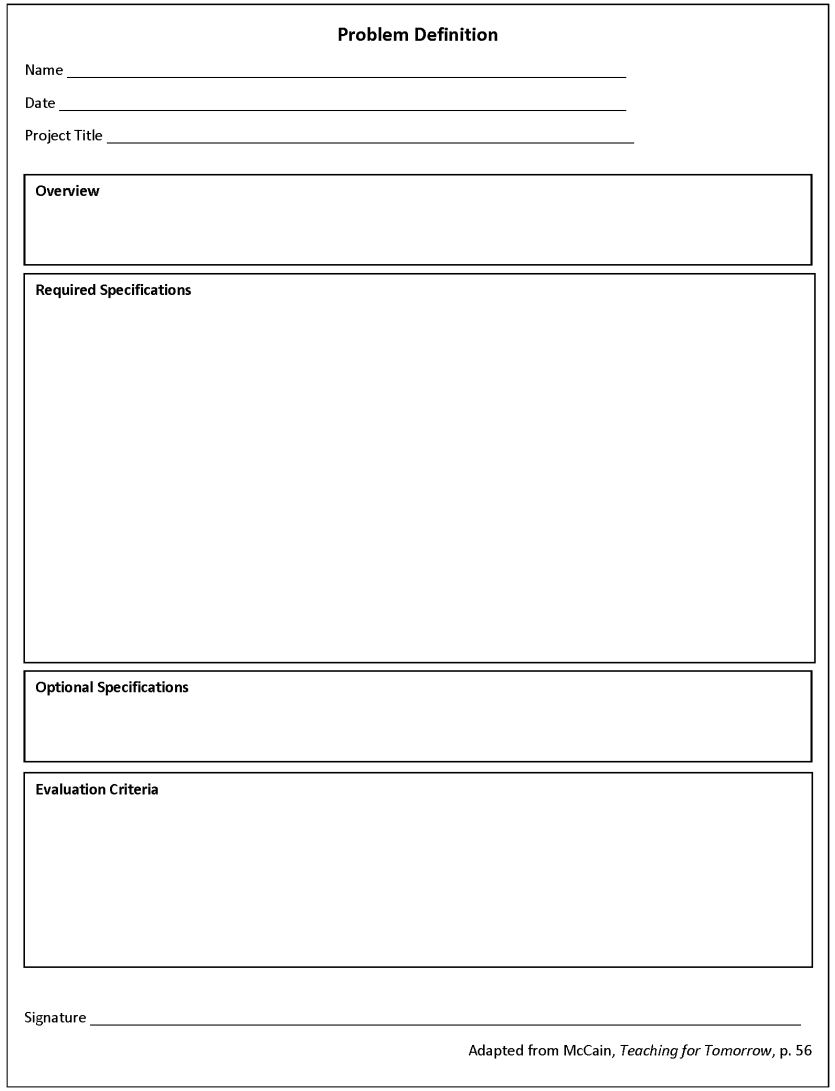
# The Four Ds of Problem Solving

- Define
- Design
- Do
- Debrief

From Ted McCain, *Teaching for Tomorrow*

# Define

- Overview
- List of criteria or specifications for completing the task (required and optional)
- Criteria for evaluating the product



**Problem Definition**

Name _____

Date _____

Project Title _____

**Overview**

**Required Specifications**

**Optional Specifications**

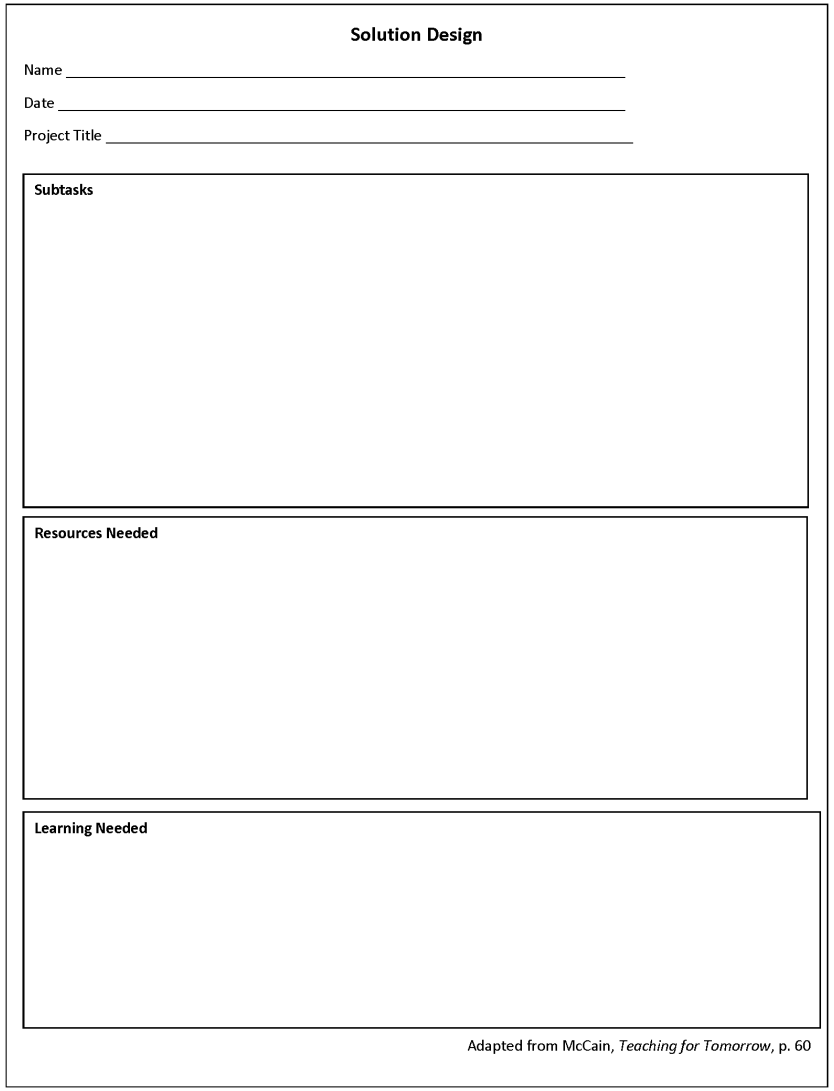
**Evaluation Criteria**

Signature _____

Adapted from McCain, *Teaching for Tomorrow*, p. 56

# Design

- Outline subtasks
- List of resources needed
- Specify learning needed



**Solution Design**

Name _____

Date _____

Project Title _____

**Subtasks**

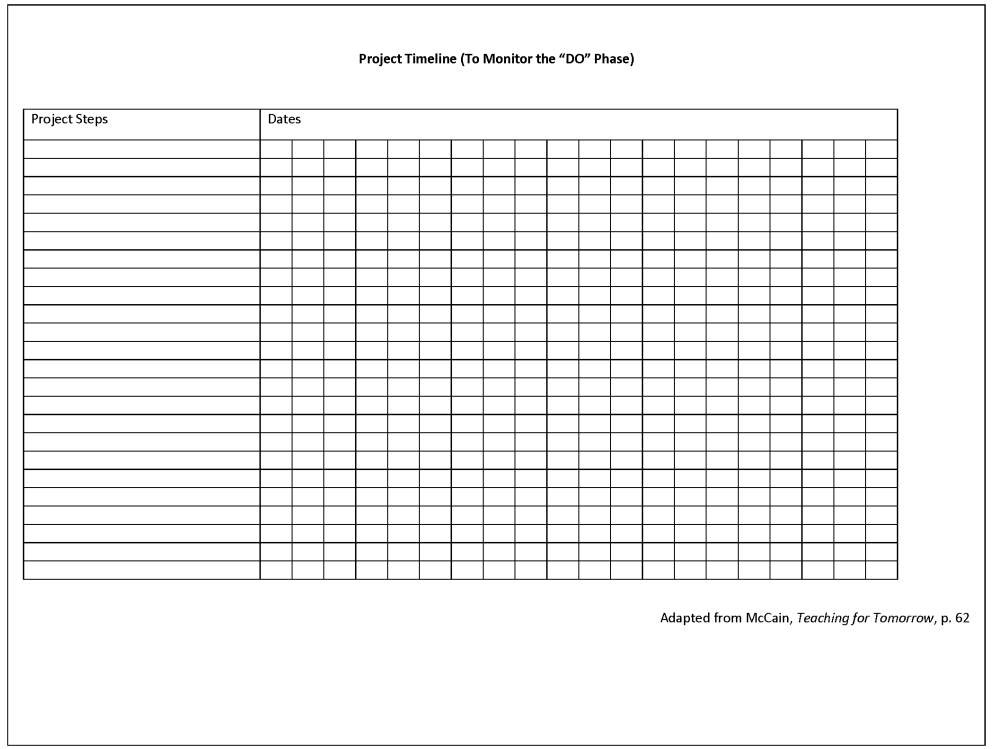
**Resources Needed**

**Learning Needed**

Adapted from McCain, *Teaching for Tomorrow*, p. 60

# Do

- Implement the plan from Design phase
- Are we keeping up with the timeline outlined in the design phase?
- If difficulties with execution, what could we change about our design plan?



**Project Timeline (To Monitor the "DO" Phase)**

| Project Steps | Dates |
|---|---|
| | |

Adapted from McCain, *Teaching for Tomorrow*, p. 62

**Invoice**

Name _____

Date _____

Project Title _____

| Item | Maximum Points | Points Awarded |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| TOTAL | 100 | |

**Project Manager Comments**

**Customer (Teacher) Comments**

Adapted from McCain, *Teaching for Tomorrow*, p. 74

# Debrief

- Both teacher and student evaluate the final product, based on specifications outlined in the define phase
- How well has the project met the criteria outlined in the define phase?

# The Four Ds of Problem Solving

| | |
|---|---|
| Define | • create a list of criteria for completing the task |
| Design | • identify subtasks, skills and knowledge needed to complete the project |
| Do | • implement the plan outlined in the Design phase |
| Debrief | • have both teacher and student evaluate the final product, based on the specifications outlined in the Define phase of the project |

From Ted McCain, *Teaching for Tomorrow*

# Other Frameworks for Tackling Complex Tasks?

Teachers share other frameworks they may already be using

See handouts for additional ideas for alternative assignments

# Teacher Small Group Reflection and Share-Out

- What upcoming course content would be appropriate for an assignment that has a real audience or resembles a real-world work assignment – or both?
  - What standards need to be assessed in such an assignment?
  - What alternative ways of assessing skills will students find relevant and engaging?
- What are the barriers to implementing this idea in my class? How can I overcome those barriers?
- How could I use the 4 D's of Problem Solving concepts and tools to provide scaffolding for students to attack an authentic task that requires them to work more independently?
- How will I know if my authentic assignment for students is successful?

# Helping Students Track Their Progress in Meeting Learning Goals

EVERYONE GRADUATES CENTER

JOHNS HOPKINS SCHOOL of EDUCATION

"Arguably the most basic issue a teacher can consider is what he or she will do to establish and communicate learning goals, track student progress, and celebrate success."

Robert J. Marzano, *The Art and Science of Teaching*

# A Sense of Accomplishment/Mastery/ Competence is One Source of Motivation

- Students need to have a way of monitoring their progress in mastering learning targets.
- Studies show that "when students track their own progress on assessments using graphic displays … [there was] a 32 percentile point gain in their achievement" (Marzano, 2009, p. 1).

# Guiding Questions

- How are we helping students to monitor their progress in meeting learning goals?
- In what ways do grades help students monitor their progress in learning?
- In what ways might grades not be as helpful as we might think in helping students monitor their learning progress?
- What do students whose grades indicate they are not succeeding need in order to make progress and experience success?

# Reports from the Field

- How are students checking their grades on the portal?
- What kind of guidance do they receive?
- Are all students doing this?
- What impact does this seem to be having?

# Group Discussion Using Google Docs

- On your computer, open Chrome
- At the top right, click: ⋮ **› New Incognito Window**

  - or -

  you can use the following keyboard shortcut:
  - On a PC: Press **Ctrl + Shift + n**
  - On a Mac: Press **⌘ + Shift + n**
- Next, follow the case sensitive link provided to you
- If you see someone around you have tech trouble, please lend a helping hand
- Please help everyone get the most out of this activity by keeping the environment as quiet as possible ☺

# Small Group Discussion

- In what ways do grades help students monitor their progress in learning?
- What else might students need to be able to reflect on and respond to their learning progress?

# Small Group Discussion

- In what other ways (besides giving grades) are you currently helping students monitor their learning progress in your classes?

# Share Out

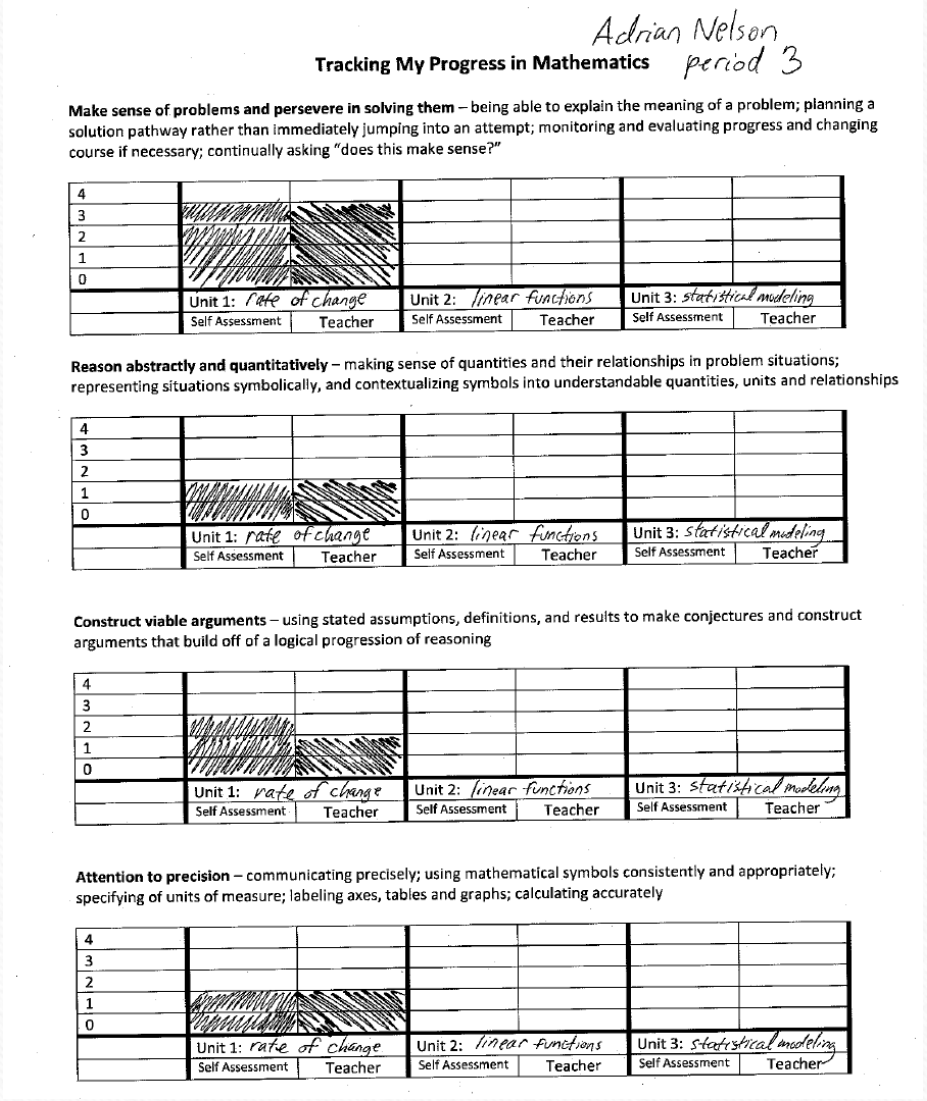
# Examples of Helping Students Track Their Learning Progress

# UNIT PLAN

**Overarching learning goal that addresses current and future relevance…**

| | | How well can I do this?<br>1= Not at all<br>2= A little<br>3= Very well | | | Evidence that I can do this | |
|---|---|---|---|---|---|---|
| | **Learning Target** | Unit Start | Unit Midpoint | Unit End | | Goal Met? |
| **Knowledge/Reasoning Targets**<br>"What do I need to know?"<br>"What can I do with what I know?" | 1. | | | | | ☐ |
| | 2. | | | | | ☐ |
| | 3. | | | | | ☐ |
| | 4. | | | | | ☐ |
| | 5. | | | | | ☐ |
| | 6. | | | | | ☐ |
| | 7. | | | | | ☐ |
| **Skill/Product Targets**<br>"What can I demonstrate?"<br>"What can I produce to show my learning?" | 8. | | | | | ☐ |
| | 9. | | | | | ☐ |
| | 10. | | | | | ☐ |
| | 11. | | | | | ☐ |

Adapted from Myron Dueck, *Grading Smarter Not Harder*, pp. 79-80. Dueck credits his colleague Karl Koehler from Humble, TX



Adrian Nelson period 3

**Tracking My Progress in Mathematics**

**Make sense of problems and persevere in solving them** – being able to explain the meaning of a problem; planning a solution pathway rather than immediately jumping into an attempt; monitoring and evaluating progress and changing course if necessary; continually asking "does this make sense?"

| | Unit 1: rate of change | | Unit 2: linear functions | | Unit 3: statistical modeling | |
|---|---|---|---|---|---|---|
| | Self Assessment | Teacher | Self Assessment | Teacher | Self Assessment | Teacher |
| 4 | | | | | | |
| 3 | | | | | | |
| 2 | | | | | | |
| 1 | | | | | | |
| 0 | | | | | | |

**Reason abstractly and quantitatively** – making sense of quantities and their relationships in problem situations; representing situations symbolically, and contextualizing symbols into understandable quantities, units and relationships

| | Unit 1: rate of change | | Unit 2: linear functions | | Unit 3: statistical modeling | |
|---|---|---|---|---|---|---|
| | Self Assessment | Teacher | Self Assessment | Teacher | Self Assessment | Teacher |
| 4 | | | | | | |
| 3 | | | | | | |
| 2 | | | | | | |
| 1 | | | | | | |
| 0 | | | | | | |

**Construct viable arguments** – using stated assumptions, definitions, and results to make conjectures and construct arguments that build off of a logical progression of reasoning

| | Unit 1: rate of change | | Unit 2: linear functions | | Unit 3: statistical modeling | |
|---|---|---|---|---|---|---|
| | Self Assessment | Teacher | Self Assessment | Teacher | Self Assessment | Teacher |
| 4 | | | | | | |
| 3 | | | | | | |
| 2 | | | | | | |
| 1 | | | | | | |
| 0 | | | | | | |

**Attention to precision** – communicating precisely; using mathematical symbols consistently and appropriately; specifying of units of measure; labeling axes, tables and graphs; calculating accurately

| | Unit 1: rate of change | | Unit 2: linear functions | | Unit 3: statistical modeling | |
|---|---|---|---|---|---|---|
| | Self Assessment | Teacher | Self Assessment | Teacher | Self Assessment | Teacher |
| 4 | | | | | | |
| 3 | | | | | | |
| 2 | | | | | | |
| 1 | | | | | | |
| 0 | | | | | | |

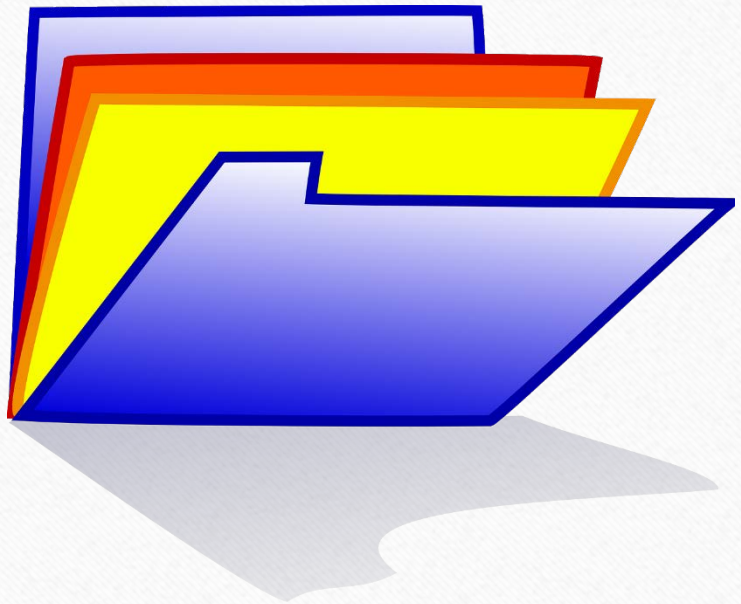
# Tracking Progress in Specific Mathematics Skills:

- Making sense of problems and perseverance in solving them
- Reasoning abstractly and quantitatively
- Constructing viable arguments
- Attention to precision

# Providing Structure for Students to Track Progress

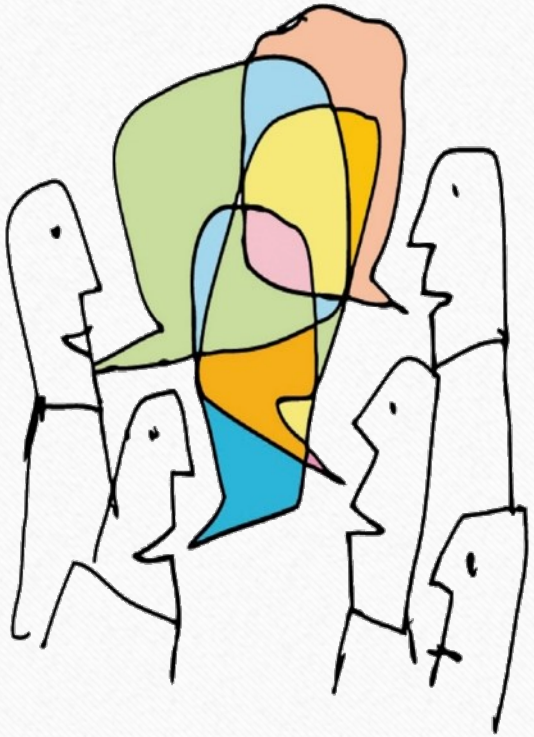
- Providing tables for students to keep track of rubric scores on different writing skills over time:

| **Each paragraph includes specific evidence to support my claims** | | | | | |
|---|---|---|---|---|---|
| 4 | | | | | |
| 3 | | | | | * |
| 2 | | * | * | * | |
| 1 | * | | | | |
| 0 | | | | | |
| | Paper 1 | Paper 2 | Paper 3 | Paper 4 | Paper 5 |



- Keeping student work portfolios to use in student-teacher conferences to reflect on work progress over time

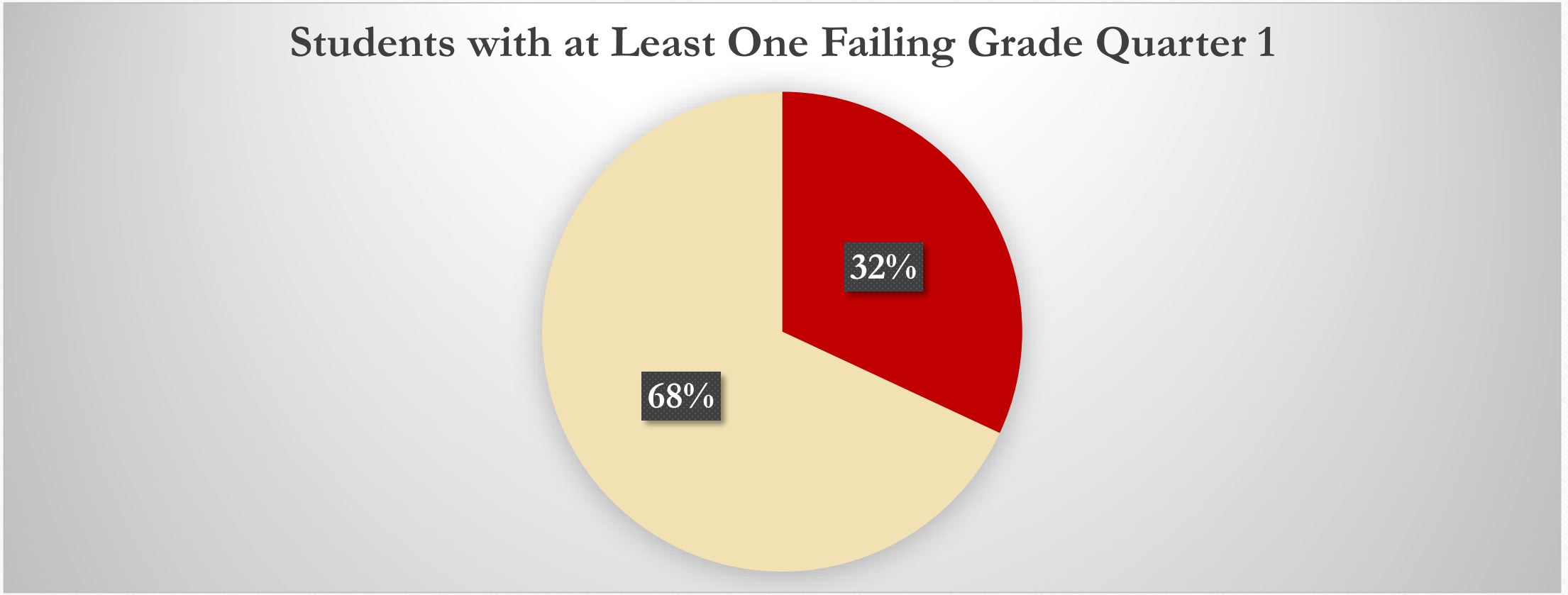
# Small Group Sharing



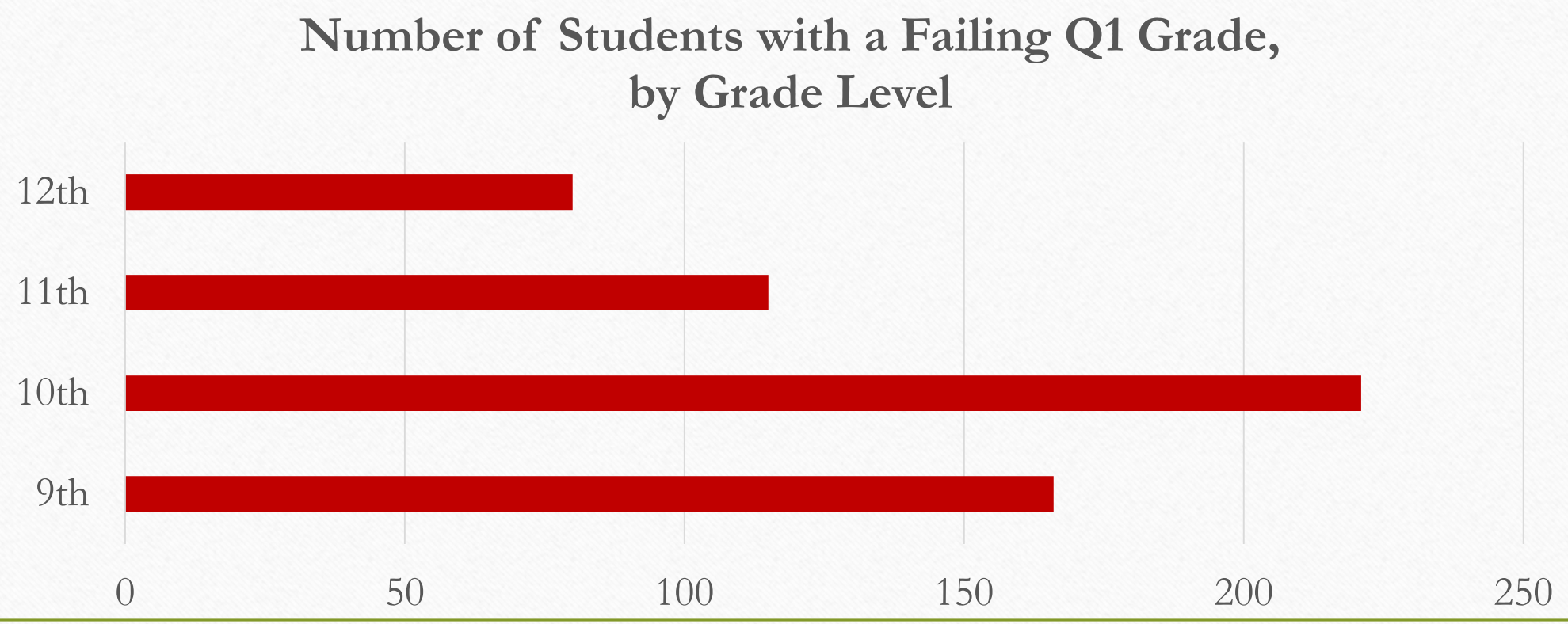
- Take a couple of minutes to look over the examples in your folder
- Then discuss with those seated near you:
  - What thoughts are emerging for you about designing and implementing a regular, systematic way for students to:
    - monitor their progress on learning goals?
    - reflect on steps they need to take to grow in mastery?

# Reflecting on Grading and Assessment

# How Many at Our School Are Not Succeeding?



# How Many at Our School Are Not Succeeding?



# Opening up the gradebooks

# What % of My Students Are Currently Not Succeeding in My Classes?

| | Class 1 | Class 2 | Class 3 | Class 4 | Class 5 |
|---|---|---|---|---|---|
| Number of students below 60 | | | | | |
| Number of students in class | | | | | |
| % below 60 | | | | | |

# Department Discussion Using Google Docs

# Department Discussing Using Google Docs

- Please go to the most appropriate link based on the courses you teach
- Type **goo.gl/** followed by:
  - *English* add link
  - *World Languages* add link
  - *Math* add link
  - *Science* add link
  - *Social Studies* add link
  - *Fine Arts* add link
  - *CTE* add link
  - *PE* add link
  - *General Special Ed* add link
- Remember, links are case sensitive!

# Questions to Ponder

- What are the main reasons your students are not succeeding?
- What steps do these students need to take to be able to pass this semester?
- What supports do these students need to help them recover?
- For how many of your students is it already too late to pass this semester?

# Next Steps

- What next steps need to happen for students who are failing?
- Are there policies or practices currently in place that, if changed, would help us help more students succeed the first time they take a course?

# Fact or Fiction? Distinguishing Fake News from Real News

## Engaging Students in Critical Reading Skills

EVERYONE GRADUATES CENTER

JOHNS HOPKINS SCHOOL of EDUCATION

# Guiding Question

How can I leverage students' natural interests to engage them in building one of the most critical skills in contemporary society:

The ability to evaluate information from the media

- What evidence do we have about students' ability to evaluate information?
- How can we engage students in learning how to evaluate information they encounter?
- How can we increase students' ability to identify and reject unreliable information?

# Wall Street Journal Headline

## Most Students Don't Know When News Is Fake, Stanford Study Finds

**Teens absorb social media news without considering the source; parents can teach research skills and skepticism**

**WSJ, November 21, 2016**

# Reactions?

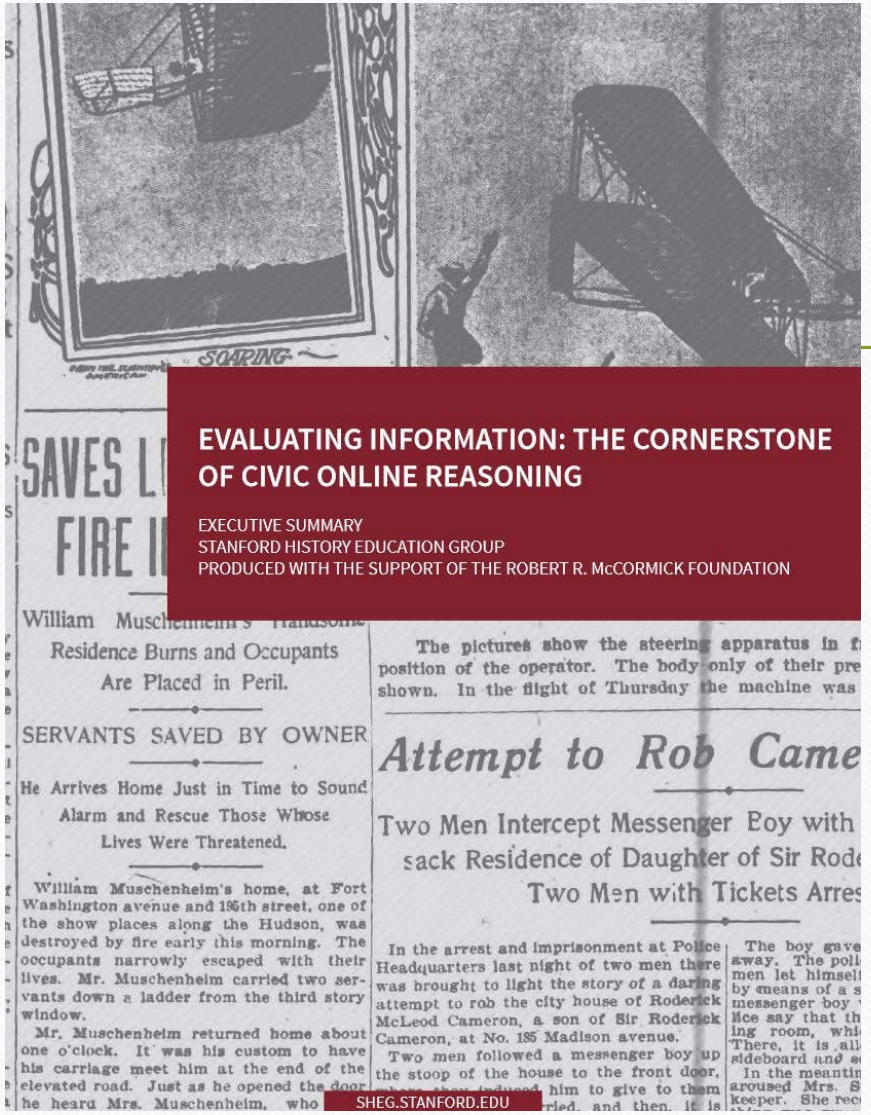
Do you tend to believe this headline, or find it questionable?

Why? What factors help to explain your reaction?

**Most Students Don't Know When News Is Fake, Stanford Study Finds**

**Teens absorb social media news without considering the source; parents can teach research skills and skepticism**

**WSJ, November 21, 2016**




# Findings from the Stanford Study

- Fewer than 1 in 5 high school students "questioned the source of the post or the source of the photo" in a claim about the effects of radiation on plant life after the Fukushima disaster
- Fewer than 1 in 5 middle school students can distinguish between native advertisements (identified as "sponsored content") and news stories

"Overall," the report concluded, "young people's ability to reason about the information on the internet can be summed up in one word: *bleak*."

Chris Berdik

http://www.slate.com/articles/technology/future_tense/2016/12/media_literacy_courses_help_high_school_students_spot_fake_news.html

# News Stories

Fact or Fiction?

**Simon Rowntree** @SRowntreeNews · 16h

I am at a Trump rally in Manhattan, and thousands are chanting "We hate Muslims, we hate blacks, we want our great country back". Disgusting

150K 120K

WikiLeaks CONFIRMS Hillary Sold Weapons to ISIS… Then Drops Another BOMBSHELL!

Read more:
http://thepoliticalinsider.com/wikileaks-confirms-hillary-sold-weapons-isis-drops-another-bombshell-breaking-news/#ixzz4aZDSK6EL

# Small Group Discussion Exercise

## (How might something like this work in your classroom?)

Teachers will play the roles of students divided into small groups to accomplish the following tasks collaboratively:

- Read the "news" story assigned to your group.
- Develop a list of questions you need to find answers to in order to evaluate whether the "news" story is reliable or not.
- List the questions in a logical order on your poster chart.
- Suggest at least one good way to find the answer to each question, and be ready to defend why it is a good approach.

# Large Group Share-Out

# Teacher Reflection on Where Students Will Need Scaffolding

- Which questions do you think your students will be able to come up with themselves?
- Which questions do you think they will probably not think of?
- Are there ways to probe and help students discover what they need to know without telling them directly? (And why might it be important to do this?)
- What methods for answering their questions are students likely to suggest? Where will they need guidance in finding reliable sources?

What are the pros and cons of teaching such a checklist prior to asking students to consider coming up with such a list on their own?

Huffington Post, November 22, 2016

# Addressing the Issue of "Fake News" in My Classroom

How can I fit this into my curriculum?

What standards does this address?

What do I need to do next to try this out?

# Reading Informational Text Standards (CCSR Grades 9-10 for ELA and SS)

- I can determine the author's point of view in a text. (RI 6-1)
- I can determine the author's purpose for writing a text. (RI 6-2)
- I can analyze accounts of the same subject told in a different medium, determining which aspects are emphasized in which medium. (RI 7-1)
- I can assess whether an author's reasoning is valid and whether s/he has enough relevant evidence to support the claims s/he makes. (RI 8-2)
- I can identify false statements and fallacious reasoning. (RI 8-3)

# Ideas for Engaging Students in Identifying Fake News

Cartoon by Joe Dator, The New Yorker

# Additional Ideas for Engaging Students in Identifying Fake News

Teachers peruse and discuss distributed lesson plan ideas and their own ideas

# Teacher Reflection Questions

- What student interests am I aware of that can provide a segue to engaging them in the importance of distinguishing fake news from real news?
- How can I link this topic to upcoming topics in my curriculum?
- What steps do I need to take to design engaging and effective lesson plans on this topic for my students? What resources would be helpful? With whom will I discuss this more?

# Engaging Students in Science Through Discussion of Science News Articles

EVERYONE GRADUATES CENTER

JOHNS HOPKINS SCHOOL of EDUCATION

# Guiding Questions

How might science news stories capture students' natural interests to engage them in learning science content, concepts and practices?

# Session Agenda

- Experience a “Science News” activity
- Debrief the experience and examine as a department
- Explore the site for potential use in an upcoming unit in your classroom

pr011717_lead_test_schools.pdf
Secure | https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/documents/leadsamplinginschools/pr011717_lead_test_schools.pdf
pr011717_lead_test_schools.pdf 1 / 2

California Water Boards

# Media Release

# California Water Systems to Provide Lead Testing For Schools

**FOR IMMEDIATE RELEASE**
**Jan. 17, 2017**

**Contact:** Andrew DiLuccia
**Phone:** (916) 324-4775
andrew.diluccia@waterboards.ca.gov

**SACRAMENTO** – In an effort to further safeguard California's water quality, K-12 schools in the state can receive free testing for lead under a new initiative announced today by the State Water Resources Control Board.

The Board is requiring all community water systems to test school drinking water upon request by the school's officials.

There are approximately 9,000 K-12 schools in California, most of which are served by more than 3,000 community water systems in the state. While these community water systems extensively and regularly test their drinking water for lead, lead could get into clean water at a school campus if there were corroded pipes or old fixtures at the school.

Because California has newer infrastructure and less corrosive water than other parts of the country, lead problems at the tap are uncommon. However, national events have highlighted the importance of ongoing water quality monitoring and in 2015 Governor Edmund G. Brown Jr. directed the State Water Board to incorporate schools into the regular water quality testing that community water systems conduct at customer's taps.

How confident are we about our drinking water at our school?

# Features of "Science News for Students"

https://www.sciencenewsforstudents.org

- Power words
- Data dive
- Real data on lead levels in school drinking water

# Directions for Student Reading in Pairs

- Decide who will be A and who will be B
- EITHER read the first paragraph silently OR A reads aloud – B follows along
- B paraphrases the content
- EITHER read the second paragraph silently OR B reads aloud – A follows along
- A paraphrases the content
- Continue through the remainder of the article

# Pairs Combine into Fours

- Discuss the first two data dive questions
- Select the graph for just one school to discuss question three

# Whole Group Discussion Questions

- If the water was tested again, what are your hunches about how the results might be different?
- How might you present this data?
- Review the Lead Sampling in California handout.
- What questions does this raise?

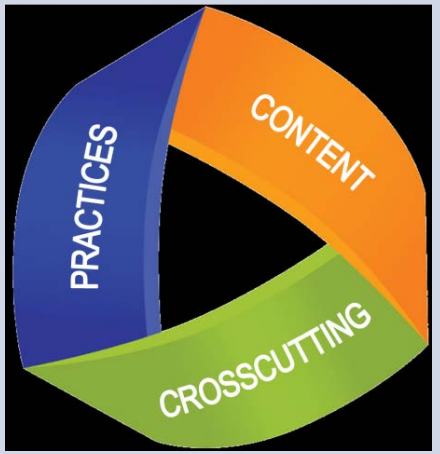
# Debrief

- Thoughts about this experience?
- How might students respond to this?
- How might this type of activity address the curriculum?

# Conceptual Shifts in the NGSS

1. K–12 science education should reflect the real world interconnections in science
2. Using all practices and crosscutting concepts to teach all core ideas all year
3. Science concepts build coherently across K-12
4. The NGSS focus on deeper understanding and application of content
5. Integration of science and engineering
6. Coordination with Common Core State Standards

# Framework for K-12 Science Education & Next Generation Science Standards (NGSS)

| 1. Scientific and Engineering Practices<br>**NSES – Process Skills, Inquiry, and Nature of Science** | 2. Crosscutting Concepts<br>**NSES – Unifying Concepts** | 3. Disciplinary Core Ideas<br>**NSES Science Content**<br><br>*Adds Engineering and STEM* |
|---|---|---|
| 1. Asking questions (for science) and defining problems (for engineering)<br>2. Developing and using models<br>3. Planning and carrying out investigations<br>4. Analyzing and interpreting data<br>5. Using mathematics and computational thinking<br>6. Constructing explanations (for science) and designing solutions (for engineering)<br>7. Engaging in argument from evidence<br>8. Obtaining, evaluating, and communicating information | 1. Patterns<br>2. Cause and effect: Mechanism and explanation<br>3. Scale, proportion, and quantity<br>4. Systems and system models<br>5. Energy and matter: Flows, cycles, and conservation<br>6. Structure and function<br>7. Stability and change<br><br>*Utilizes History of Science and Social and personal perspectives* | • Physical Sciences<br>• Life Sciences<br>• Earth and Space Sciences<br>• Engineering, Technology, and the Applications of Science<br><br>  |

# Time to Explore the Site

- What news pieces are available that align with content in my upcoming curriculum?
- Which scientific and engineering practices might the activity be designed to address?
- What resources or actions would I need to do next to try this out?

# Teacher Reflection Questions

- What steps do I need to take to use this resource in the design of engaging and effective lesson plans?
- What resources would be helpful?
- With whom will I discuss this more?

# Using Project-Based Learning to Deepen Learning and Engagement

EVERYONE GRADUATES CENTER

JOHNS HOPKINS SCHOOL of EDUCATION

# Project-Based Learning (PBL)

- Learning by doing
- Real world connection
- Engages student interest
- Associated with higher or equally high student academic achievement outcomes
- Teaches skills for real world of work

# Agenda

- Teachers engage in short PBL experience
- Debrief about learning from the experience
- Videos and discussion about how students perceive PBL
- Explore site with example PBL units in different subject areas
- Reflect on how you may be able to incorporate PBL in your classroom

# Marshmallow Tower Challenge

In 18 minutes, build the tallest free-standing structure out of
20 sticks of spaghetti, 3 feet of tape, 3 feet of string, and 1 marshmallow.
The marshmallow must be on top.

# Marshmallow Tower Challenge

- Task: Build a free-standing tower that will support the weight of one regular-sized marshmallow **on top**
- Materials (do not all need to be used):
  - 20 pieces of uncooked spaghetti
  - 1 yard of tape
  - 1 yard of string
  - 1 marshmallow

# Debrief of Marshmallow Tower Challenge

- As a learner, what did you learn from this challenge?
- What made this activity engaging or motivating?
- To what extent might students be able to learn from such an experience as the Marshmallow Tower challenge, even though it is not related to course content?

# Debrief of Marshmallow Tower Challenge

- What is needed to create a project that requires collaboration?
- What skills do students need to collaborate effectively?
- What collaboration skills may need to be taught to students and scaffolded rather than assumed?

# How Do Students Experience PBL?

# INSERT VIDEO HERE

http://www.bie.org/object/video/it_really_actually_changed_my_life

When you register at Buck Institute for Education PBLWORKS www.bie.org, you can access this video to show to teachers (at no cost)

# Debrief of PBL Video

What did you find striking or interesting about student perceptions of PBL?

How do the points made by students match your experience as an educator?

# Barriers and Obstacles to PBL

# 5 Keys to PBL

- Establishing Real-World Connections
- Core to Learning
- Structured Collaboration
- Student-Driven
- Multi-faceted Assessment

From http://www.edutopia.org/video/5-keys-rigorous-project-based-learning

# PBL Exploration

- We will explore more ideas for PBL
- Check out this resource: www.pblworks.org
- Register (free) to get access to resources
- Examine the various topics, and generate an idea for a project you could implement in your classroom

# www.pblworks.org

# my.pblworks.org/resources

Search

Go

Type (-)

- Articles (6)
- Project Videos (35)
- Other Videos (19)
- Planning Tools (9)
- Rubrics (23)
- Strategy Guides (17)
- Student Handouts (12)

121 Results

PLANNING TOOLS

## Project Design Rubric

Plan projects with Gold Standard PBL's Essential Project Design Elements.

PROJECT VIDEOS

## Water Quality Project

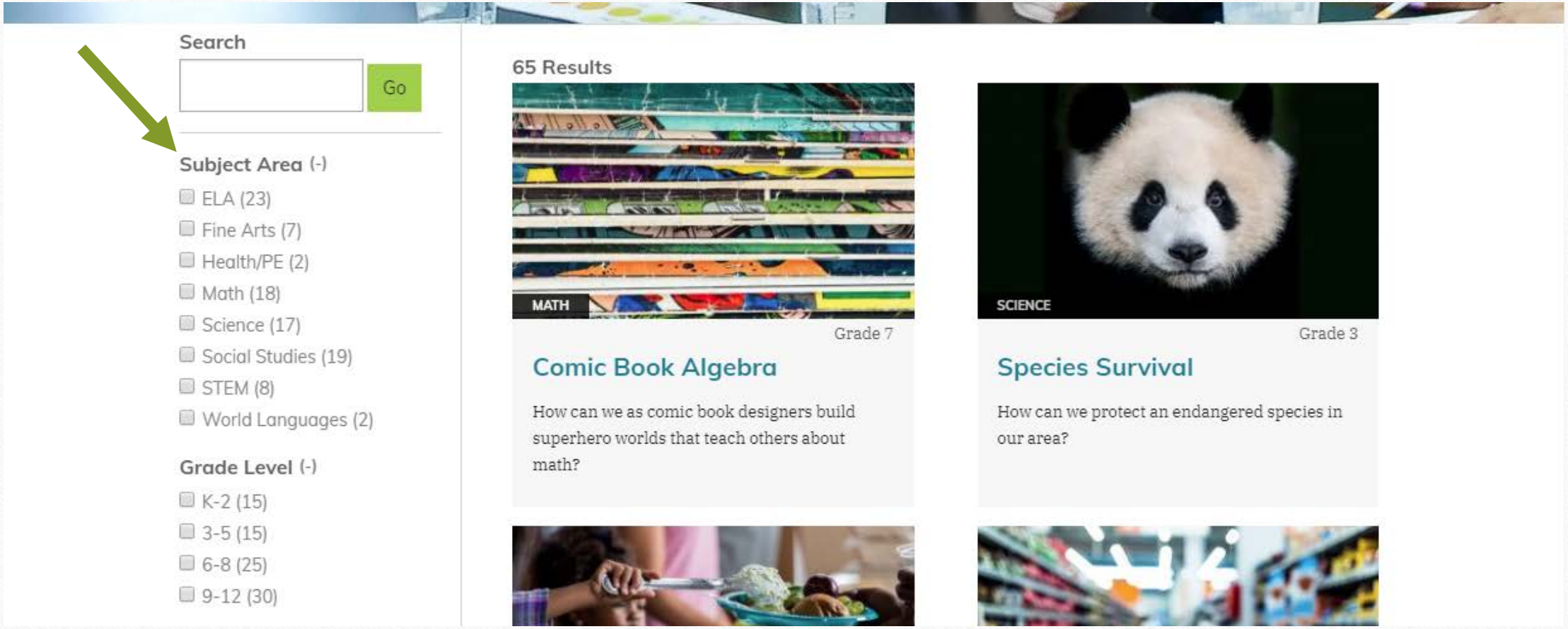
PBLWorks Project Videos 2018: High School Chemistry - Rayhan Ahmed, Leaders High School.

PROJECT VIDEOS

## Revolutions Project Video

PBLWorks Project Videos 2018: High School World History - Erin Brandvold, Impact Academy of Arts & Tech

# my.pblworks.org/projects




Choose a subject – get links to sample units

# Examples of projects under "Health/PE"

Search

Go

Clear all | Health/PE X

**Subject Area** (-)

- [ ] ELA (23)
- [ ] Fine Arts (7)
- [x] Health/PE (2)
- [ ] Math (18)
- [ ] Science (17)
- [ ] Social Studies (19)
- [ ] STEM (8)
- [ ] World Languages (2)

**Grade Level** (-)

- [ ] K-2 (1)
- [ ] 3-5 (1)
- [ ] 6-8 (2)
- [ ] 9-12 (1)

2 Results

Grade 7

### Planning to Thrive

How can we set and achieve personal goals that help us thrive?

Grades K-12

### Healthy Choices = Long Life

How can our school best support our overall health and wellness?

# Examples of projects under "Fine Arts"

Search

Go

Clear all | Fine Arts X

**Subject Area** (-)

- ☐ ELA (23)
- ☑ Fine Arts (7)
- ☐ Health/PE (2)
- ☐ Math (18)
- ☐ Science (17)
- ☐ Social Studies (19)
- ☐ STEM (8)
- ☐ World Languages (2)

**Grade Level** (-)

- ☐ K-2 (2)
- ☐ 3-5 (1)
- ☐ 6-8 (4)
- ☐ 9-12 (5)

7 Results

Grade 1

## Boom Boom Flash!

How can we use light and sound to communicate different kinds of feelings without words?

Grades 9-12

## Setting the Stage

How can we design a theatrical set that adds meaning and power to a production?

# Examples of projects under "World Languages"

Search

Go

Clear all | World Languages X

**Subject Area** (-)

- ☐ ELA (23)
- ☐ Fine Arts (7)
- ☐ Health/PE (2)
- ☐ Math (18)
- ☐ Science (17)
- ☐ Social Studies (19)
- ☐ STEM (8)
- ☑ World Languages (2)

**Grade Level** (-)

- ☐ 9-12 (2)

**Standards** (-)

2 Results

Grades 11-12

### What in the World?

What can international media tell us about what is REALLY happening around the world?

Grades 9-10

### Welcome to Our School (¡Bienvenidos a nuestra escuela!)

How can we use our target language to help visitors learn about our school?

# Teacher Reflection

- What upcoming units and/or content standards could be addressed through a project-based learning approach?
- What next steps could I take to plan a PBL mini-unit?
- What resources and/or information do I need and how will I obtain these?
- When and with whom will I discuss my planning further?

# For Final Upcoming Session: Volunteer to Share From Your Practice

What have I done <u>differently</u> this year in my teaching to seek to engage more students more deeply in academic work?

How has it worked? What have I learned from what I have tried?

# Reflecting on Student Work, Student Progress, and Next Steps for Continuous Improvement

EVERYONE GRADUATES CENTER

JOHNS HOPKINS SCHOOL of EDUCATION

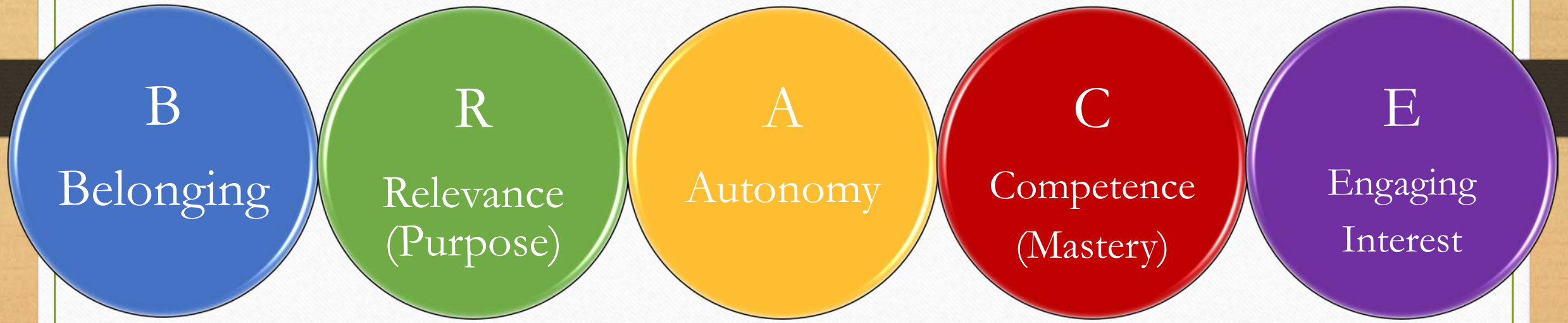
# Guiding Questions for the Series

- How do we motivate students to engage in rigorous academic work?
- How can we adapt our classroom instructional practices to tap into students' intrinsic motivation?
- How can we do this as a collaborative community?

Where have you come from and where are you going?

(Genesis 16:8)

# Motivation Components – BRACE



Building Community

Relevance/
Engaging Instruction

Choice/Autonomy

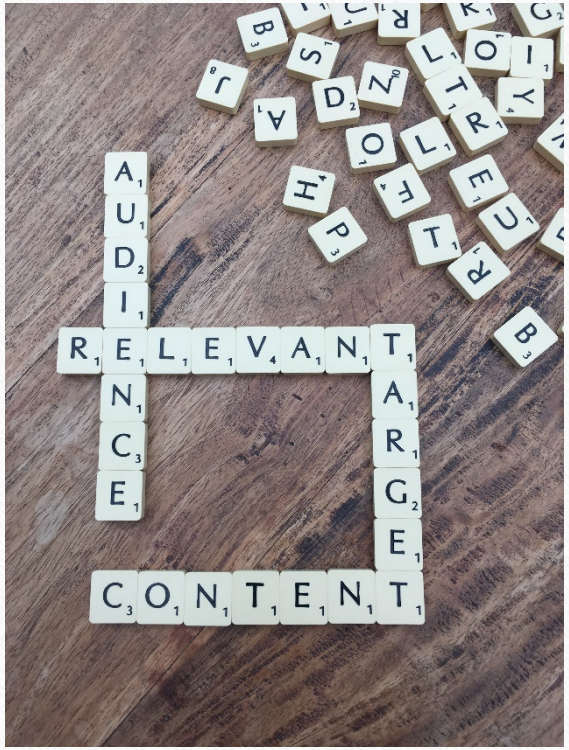
Monitoring Student Progress

Grading/Assessment

# Building Community

- Getting to know your students
- Connecting learning to students' lived experiences and culture
- Cooperative learning strategies

# Relevance/Engaging Instruction




- Reframing objective
- Authentic Assignments
- Project-Based Learning

# Choice/Autonomy

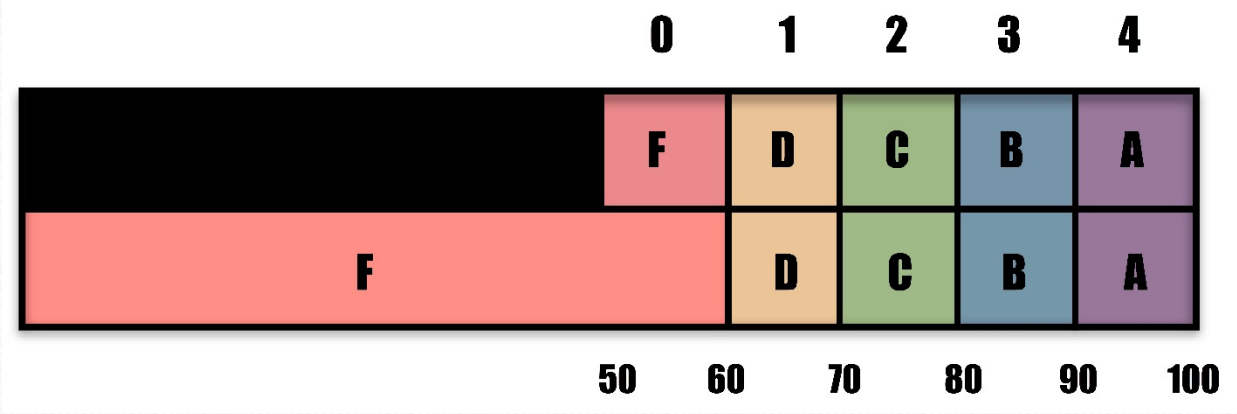
Providing menus and options for students to choose

# Monitoring Student Progress

- Providing students with tools to monitor their own progress
- Helping students reflect on their own progress

# Grading/Assessment

- 100 vs 5 point scale
- Power of 0
- Opportunities for recovery



# Reflection Exercise

Create a visual representation of your journey this year in teaching, addressing the following questions:

- What have I done differently this year in my teaching to seek to engage more students more deeply in academic work?
- How has it worked? What have I learned from what I have tried?
- What changes in student engagement and student outcomes have I seen?
- How has this impacted me?
- What next steps do I need to take in a continuous improvement process?

Share your journey

Pose questions to your colleagues

How do I sustain an effective continuous improvement process in my practice?

# Cycle of Inquiry Process

Honig and Ishimaru, 2013

# Plan – Do – Study – Act Cycle

- What did you conclude?
- What changes might you attempt in the next cycle?

- I plan to:
- I hope this produces:
- Steps to execute:

- What did you learn?
- Did you meet your goal?

- What did you observe when you did this?

Thanks so much for your participation in this journey!