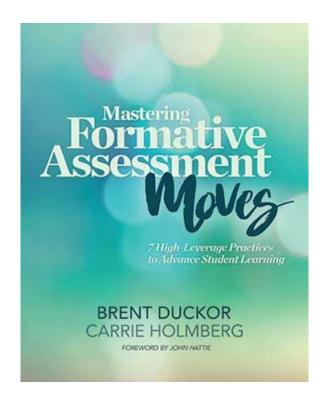
## The Power of Posing, Pausing, and Probing Moves to Advance Deeper Learning

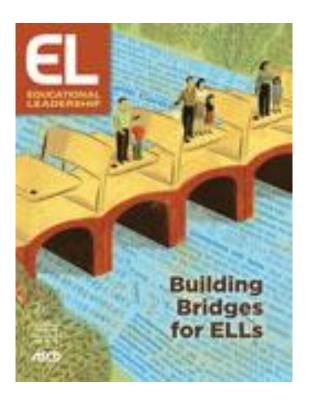
Brent Duckor, PhD Carrie Holmberg, EdD





#### Context for Our Work





#### Our Backgrounds

- Dr. Brent Duckor is an Associate
   Professor in the Department of Teacher Education and Core Faculty in the Ed.D. Leadership program at San José State University.
- Taught History, Economics, Civics, and Entrepreneurship at Central Park East Secondary School in East Harlem (NYC).
- Supervise pre-service teachers and collaborate with cooperating teachers across multiple counties in Northern California.

- Dr. Carrie Holmberg is a Lecturer in the Department of Teacher Education at San José State University.
- Taught English Language Arts and Journalism at a Title I high school in California and was a National Board Certified Teacher for 20 years.
- Supervise pre-service teachers and collaborate with cooperating teachers in 8 subject areas across multiple counties in Northern California.

We work with ELA, math, science, art, music, P.E., social science, and world language teachers.

### Welcome to our Leading Forward Webinar Series

- □ The Power of Posing, Pausing, and Probing Moves to Advance Deeper Learning (February 24, 2-3pm)
- □ The Power of Bouncing, Tagging, and Binning Moves to Improve Decision Making During a Lesson (March 24, 2-3pm)
- □ Formative Assessment Moves to Uncover Academic Language Demands and Support English Learners During a Lesson (April 21, 2-3pm)



### Poll 1: Situating Ourselves

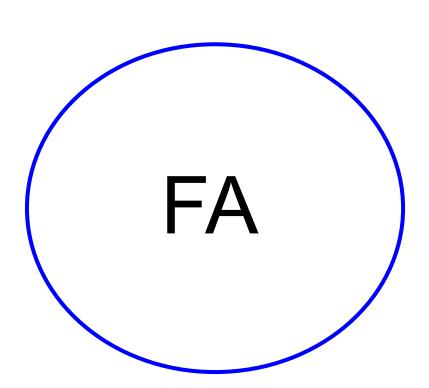
- 1. Tell us where you are in the K-12 system.
- 2. Which region of California?
- 3. Have you done any formative assessment training previously?

### Opener/Warm Up/Check for Prior Knowledge



#### Brainstorm

What comes to mind?



### Today's Agenda: Uncovering the Power of FA Moves in a Lesson



When do we need to ask questions during the lesson?

Which kinds of questions are worth asking, at which points in the lesson?



How much time is enough time to generate meaningful responses?

And give equity of "voice"?



Why is it important to ask students to elaborate on their "first draft" responses to a question or prompt?

#### What the Research Tells us



### Purposes Matter

#### Assessment of Learning

- Summative
- Proficiency-focused
- End of unit, semester, or year
- Test-taking skills
- Motivation for some
- Standard met or not met

#### **Assessment for Learning**

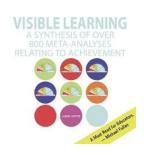
- Formative
- Process-oriented
- Continuously occurring
- DURING a LESSON
- Feedback during the instructional cycle
- Progress and growth mindset

#### FA Practices Raise Student Achievement

"There is a body of firm evidence that formative assessment is an essential component of classroom work and that its development can raise standards of achievement. We know of no other way of raising standards for which such a strong...case can be made."

(Black & Wiliam, 1998)

#### Hattie's Work Reminds us FA Still Counts



- In a massive study of over 95,000 studies
- Formative assessment ranks 4th (out of 150) of the most powerful educational influences on learning
- Formative assessment is a "high-leverage" evidence-based practice

Bottom line: We have hard data that soft data gathered during instruction matters.

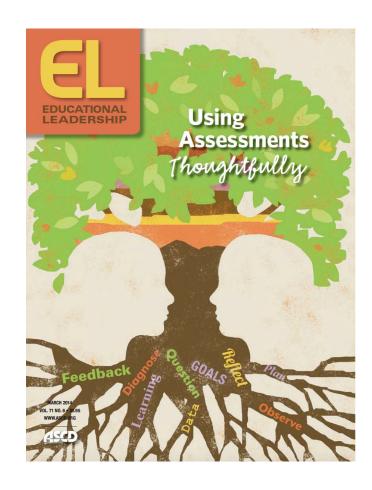
#### **FA Practices**

- Setting clear lesson-learning goals and success criteria, so students understand what they're aiming for;
- Gathering evidence of learning during lessons to determine where students are relative to goals;
- A pedagogical response to evidence, including descriptive feedback that supports learning by helping students answer: Where am I going? Where am I now? What are my next steps?;
- Peer- and self-assessment to strengthen students' learning, efficacy, confidence, and autonomy; and
- A collaborative classroom culture where students and teachers are partners in learning.

#### The FA Challenge

"What makes formative assessment so effective? It depends on whom you talk to. Although experts tell us that formative assessment is one of the most powerful ways to raise student achievement...

... we don't always know which practices are most effective, when to deploy them, and why a particular combination actually worked for a particular student in a particular classroom."



We've identified 7 high-leverage moves to identify where students currently are, where we are going, and how to get there together



# Making FA Moves that Make a Difference During COVID-19: Understanding the Power of P-P-P



#### Did You Know?

According to one study teachers ask over 300 questions a day!

\*\*\*\*\*\*\*\*

We want to distinguish today between

- general questions that make up the day's work of teaching and
- specific questions embedded in a lesson that drive towards deeper learning

These questions we are posing must signal our interest in student thinking/feelings now more than ever...for equity-driven instruction.

### Making the Shift: Unpacking Our Question Moves

- Aimed at classroom management
- Task/Assignment completion
- "Good of the order"

■ Multiple entry points

Aim at conceptual understanding

Directing and maintaining attention by inviting responses from all

Elicit curiosity



Today we're focusing on posing-pausing-probing ("P-P-P" Moves) to check for understanding and for re-engagement

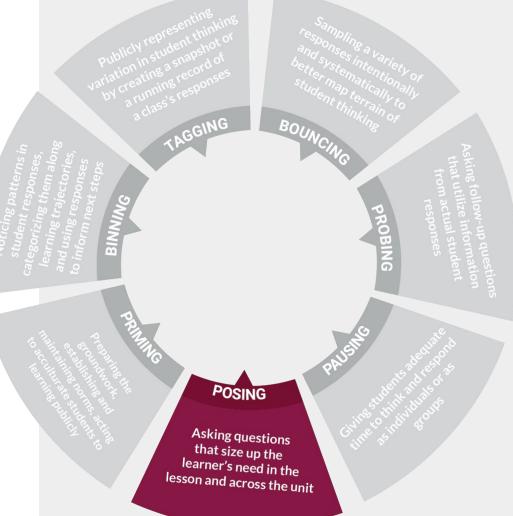




# Posing as an FA practice





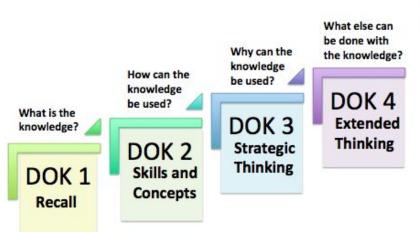


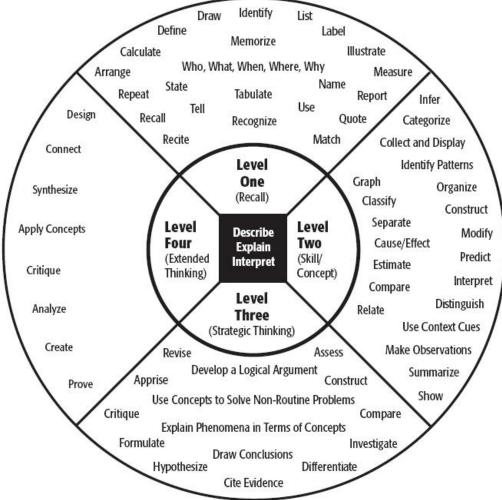




Asking questions that size up the learner's need in the lesson and across the unit

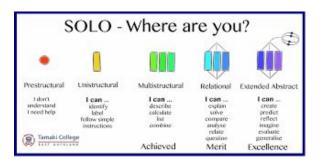
# Got Learning Targets & Goals? Webb's DOK





OCAN you recall? When did happen? Who was? How can you recognize? What is? How can you find the meaning of? Can you recall? Can you select? How would you write? What might you include on a list about? Who discovered? What is the formula for? Can you identify? How would you describe?	DOK 2  Can you explain how affected ?  How would you apply what you learned to develop ?  How would you compare ?  Contrast ?  How would you classify ?  How would you classify the type of ?  What can you say about ?  How would you summarize ?  How would you summarize ?  What steps are needed to edit ?  When would you use an outline to ?  How would you estimate ?  How could you organize ?  What would you use to classify ?  What do you notice about ?
How is related to?     What conclusions can you draw?     How would you adapt to create a different?     How would you test?     Can you predict the outcome if?     What is the best answer? Why?     What conclusion can be drawn from these three texts?     What is your interpretation of this text? Support your rationale.     How would you describe the sequence of?     What facts would you select to support?     Can you elaborate on the reason?     What would happen if?     Can you formulate a theory for?     How would you test?     Can you elaborate on the reason?	<ul> <li>Write a thesis, drawing conclusions from multiple sources.</li> <li>Design and conduct an experiment. Gather information to develop alternative explanations for the results of an experiment.</li> <li>Write a research paper on a topic.</li> <li>Apply information from one text to another text to develop a persuasive argument.</li> <li>What information can you gather to support your idea about?</li> <li>DOK 4 would most likely be the writing of a research paper or applying information from one text to another text to develop a persuasive argument.</li> <li>DOK 4 requires time for extended thinking.</li> </ul>

There are so many "solutions" for posing questions it can be dizzying and at times overwhelming









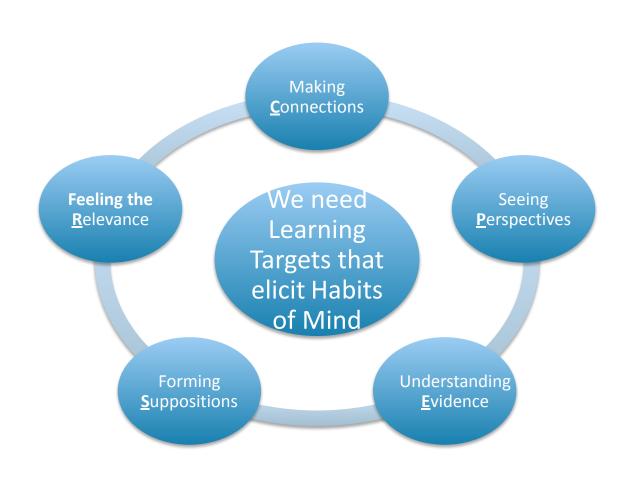


CALIFORNIA CONTENT STANDARDS

**COMMON** 

CORE

COUNTY VANDANT Descript carries for Septing



## Learning to Ask and Answer Powerful Questions in Extraordinary Times

- How is what we are learning (in this lesson) connected to another things or ideas (from other lessons)?
- From whose *viewpoint* is this written? Or said? Or heard?
- What is the evidence to support this or that claim...?
- What if things/events/etc. had been different? Can you speculate about...? Or imagine alternatives?
- Why are we studying this? What's the *relevance* to our lives? How can this knowledge be applied?

Are we posing questions that meet students where they are while sizing up the learner's needs in the lesson and across the unit?

#### QUESTION MAP

Chapter 11.2, Arithmetic Sequences Chapter 11.3, Geometric Sequences Chapter 11.4, Series and Sigma Notation Chapter 11.5, Sums of Series

#### CONNECTIONS

 How can you be sure that the formula you came up with is correct? (A-SSE.2) DOK 2

**EVIDENCE** 

- How do you know the exponent of the geometric series should be n-1? (A-SSE.2) DOK.2
- Can you explain your thinking in coming up with the nth term of the geometric sequence? (F-BF.2) DOK 3
- Can you explain how you found the common ratio even though you weren't given adjacent terms? (F-BF.2) DOK 3
- How do you know the exponent of the geometric series should be n-1? (A-SSE.4) DOK 2
- How do you know what the common ratio is just from looking at the general term of the sigma notation? DOK 2

- What does this look like that we've seen before? (A-SSE.2) DOK 2
- How is the equation for the explicit formula for the nth term of a geometric sequence similar to that of an arithmetic sequence?
   (A-SSE.2) DOK 2
- How is the equation for the sum of the first n terms of a geometric sequence similar to that of an arithmetic sequence? (A-SSE.4) DOK 2

#### **Essential Question**

How can we come up with an explicit formula for the  $n^{th}$  term of a sequence or for the sum of the first n terms of a series?

#### RELEVANCE the first n terms of a series?

#### SUPPOSITION

- Why is it important to be able to identify patterns? (A-SSE.2) DOK 2
- When might you see a sequence like this in every-day life? (A-SSE.2) DOK 2
- Can you think of a situation where you would need to add a number of terms together?
   (A-SSE.4) DOK 1

- How would the explicit formula change if the ratio were negative? (A-SSE.2) DOK 2
- How might this sequence look different if it were geometric instead of arithmetic? (F-BF.2) DOK 2.

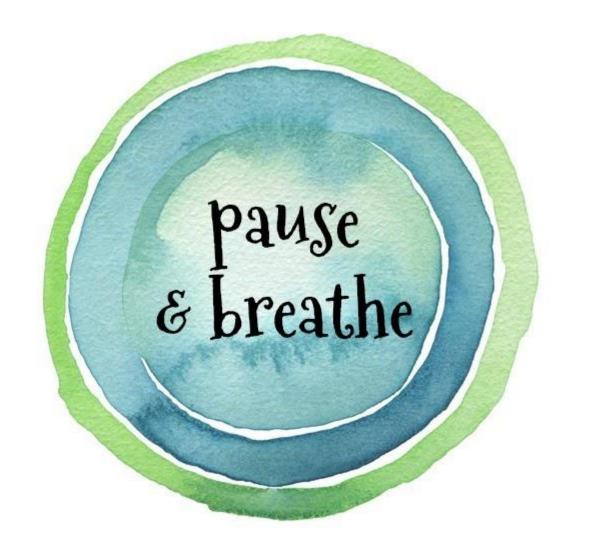
### Posing for Equitable Learning





"Pose questions that empower. Students learn by engaging meaningful questions and asking questions themselves. The sound of learning comes when students are comfortable giving responses, all kinds of responses. It is important to refrain from asking only questions that yield absolute answers."

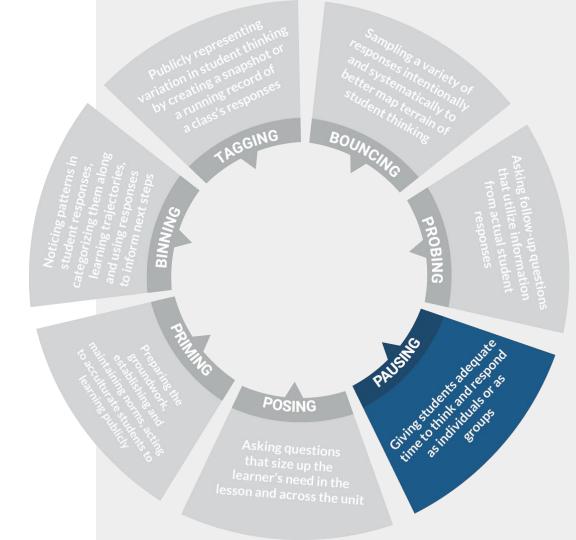
—Bill, beginning middle school teacher





# Pausing as an FA practice







### Pausing

Giving students adequate time to think and respond as individuals or as groups



## Go-to Pausing Moves

Think-pair-share: 2 minutes.

Take 30 seconds BEFORE entering your response into chat.

Take a moment to talk in your group before I visit you in breakout rooms.



"Pausing communicates caring—that what students say and do is worth slowing down for."

-Deidre, 6<sup>th</sup> grade art teacher





"Pausing is hard."

-Oscar, high school math teacher

### Pausing Moves...

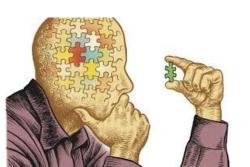
Give our students adequate time to think and respond as individuals or in groups

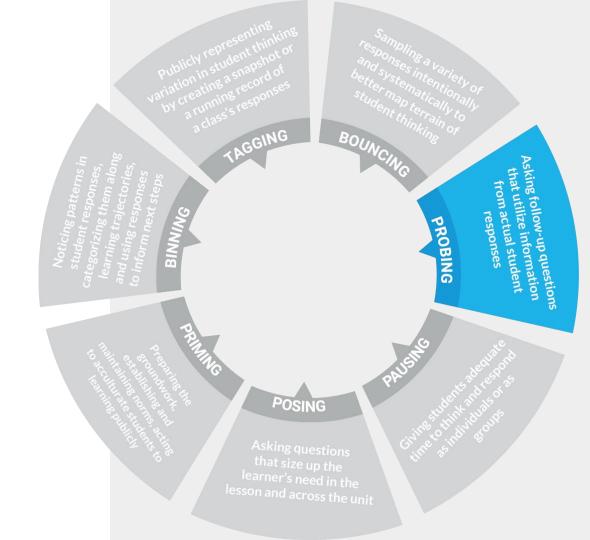
Pausing moves directly support:

- equity of participation for all students
- sounder decision making for teachers
- possibilities for critical thinking & deeper learning



## Probing as an FA Practice







## Probing as an FA Practice

Asking follow-up questions that utilize information from actual student responses



## Go-to Probes

Say more...

Can you explain that to your table partner?

See if you explain it to your breakout group?



## Example: P-P-P cycle of Checking for Understanding

Teacher poses the initial question: "Why do things sink and float?"

Student responds: "Sharp things definitely sink!"

Teacher probes on student response: "That's interesting...can you say more? Try to explain why you think 'Sharp things definitely sink

# Science CFU Example: Using P-P-P Cycle to Uncover Misconceptions

Teacher
/POSES

Why do things sink and float?

Teacher /PAUSES Take 2 minutes to type or write your response in the Google form.

Student/ Initial Response Sharp things definitely sink!

Teacher/ PROBES That's interesting...can you say more? Try to explain why you think "Sharp things definitely sink."

Teacher /PAUSES

Think-pair-share to explain your reasoning. Use your sentence scaffolds.

Student/ Elaboration

We think sharp things sink <u>because</u>...

Learning Target	Initial Pose	Follow-up Probes
Evidence	What do we know?	How do you know? Can you state your source? How credible is this? Are you sure? Can you back it up with more evidence?
Perspective	Whose point of view is this?	Are there other perspectives? Whose perspective is missing? Whose perspective seems to matter most?
Connections	How are things/actions/events/ideas connected?	Which connections cause other events or ideas? How are these things connected? Is there a relationship? What else influences these actions or events?
Supposition	What if?	Is there another possibility? Could events have turned out differently? What are the alternatives? What effect might it have? What other hypotheses can you formulate?
Relevance	Why does this matter?	Who cares? How is it relevant to our lives? What effect does it have? Will anything change as a result of studying this material?

### Probing Moves...

Asking follow-up questions that use information from actual student responses

Probing moves directly support:

- equity of participation by asking ALL children to "Please say more"...
- sounder decision making as teachers ("Do I need to slow down, re-teach, or reflect on "where we are")
- critical thinking & deeper learning by asking for elaboration

## **Probing**

"If students aren't interested in the subject matter, probing will be an irritation, a nuisance."

-Diego, 8th grade science teacher





"Of all the moves, probing seems easiest to mess up in ways that can really jeopardize a teacher-student relationship."

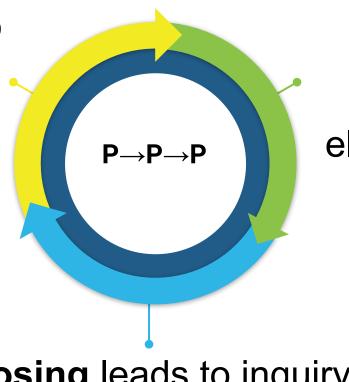
-Lucia, music teacher

### Putting it All Together



#### A Virtuous Circle

Pausing leads to think-time



**Probing** leads to elaboration

**Posing** leads to inquiry

#### Formative Assessment Moves

- Build student participation
- Encourage equity of voice
- Make thinking public
- Reveal patterns in understanding in real-time
- Promote safe spaces to question or clarify
- Support academic language use and production in Zoom

#### Let's share in chat

Posing
Leads to
inquiry

Why does posing matter?

Probing

Leads to elaboration

Pausing

Leads to think-time

#### Let's share in chat

Posing Leads to inquiry Pausing Probing Leads to Leads to elaboration think-time

Who benefits from pausing?

#### Let's share in chat

What are a few benefits of students elaborating on their responses?

Posing
Leads to
inquiry

Probing
Leads to
elaboration

Pausing Leads to think-time

## Ways to Connect Going Forward

**Webinars** 

Modules

"Office Hours"

https://ccee-ca.org/

https://ccee-ca.org/

cholmberg@validitypartners.com

The Power of Bouncing, Tagging, and Binning Moves to Improve Decision Making During a Lesson March 24, 2-3pm

Formative Assessment
Moves to Uncover Academic
Language Demands and
Support English Learners
During a Lesson
April 21, 2-3pm

Free eCourse modules:

- Overview of the FA Moves
- Priming
- Posing
- Pausing
- Probing
- Bouncing
- Tagging
- Binning
- Using the FA Moves to Close Opportunity Gaps

Professional development support:

—5 "office hours" slots for those LEA/districts/schools who want to work with us in May

—We will be collaborating with those who would like to integrate this work into their LCAP



## Thank you



Please go to the link in THE CHAT to provide feedback.

