Slide 1

Planning Powerful Instruction
A proven process for planning transformational teaching and learning

Jeffrey D. Wilhelm, Boise State University

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Slide 2

Planning Powerful Instruction
Grades 2-5 & 6-12

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GRADES 2-5
PLANNING POWERFUL INSTRUCTION
7 MUST-MAKE MOVES TO TRANSFORM HOW WE TEACH—AND HOW STUDENTS LEARN
JEFFREY D. WILHELM
JACKIE MILLER
CHRIS BUTTS
ADAM FACHLER

GRADES 6-12
PLANNING POWERFUL INSTRUCTION
7 MUST-MAKE MOVES TO TRANSFORM HOW WE TEACH—AND HOW STUDENTS LEARN
JEFFREY D. WILHELM
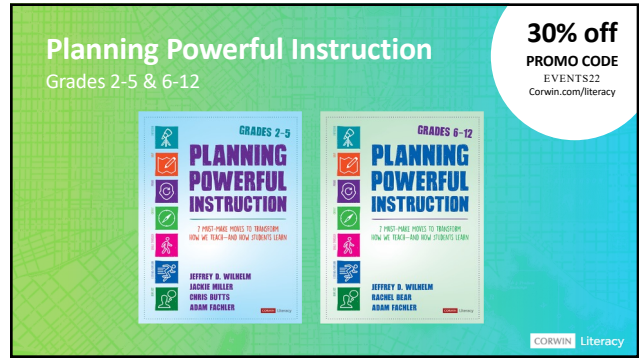RACHEL BEAR
ADAM FACHLER

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Slide 3

Essential Question:

How can we plan and implement the most powerful units and lessons that engage, support, challenge, and inspire our students to think, know and do in new more expert and transformational ways?

3

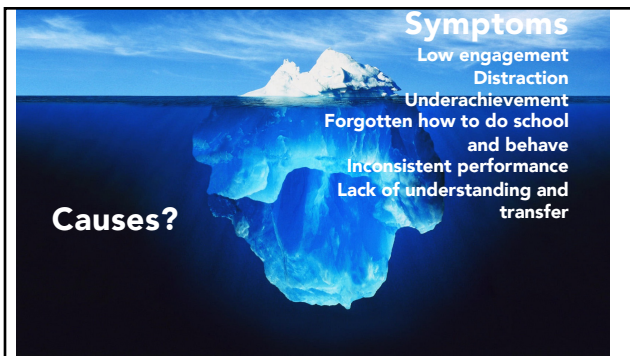## Slide 4

Learning Targets:

Educators will...
- Explore the power of EMPOWER as a mental model for planning, implementing and reflecting on transformational instruction.

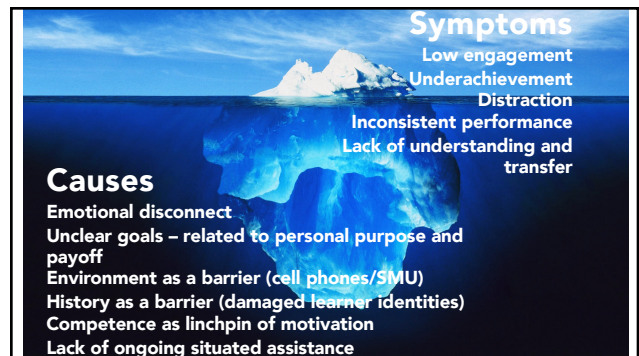Brainstorm ways to implement what you are learning in your classroom.

4

Slide 5

Symptoms
Low engagement
Distraction
Underachievement
Forgotten how to do school and behave
Inconsistent performance
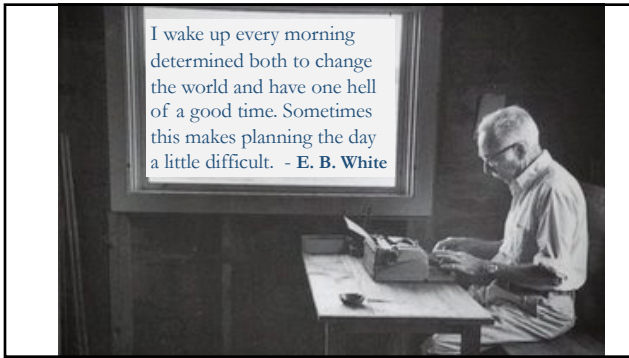Lack of understanding and transfer

Causes?

5

Slide 6

Symptoms
Low engagement
Underachievement
Distraction
Inconsistent performance
Lack of understanding and transfer

Causes
Emotional disconnect
Unclear goals – related to personal purpose and payoff
Environment as a barrier (cell phones/SMU)
History as a barrier (damaged learner identities)
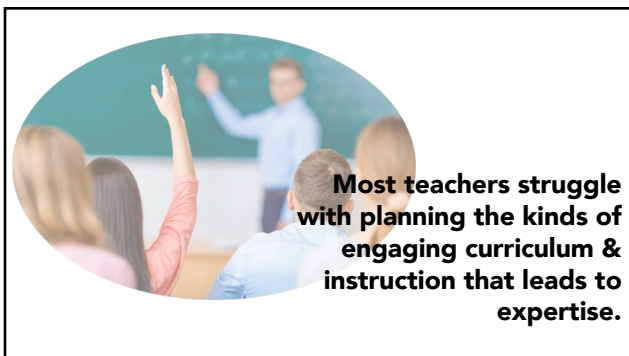Competence as linchpin of motivation
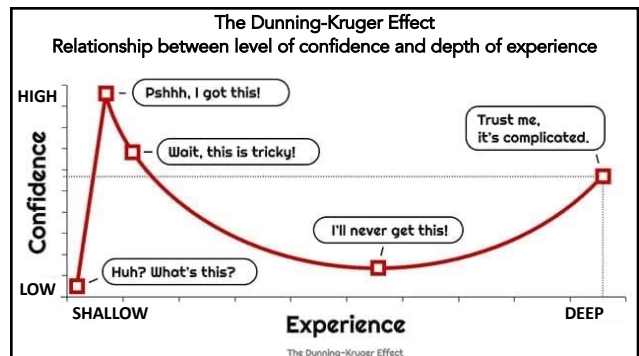Lack of ongoing situated assistance

6

7

8

Most teachers struggle with planning the kinds of engaging curriculum & instruction that leads to expertise.
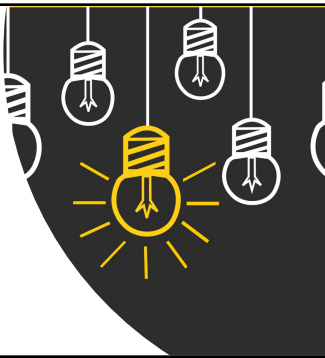
9

10

11

12

Two essential ingredients for expertise

13

Ericsson on how to achieve expertise

1. **a mental model:** a highly conscious and articulated representation of a task and how to complete it
2. **deliberate practice:** mindful focused practice aligned with "correspondence concept"

14

	unconscious	conscious
incompetence	unconscious incompetence	conscious incompetence
competence	unconscious competence	conscious competence (expertise)

15

EMPOWER is a *mental model* that captures exactly how experts in all fields **apprentice** learners into expertise.

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⊙
Key Insight

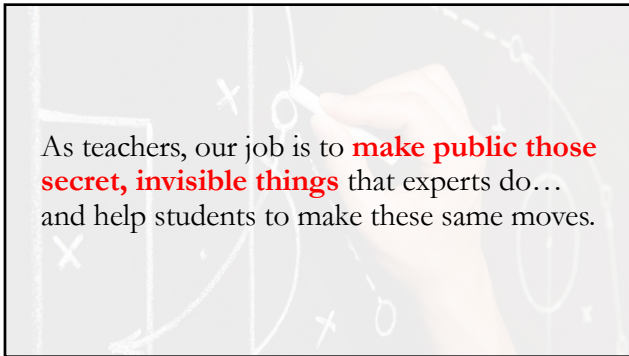If you lack a **mental model** for a task, you **cannot get better** at that task.

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⊙
Key Insight

You already do some/most of EMPOWER.

The new opportunity is using it consciously to (a) simplify planning and (b) improve at it.

EMPOWER TEACHING

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As teachers, our job is to **make public those secret, invisible things** that experts do… and help students to make these same moves.
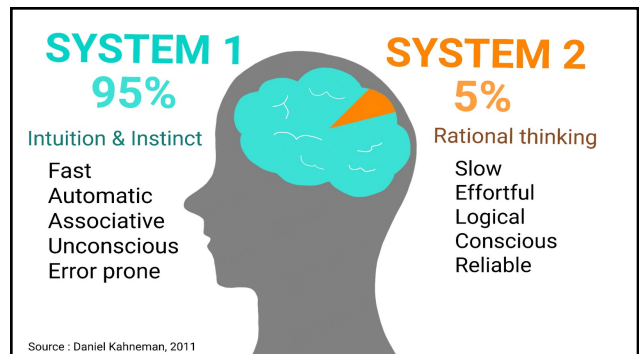
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pedagogical content knowledge

Is the integration of what you know about teaching and what you know about doing your subject; a.k.a. *expertise* in teaching. In other words, knowing HOW to teach learners HOW to engage in more expert practices.

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The human brain is actually *two* systems at work.

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SYSTEM 1
95%

Intuition & Instinct

Fast
Automatic
Associative
Unconscious
Error prone

SYSTEM 2
5%

Rational thinking

Slow
Effortful
Logical
Conscious
Reliable

Source : Daniel Kahneman, 2011

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The importance of motivation

- Cannot possibly be overemphasized (Dulin)
- Is necessary and pre-requisite to all learning
- Growth/Dynamic Mindset research
- "the continuing impulse to engage and learn"
- E * V = M

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ZFD
BEYOND REACH
RIGHT NOW

ZPD
WHAT'S POSSIBLE
WITH SUPPORT

ZAD
LEARNER'S CURRENT
ACHIEVEMENT

where motivation and learning happens

24

Free-soloing El Capitan

a case study in motivated learning

25

When I first **mentally mapped** out what it would mean to free solo, there were pitches where I was like, 'Oh that's a scary move and that's a really scary sequence...

But in the years since, I've **pushed my comfort zone** and made it bigger and bigger until these **objectives that seemed totally crazy** eventually fell within the **realm of the possible."**
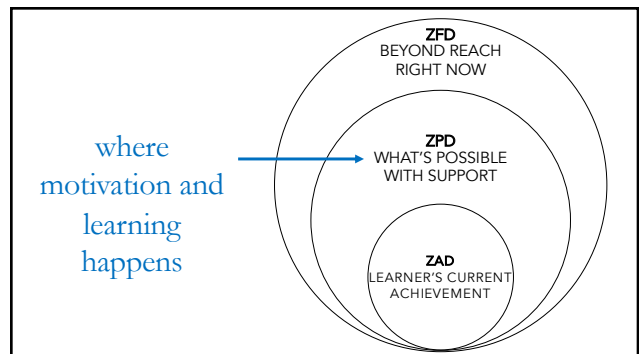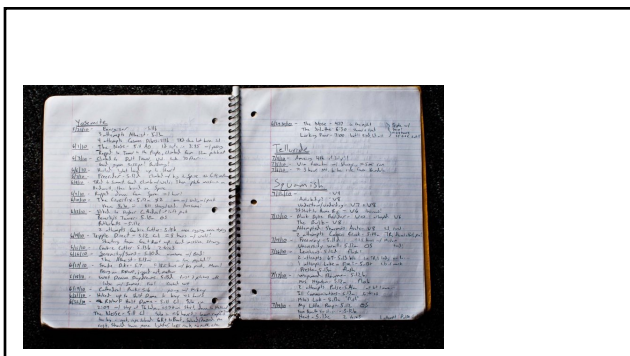- ALEX HONNOLD

26

27

The 6 Things Alex Honnold Can't Live Without

Honnold is known for his minimalism, both in climbing and in life. But there are couple items he deems essential.

Journals

Journals

https://www.outsideonline.com/2197186/alex-honnolds-favorite-things

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Alex was effectively apprenticed into effectively apprenticing *himself.*
How can we generalize the model?

29

EMPOWER is a *mental model* that captures exactly how experts apprentice learners into expertise:

Move 1	Move 2	Move 3	Move 4	Move 5	Move 6	Move 7
E	**M**	**P**	**O**	**W**	**E**	**R**
ENVISION	MAP	PRIME	ORIENT	WALK-THROUGH	EXTEND/EXPLORE	REFLECT
a destination	the mental model & the path to mastery	for the journey	the learning	new skills	new territory	on the journey

30

Why does this work? (continued)

SIX ELEMENTS OF DELIBERATE PRACTICE

Clear and specific goals (EM) | Preparation for success (PO) | Focused practice (WE) | Pushing beyond one's comfort zone (WE) | Receiving high-quality feedback (R) | Developing a mental model of the expert task (R)

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EMPOWER TEACHING

Envision — Map
Prime — Orient — Walkthrough and extend — Reflect
Explore

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EMPOWER TEACHING

big picture planning lays the foundation for…

a sequence of learning events

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EMPOWERed Teaching: The 3 M's
ENVISION Threshold Knowledge in Learner's ZPD
MAP a backwards plan to achieving new threshold knowledge

34

35

36

37

38

Think about a unit you already teach (or PD/coaching) that could go a bit better

39

Up in Smoke
An inquiry into the teen vaping epidemic

40

CRYSTAL LAKE, Ill. — In Alabama, a school removed the doors from bathroom stalls to stop students from sneaking inside to vape. In Colorado, a school decided to forfeit a volleyball game after finding "widespread vaping" and other infractions by the team. And in Pennsylvania, at a school where administrators have tried installing sensors to detect vaping in bathrooms and locker rooms, students caught with vape devices face a $50 fine and a three-day suspension.

Julie Bosman
September 2019
NYT

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EMPOWER TEACHING

ENVISION the destination

MAP the path to mastery

Envision

PRIME learners

ORIENT the learning

WALKTHROUGH new strategies

EXTEND expertise

REFLECT on the journey

P O W E R
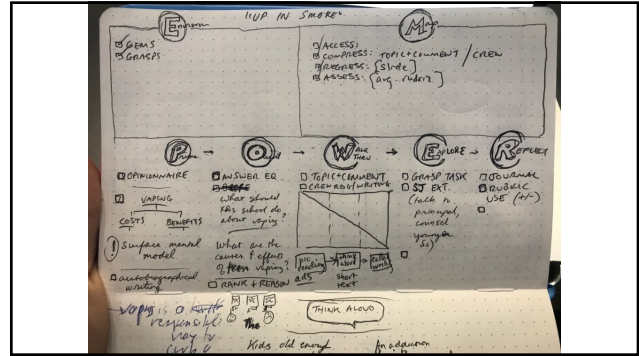
EXPLORE new territory

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EMPOWER Principle **1**

ENVISION: Your goal is what students can do *independently* (that is new and transformational – threshold knowledge!) by the close of the unit.

43

Envision the destination

Setting a goal, deciding on a culminating task, identifying quality standards, and an "angle"

44

threshold knowledge

core concepts and processes that transform perception and participation in a subject

45

Threshold knowledge is...

Transformative
Troublesome
Integrative
Irreversible
Bounded
Discursive

46

Threshold knowledge is 3D/4D and is made up of TRANSFORMATIONS through
ENGAGING with

The threshold concept of . . . . (KNOWING- typically a mental model)

Necessary to problem-solving or meaning- making processes of . . . (DOING)

Supporting learners to consider, discuss, reflect, revise, extend, and rehearse for transfer by . . . . (THINKING)

Which leads to deep understanding that take one through a GATEWAY to new transformed ways of knowing, doing, thinking and being (UNDERSTANDING)

47

Understanding Understanding

Understanding means that one engages, knows, can do/apply, reflect and think about the relationships between a concept, set of connections, and processes of enacting knowledge

High road transfer vs. low road

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Slide 49:

Understanding Understanding

Understanding means that one has sufficient grasp of concepts, principles and processes AND THEIR RELATIONSHIP so that one can adapt them and bring them to bear on new problems in new situations

High road transfer vs. low road

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Slide 50:

G	E	M	S

50

Slide 51:

EMPOWER ⟶ TEACHING

ENVISION the destination — *Define what learners will learn to do* — MAP the path to mastery

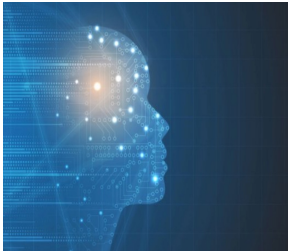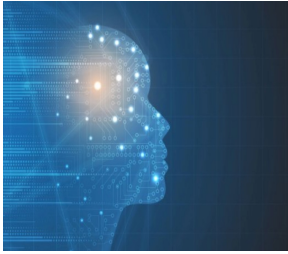| G GOAL	E EVIDENCE	M MEASURES OF SUCCESS	S STAKES
What learners learn to do independently	The product(s) and deliverables learners create as proof of learning (summative task)	The quality bar, criteria, or standards by which work will be assessed	The importance of this unit's goals

Ideas for your unit goals become

PRIME learners — Ideas for how to get their attention — Ideas for how to connect to background knowledge

ORIENT — Ideas to get their buy-in: purpose and payoff of learning — to teach them to problem solve — Ideas for how to read and compose

practice the strategy — EXPLORE new territory — Ideas for how to help them be independent

ric ideas about ritical andards — the journey — be metacognitive about process — Ideas for future use and transfer

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Slide 52:

G GOAL	E EVIDENCE	M MEASURES OF SUCCESS	S STAKES

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Slide 53:

ENVISION the destination: Goal • Evidence • Measures of Success

The unit _____
(compelling title of your unit framed as 'how to' or question)

teaches learners how to _____
(disciplinary goal that meets correspondence concept, i.e. arguing, storytelling, conducting scientific inquiry, analyzing historical documents, solving problems)

Learning will be evidenced through _____
(culminating projects and/or summative assessments)

_____

Work products will be judged on criteria such as:

•   _____
•   _____
•   _____   (measures of success usually adjectives)
•   _____

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Slide 54:

ENVISION the destination: Goal • Evidence • Measures of Success

Up in Smoke: A deep dive into the teen vaping epidemic

The unit _____
(compelling title of your unit framed as 'how to' or question)

teaches learners how to
(1) **READ/VIEW:** Analyze causes and effects of a complex problem
(2) **CREATE/COMPOSE:** Compose policy arguments grounded in evidence and connected through reasoning

Learning will be evidenced through
1) **Micro-arguments**
2) **vaping policy paper**
3) **PSA campaign with memes, videos, podcasts, etc.**

Work products will be judged on criteria

•   **Evidence-based**
•   **Insightful / reasoned**
•   **Coherently structured**   (measures of success usually adjectives)
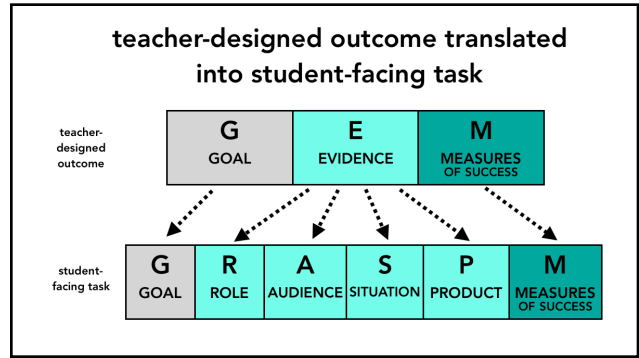•   **Actionable (solution)**

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9

Make an evidence-based argument about the dangers of vaping.

vs.

Students are vaping in school. As a copywriter for a leading marketing agency, our class has become a PR firm hired to build a compelling campaign that influences teens to reconsider their choice to vape. (Mantle of the expert drama)

55

teacher-designed outcome translated into student-facing task

56

GOAL	REAL-WORLD ROLE	AUDIENCE	STORY/ SITUATION	PRODUCT/ PERFORMANCE
convince	storyteller	client/customer	You have been asked to...	discussion/debate
analyze	historian	fellow students	The context/ challenge is..	presentation
inform	politician	expert panel	The issue you must address is...	article/essay
explain	engineer	community		podcast
design	scientist	an official	The problem is..	webpage
test	artist	pen pal	You have an opportunity to...	speech
	CEO	reader		story

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Guiding Questions: What are the causes and consequences of teen vaping?

What could this school (and society) do about it?

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What questions do YOU have about this topic?

59

EMPOWER ⟷ TEACHING

ENVISION the destination
List 1-3 goals for learners to master.
Define the life evidence and measures of success of each goal.
(If designing a unit, create a culminating task or portfolio piece.)

MAP the path to mastery
Do the culminating task and identify the mental models and skills required for the task.
Build quality assurance tools such as performance checklists and rubrics.
List key Tier 3 and Tier 5 vocabulary.

G GOAL	E EVIDENCE	M MEASURES OF SUCCESS	S STAKES
What learners learn to do independently	The product(s) and deliverables learners create as proof of learning (summative task)	The quality bar, criteria, or standards by which work will be assessed	The importance of this unit's goals

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Slide 61

ENVISION the destination: Goal • Evidence • Measures of Success

The unit _____
(compelling title of your unit framed as 'how to' or question)

teaches learners how to _____
(disciplinary goal that meets correspondence concept, i.e. arguing, storytelling, conducting scientific inquiry, analyzing historical documents, solving problems)

Learning will be evidenced through _____
(culminating projects and/or summative assessments)

Work products will be judged on criteria such as:

• _____
• _____
• _____
• _____

(measures of success (usually adjectives))

Your Turn

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Slide 62

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Slide 63

EMPOWER Principle **2**

MAPPING THE PATH:
Go the way so you can **know** and **show** and grow the way!

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Slide 64

**Map** the path to mastery

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Slide 65

MAPPING THE PATH: The 4 Moves

ACCESS
Access the task from your learners' point of view.

COMPRESS
Essentialize the material and determine mental model(s)

REGRESS
Break down the task and the knowledge required to do it
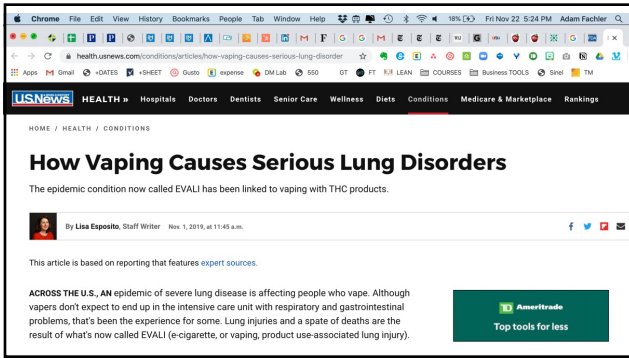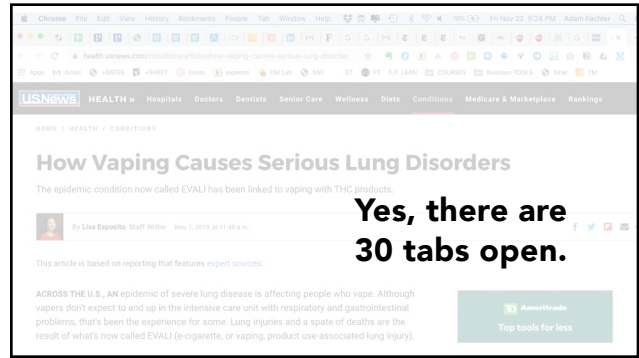
ASSESS
Design scoring tools

65

Slide 66

ACCESS
Access the task from your learners' point of view.

66

67

Yes, there are 30 tabs open.

68

ACCESS:
RESPOND TO PROMPT
What message about teen health and vaping is being communicated by this position paper, i.e. what is the major topic and major comment/takeaway?

Taking my shot at a microargument

69

WHAT ARE THE MOST IMPORTANT SUB-SKILLS FOR ARGUMENT?

REGRESS
Break down the task and the knowledge required to do it

- Generating data
- Making personal connections to the topic
- Reasoning about data
- Evaluating data
- Reading for key details and themes/generalizations
- Finding data
- Generating claims
- Identifying counterclaims
- Reasoning about data
- Responding to counterclaims
- Analyzing data to see data patterns and to explain them

70

Parts of a Strong Argument	INTERPRETIVE QUESTION: Why does Ms. Jones take Roger in?
CLAIM *What is the main point you are trying to argue?*	I believe… In my own view…
REASON *Why are you arguing this claim/point? What reasons do you have?*	I think this because… I hold this view because…
EVIDENCE *What specific evidence from the text supports your reason?*	Evidence that supports this idea can be found on page ___ when… My perspective is supported by, "INSERT QUOTE".
WARRANT *What is the connection between your claim/reason and evidence? Why does your point matter?*	If _____ (reason/evidence), then _____ (insert connection to claim or reason). Since _____ , we can infer that _____ (what conclusion can you draw?).

REGRESS
Break down the task and the knowledge required to do it

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COMPRESS
Essentialize the material and determine mental model(s)

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(slide 73)

COMPRESS: A MENTAL MODEL and the topic comment strategy for understanding theme/main idea

Noticing the conversation — Noticing the genre — Noticing Key Details — Noticing Text Structures

73

MODEL FOR LOGICAL ARGUMENTATION

C — A debatable, defensible CLAIM supported by…
R — Logical REASONS based in…
E — Reliable and sufficient EVIDENCE and…
W — Thorough explanation of how they all connect (WARRANTING)

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THE ELEMENTS OF ARGUMENT

75

THE MENTAL MODEL MUST BE FLEXIBLE/MODULAR (NOT A FORMULA)

76

A mental model for claims – and how they relate to evidence, warranting/reasoning, counterclaims in the ongoing conversation

- **Topic** + **Comment**
- **Topic (+ qualifier/conditions/context)** + **Comment (+qualifier/conditions/context)** + **(causal statement)**
- **Abstract Noun (+ Q/C/C)** + **Evaluative Statement (+ QCC)** + **Causal Statement**

Music censorship is a policy tool that **should be carefully used to protect our youth from deleterious influences because music is an especially influential medium that often works through subliminal suggestion**.

77

How do you make a valid, logical ARGUMENT?

ASSESS Design scoring tools

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Slide 79

CRITERIA SCORE	CONVINCING As a whole, does the argument convince the reader of the claim?	SUPPORTED Are there enough relevant reasons from the text* to support the claim? *or often reliable source	WARRANTED/ EXPLAINED/ JUSTIFIED Is the connection between the evidence and the claim explained?	CONVENTIONALLY SOUND Is the argument polished for an audience?
EXPERT ★	As a whole, the argument is highly convincing and compels the reader to accept the claim(s). The argument even goes as far as anticipating counterclaims and/or rebuttals.	The claim is _fully_ supported by reliable reasons and evidence that connect persuasively to the claim.	The warrants _thoroughly_ explain the connection between the claim and the evidence. The link between the evidence and the claim is _highly clear._	_All_ text evidence is properly cited and _smoothly introduced._ Capitalization, sentence, and punctuation rules are _completely followed._
PRO ✔	As a whole, the argument is convincing and compels the reader to accept the claim(s).	The claim is _mostly_ supported by reasons and evidence from reliable sources that connect persuasively to the claim.	The warrants _completely_ explain the connection between the claim and the evidence. The link between the evidence and the claim is _generally clear._	Most text evidence is properly cited. Capitalization, sentence, and punctuation rules are _mostly followed._
APPRENTICE AND NOVICE* △ 2 or 1 *USE THE REVISION TIPS	As a whole, the argument somewhat convinces or fails to convince the reader to accept the claim. **REVISION TIPS** △ _Do you make your overall claim clear enough to your reader?_ △ _Check the other sections of the rubric. Is your argument supported and justified?_	The claim is _partially supported_ or _unsupported_ by reasons and evidence from text or other reliable sources that connect persuasively to the claim. **REVISION TIPS** △ _Can you go back in the text and find quotes from the story (with pg. numbers) to support your point?_	The warrants _partially_ explain the connection between the claim and the evidence. The link between the claim and evidence is _somewhat clear_ or _unclear._ **REVISION TIPS** △ _Can you explain how your reasons prove your point?_ △ _Can you use "If/then...", "Generally...," "Usually...", "This means that...", or your own words to link?_	_Some_ or _no_ text evidence is properly cited. Capitalization, sentence, and punctuation rules are _somewhat_ or _mostly not followed._ **REVISION TIPS** △ _Can you include page numbers on evidence?_ △ _Can you check your capitals, sentences, and punctuation?_

☑ ASSESS Design scoring tools

Slide 80

Gut Check
Which of these moves have you done in planning your current unit?
Which could you try?

ACCESS — Access the task from your learners' point of view.
COMPRESS — Essentialize the material and determine mental model(s)
REGRESS — Break down the task and the knowledge required to do it
ASSESS — Design scoring tools

Slide 81

EMPOWER YOUR TEACHING

ENVISION the destination — Envision
MAP the path to mastery — Map
PRIME learners — Prime
ORIENT the learning
WALKTHROUGH new strategies
EXTEND expertise
REFLECT on the journey
EXPLORE new territory

Slide 82

EMPOWER Principle 3
PRIME: All learning proceeds from prior interests and learning.

Slide 83

Prime the learners
Activate and build background knowledge

Slide 84

The truth about how people learn
Rider — _your rational brain_
Elephant — _your emotional brain_
Path — _your environment_

79 80 81 82 83 84

14

"PRIMING" the pump

- To connect learners personally to the inquiry
- To activate prior interest and knowledge – and then build on it
- To set a purpose and problem-orientation
- To create a template for gauging progress

85

Frontloading with an Opinionnaire

Evaluate from Strongly Disagree to Strongly Agree

⟷

➢ Kids who vape in school should be disciplined, if not suspended.

➢ Vaping is a responsible way to curb a smoking addiction.

➢ An addiction (to nicotine) is something outside of a student's control.

➢ Vaping companies should be able to produce whatever kinds of flavors they want, even if they seem enticingly "kid-friendly" (e.g. Cocoa Puffs).

86

We are already doing micro-arguments and interpretive analysis:

"YOUR RANKING IS YOUR **CLAIM."**
But claims only hold weight when supported by safe evidence and reasoning

- WHAT MAKES YOU SAY SO? What evidence do you have from the text – from your life experience?
- SO WHAT? What rule are you placing on the data so it fits your claim about what is necessary to a good relationship?

87

Other Frontloading ideas: Which ones are you using? Could you use?

- K-W-L
- Brainstorming and Webbing
- Analogy Organizers
- Autobiographical Writing
- Rankings
- Drama/Role Playing
- Character Quotes
- Floorstorming/Video Clips – infer topic
- Mad Libs

IF YOU FAIL TO **PREPARE,** **YOU** PREPARE **TO FAIL**

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EMPOWER ⟶ TEACHING

ENVISION the destination

Envision

MAP the path to mastery

Map

PRIME learners
ORIENT the learning
WALKTHROUGH new strategies
EXTEND expertise
REFLECT on the journey

Prime   Orient

E₁

EXPLORE new territory

E₂   R

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Orient the learning
Concretize goals with learners and assure them they will get the help they need.

90

EMPOWER Principle 4

ORIENT: No one moves into the "fog" without a clear vision of where they're going, how they'll get there, and what makes the trip worth it.

91

92

SIMPLE FORMULA FOR MOTIVATION

$$E \ x \ V = M$$

expectation of success (E) * valuing of success (V) = motivation (M)

93

94

Two Essential Characteristics of Essential/Existential Questions

Engaging.
Offers potential for intriguing students and motivating student learning

Enduring.
Leads to learning big ideas that have value beyond the classroom

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Recent Essential Questions

Admin/PD: What is an effective EQ? What is the most effective teaching and how can we implement it?
Macbeth: How far are you willing to go to get what you want?
Pre-Algebra: What determines who wins?
Civics: What makes a law useful and fair?

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Essential Question for *Romeo and Juliet*

- What makes and breaks a relationship?

For other units:

- What are my civil rights and how can I best protect them? What makes a good home? What makes a good friend? What can we do to protect the environment? Do We Find or Create Our True Selves?
- What Rights and Responsibilities Should Teens Have? How Can We Balance Everyone's Rights? What Makes a Hero? What Influences a Person's Choices? What Makes a Good Parent?

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Ways to generate Essential Questions – with learners! TRY ONE or TWO or ….

- **Qualitative/Comparative.** *What are the most influential inventions/ movies/works of art?*
- **Analogies.** *How are cells and their operations like modern cities/cell phone networks/the water cycle?*
- **Impacts.** *How do/might genetically modified organisms affect the safety of our food supply?*
- **What if . . . questions.** *What (would American and world history be like) if the American Revolution had never happened?*
- **Applications.** *How should we use our knowledge of energy exchange to create more environmentally sustainable schools, homes and policies?*
- **Ethics/Fairness.** *To what degree and in what situations should we use what we know about genetic manipulation, bioengineering, nuclear energy, nuclear weaponry, etc.?*
- **Improvement questions.** *How can we improve our school lunches to make them healthier?*

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Identifying Culminating Projects

The world is filled with testing situations . . .

- What is a real world test/application for the developed knowledge?
- In school?
- In the community?
- Service learning and social action possibilities?
- Personal growth?

99

teacher-designed outcome translated into student-facing task

100

EMPOWER Principle 5

WALKTHROUGH AND EXTEND EXPERTISE.
Deliberate practice yields proficient performance.

101

Walkthrough and extend expertise

Guide students in deliberate practice through increasingly harder "junior versions" of the final task.

102

MILESTONES ON THE PATH TO MASTERY

Level 1. Read memes, ads, cartoons, news articles on vaping.
Level 2. Learn and practice the **topic-comment strategy** for finding and supporting main ideas in these short texts.
Level 3. Summarize the article and its main idea for a peer.
Level 4. Identify what makes credible evidence.
Level 5. Collect justified evidence about causes, effects and solutions to vaping.
Level 6. Identify patterns of evidence and apply reasoning (general rules of human behavior) to explain and extrapolate from them   AND SO ON, leading up to…
DESTINATION: Create fully articulated problem-solution arguments about vaping that can be used to produce mind and behavior changing PR/PSA programs

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Student Teacher: MILESTONES ON THE PATH TO MASTERY

Level 1. Analyze vaping ads (noticing persuasive moves) and contrast persuasion vs. argument in visual text/comics.

Level 2. Research, collect (surveys/interviews), and weigh evidence for arguments.

Level 3. Apply reasoning to evidence to generate claims.

Level 4. Craft multiple micro-arguments that can be "stacked" on each other to support more complex claims.

Level 5. Anticipating and responding to counterclaims.

And so on, leading up to…

✈ THE DESTINATION
Create (1) a compelling anti-teen vaping marketing campaign and (2) a well-sourced and cited position paper sharing the reasoning and evidence behind the campaign.
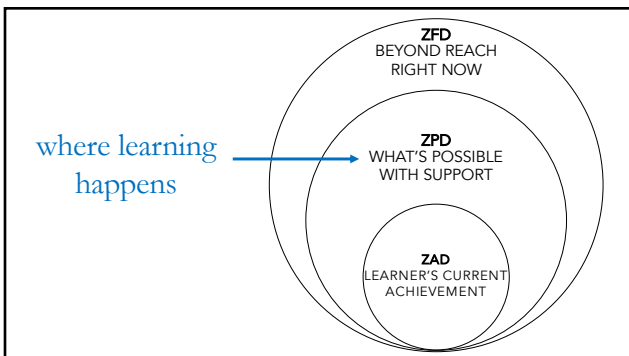
104

Scaffolds help us do what we cannot yet do.

105

Ways to Walkthrough: Making expert strategies visible and available to learners, and giving learners ways to practice them

- Think alouds
- Visual strategies that help to see, analyze and represent data
- Drama/Action strategies
- Student generated questioning techniques
- Discussion structures
- Collaborative structures: Reciprocal reading, Literature Circle Roles, Conferencing
- Any prompt, stem, protocol or scaffold that helps learners to do what they cannot yet do alone
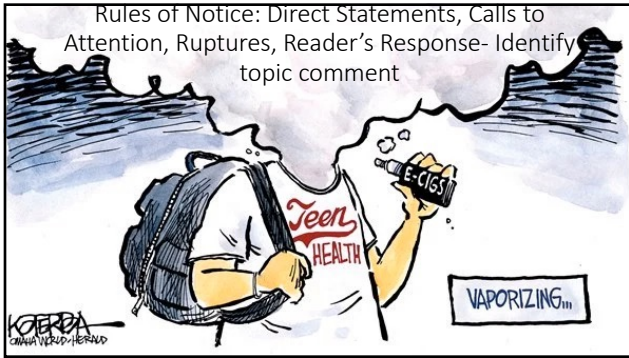
106

ZFD
BEYOND REACH
RIGHT NOW

ZPD
WHAT'S POSSIBLE
WITH SUPPORT

ZAD
LEARNER'S CURRENT
ACHIEVEMENT

where learning happens →

107

Assisting Students through a RANGE of experiences with the mental model

- CREW micro-arguments with paintings, memes, articles, charts, survey data and other data sets
- Engage in activities like claim and evidence rankings, warrant workouts, revising claims, applying semantic scales to evaluate evidence
- Rewrite arguments into visuals like cartoons, memes, posters
- PRACTICE, PRACTICE, REFLECTIVE PRACTICE TIED TO EXPERTISE!
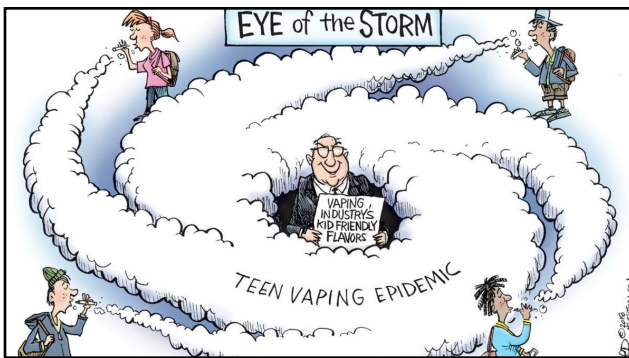
SIX ELEMENTS OF DELIBERATE PRACTICE

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110

111

112

113

114

115

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Slide 121

When I first **mentally mapped** out what it would mean to free solo, there were pitches where I was like, 'Oh that's a scary move and that's a really scary sequence...

But in the years since, I've **pushed my comfort zone** and made it bigger and bigger until these **objectives that seemed totally crazy** eventually fell within the **realm of the possible."**
- ALEX HONNOLD

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Slide 122

What would YOU want to look at to explore this topic?

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Slide 123

Examples of Meaningful Making

Writing

Arguments: of Extended Definition, Policy, Judgment
Exposition/Process Analyses
In-role writing Classifications
Informational brochures
Letters to the editor
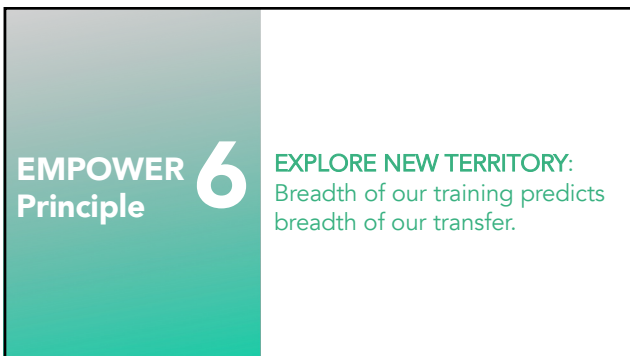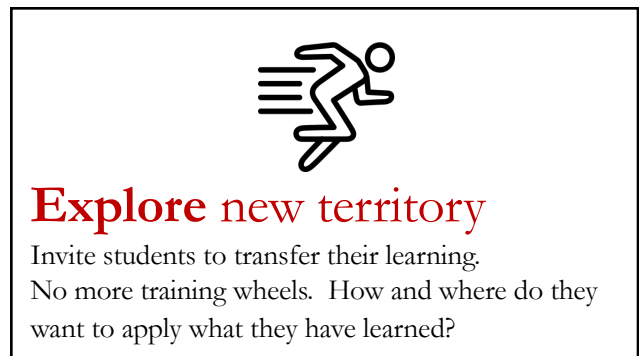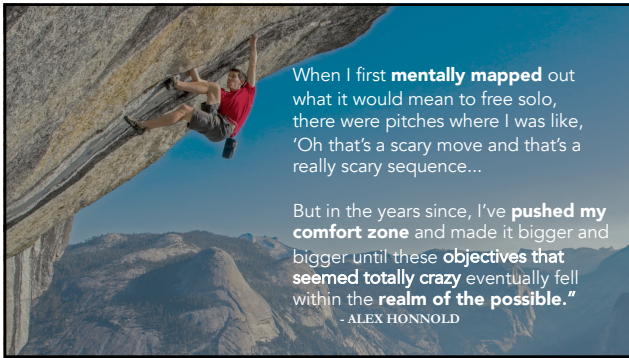Story extensions
Children's books

Multimedia Social Action Projects

Dramas/Forum Dramas
Websites/PSAs, Surveys
Podcasts
Social Media campaigns
Museum exhibits
Video documentaries
Raps/ Social Critiques and Performances
Service learning projects

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Slide 124

GOAL	REAL-WORLD ROLE	AUDIENCE	STORY/ SITUATION	PRODUCT/ PERFORMANCE
convince	storyteller	client/customer	You have been asked to...	discussion/debate
analyze	historian	fellow students	The context/ challenge is..	presentation
inform	politician	expert panel	The issue you must address is...	article/essay
explain	engineer	community		podcast
design	scientist	an official	The problem is..	webpage
test	artist	pen pal	You have an opportunity to...	speech
	CEO	reader		story

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Slide 125

"…breadth of training predicts breadth of transfer. That is, the more contexts in which something is learned, the more the learner creates abstract mental models, and the less they rely on any particular example."

- DAVID EPSTEIN in *RANGE*

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Slide 126

The Importance & Difficulty of Transfer

Understanding requires transfer of learning to new situations

Despite the importance of transfer to all learning, research findings over the past nine decades clearly show that as individuals, and as educational institutions, we have failed to achieve transfer of learning on any significant level (Haskell, 2000, p. xiii)."

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EMPOWER Principle 7

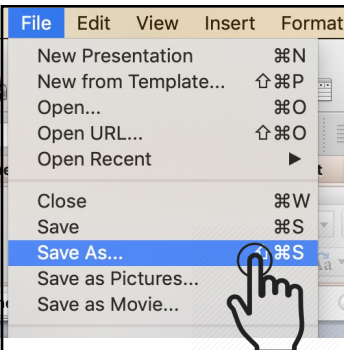REFLECT ON THE JOURNEY: When you can name it, then you can tame it.

127

Reflect on the journey

Promote thinking about the thinking, self-regulation, high-road transfer, and self-efficacy.

128

File Edit View Insert Format

New Presentation ⌘N
New from Template... ⇧⌘P
Open... ⌘O
Open URL... ⇧⌘O
Open Recent ▶

Close ⌘W
Save ⌘S
Save As... ⌘S
Save as Pictures...
Save as Movie...

Reflecting is like clicking save…

If you don't **do it, you lose your work.**
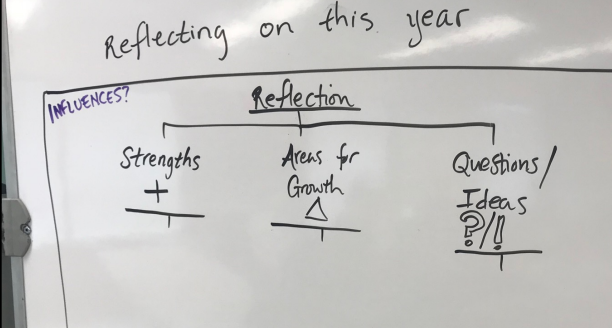
129

Look for: High Road Transfer

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Haskell's 4 Principles: Transfer ONLY OCCURS when we have 4D Teaching/Learning

- If students connect to and develop command of the knowledge that is to be transferred (KNOWING) POW
- If students get plenty of practice in applying meaning-making and problem-solving principles to new situations (ENGAGING AND DOING) WE
- If a classroom culture cultivates a spirit of engagement and transfer (ENGAGING AND DOING), WER
- If students have a theoretical understanding of the principles to be transferred (THINKING) POWER

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Reflecting on this year

INFLUENCES?   Reflection

Strengths   Areas for Growth   Questions/Ideas ?/!

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Slide 133

LOOK FOR: Reflection and invitations for transfer throughout

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Slide 134

POTENTIAL REFLECTION PROMPTS FOR YOUR LESSON / WEEK / UNIT

PERFORMANCE
What are your strengths and struggles when it comes to _____?
What helped you be successful today? What actions led to your success?
What will you do differently the next time you see this kind of problem?

CONSOLIDATION
So, what did you learn? What are your takeaways?
Summarize this information into a concise sentence or ¶.

SIGNIFICANCE
Why is this significant? What is this idea's value?
What do you think is the most influential reason for _____? Why?

ACTION
Now, what action steps should we take to prevent teens starting to smoke?
Who needs to know this information and in what format? Why?
What questions does this raise for you? Now, what do you wonder?
What additional research should we do to better understand this?

ENCOURAGE MULTIPLE PERSPECTIVES
How would things be different without _____?
What patterns do you notice? How does this connect with _____ (prior topic)?

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Slide 135

Procedural feedback format for promoting growth mindset and agentive identity

The way you _____ NAME EFFORT AND STRATEGY USE _____
had the effect of _____ DESCRIBE EFFECT _____ .
because EXPLAIN WHY / HOW IT WORKED .

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Slide 136

Procedural feed-forward format for promoting high road transfer

I wonder what would happen if you tried _____ DEFINE NEW APPROACH _____ because _____ NAME WHY IT MIGHT WORK _____ .
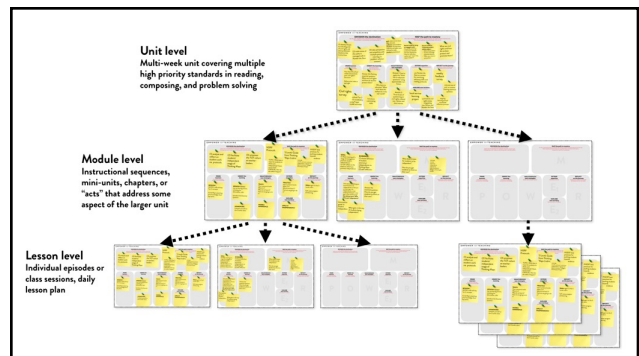And this could extend learning and effect by _____ POTENTIAL IMPACT _____ .

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Slide 137

EVERY STEP IS ESSENTIAL!

When an educator does not _____, then it usually causes learners to feel or be _____ .

M	P	O	W	E	R	=	**AIMLESS**
E	P	O	W	E	R	=	**OVERWHELMED**
E	M	O	W	E	R	=	**DISCONNECTED**
E	M	P	W	E	R	=	**UNMOTIVATED**
E	M	P	O	E	R	=	**UNSKILLED**
E	M	P	O	W	R	=	**UNCHALLENGED**
E	M	P	O	W	E	=	**DEPENDENT**

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Slide 138

Unit level
Multi-week unit covering multiple high priority standards in reading, composing, and problem solving

Module level
Instructional sequences, mini-units, chapters, or "acts" that address some aspect of the larger unit

Lesson level
Individual episodes or class sessions, daily lesson plan

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Your turn to Reflect and Rehearse for Future Action and Transfer

Name a principle and/or a practice that you can use immediately in your teaching

- Action plan: what is your commitment to trying it out?
- Every journey starts with the first step and continues with the next one – take the first step!

139

Conclusion, playing the old preacher

- Learning should be hard fun
- Teaching should be responsive and relational
- Learning should be meaningful and substantive and mirror what experts do
- Teaching should be apprenticing students into doing what we, as experts, do.

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