



South Lewis Central School

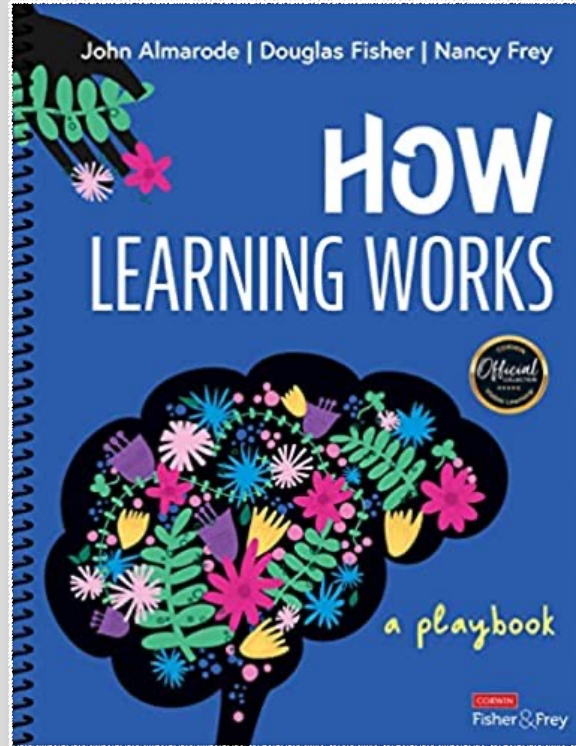
March Faculty Meeting

March, 2024

One District • One Building • One Family



How Learning Works



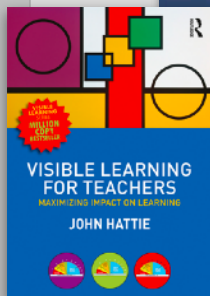
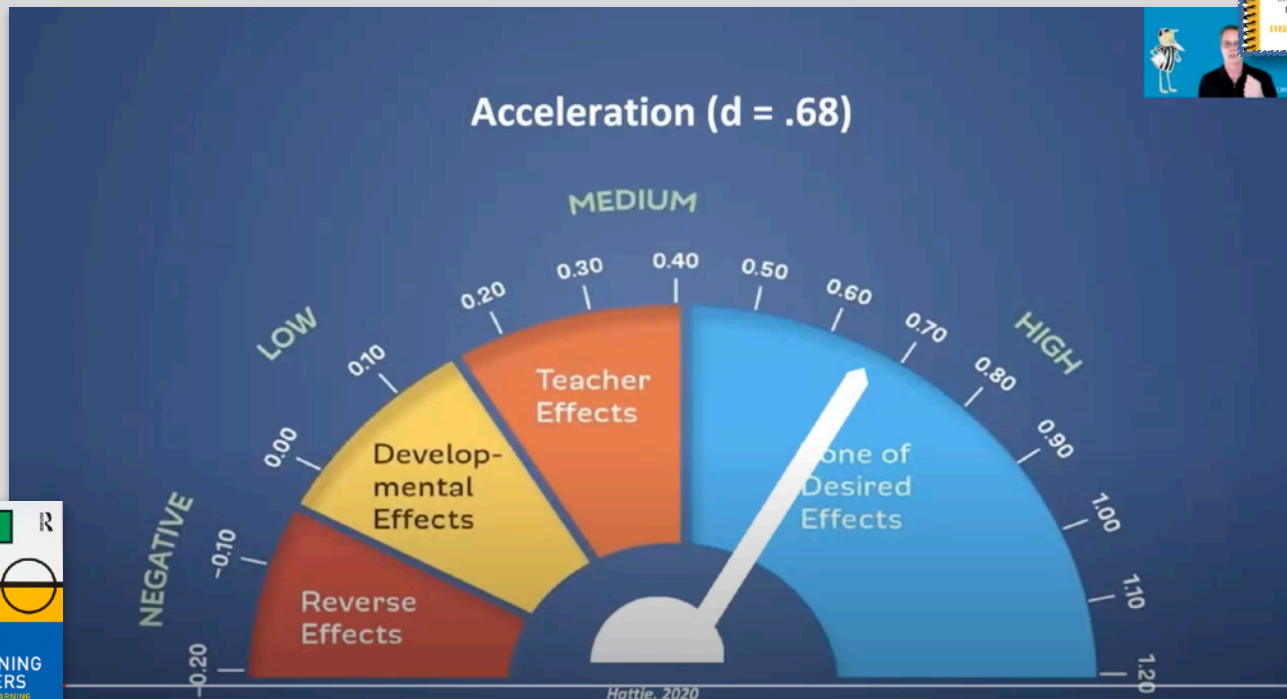
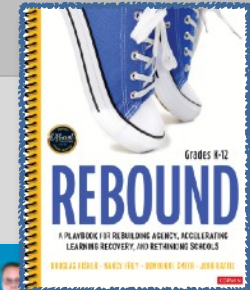
“The purpose of this playbook is to take a closer look at how our students learn so that we can better design learning experiences that align with how learning works” (Almarode, Fisher & Frey, 2022, pg 3).

Almarode, J., Fisher, D., & Frey, N. (2022). *How learning works: a playbook*. Thousand Oaks, CA: Corwin Press.

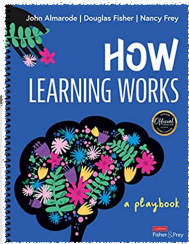




Rebound



Fisher, D., Frey, N., Smith, D. & Hattie, J. (2021). *Grades K-12 rebound: A playbook for rebuilding agency, accelerating learning recovery, and rethinking schools*. Thousand Oaks, CA: Corwin Press.



How Learning Works: a playbook

A Thought to Ponder.....

“Just as **summarizing** prompts learners to identify the **key concepts, main ideas, and important details, mapping** requires learners to do this as well... **Mapping**, however, involves the **creation of a spatial representation of those connections**” (Almarode, Fisher, & Frey, 2022, pg. 166).

Learning Strategy 4: Mapping

Learners extract the key concepts, ideas, and important details based on the what, why, and how of the learning experience or task.

Learners must arrange the concepts, ideas, and details into logical clusters. What goes with what?

Explicitly articulate the connections or relationships using phrases or sentences.

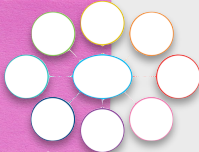
Three Types of Mapping

Graphic Organizer
Learners simply fill in or complete the organizer with the required information.



Knowledge Maps
Learners must:

- Identify the most relevant information.
- Organize the information in a way that is meaningful to them.
- Apply a predetermined set of links.



Concept Maps
Learners must:

- Identify the most relevant information.
- Organize the information in a way that is meaningful to them.
- Explicitly identify and label the spatial connections.



Mapping **must relate and align to** the **what, why** and **how** of the new content to **move learning forward**.



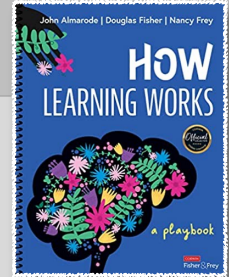
“Nodes are words - concepts, ideas, or details. Those nodes are linked together. These links are purposeful, intentional, and deliberate, not arbitrary connections” (Almarode, Fisher & Frey, 2022, pg. 171).





How Learning Works

Learning Strategy 5: Self-Testing



Learning Intention:

We are learning about the role of self-testing in the acquisition, consolidation, and storage of learning.

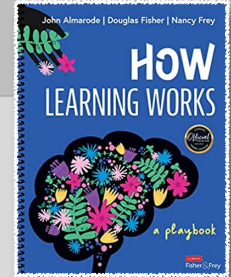
Success Criteria:

- I can describe what is meant by self-testing.
- I can explain how self-testing benefits my learners.
- I can apply the gradual release of responsibility to explicitly teaching students to engage with self-testing.





How Learning Works



Learning Strategy 5: Self-Testing

What is Self-Testing?

“Self-testing occurs when learners **respond** to **low-stakes practice questions** about **previously learned material**” (Almarode, Fisher, & Frey, 2022, pg. 180).

How Does **Self-Testing** Differ From **Other Forms of Testing**?

- Self-testing is a highly effective learning strategy that is **student initiated** and is **low stakes** or **no stakes**.
- Self-testing can be **completed during the lesson** or at **another time**.
- Students engage in self-testing as **self-directed learners** and **on their own**.

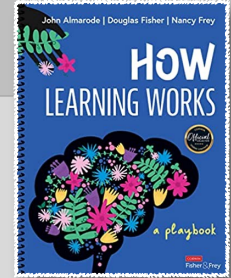


Almarode, J., Fisher, D., & Frey, N. (2022). *How learning works: a playbook*. Thousand Oaks, CA: Corwin Press.





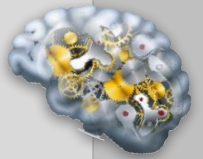
How Learning Works



Learning Strategy 5: Self-Testing

Benefits of Self-Testing:

- Responding to low stakes practice questions *engages students* in the *retrieval* of *previous learning*.
- As shown by the timing of the *retrieval graph*, the *benefits of self-testing* are *enhanced* when the questions are *spaced over time*.
- Not all low-stakes questions are created equal. *Free-response questions* require a *different kind of knowledge retrieval* than *multiple choice questions*.
- Self-testing *amplifies* other *promising principles* such as: *motivation, attention, elaborate encoding, retrieval and practice, cognitive load, productive struggle, and feedback*.

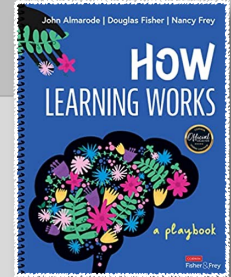


3 Identify the evidence that explains why the climate of New York City is cooler than the climate of Rio de Janeiro even though they receive about the same amount of yearly precipitation. [1]





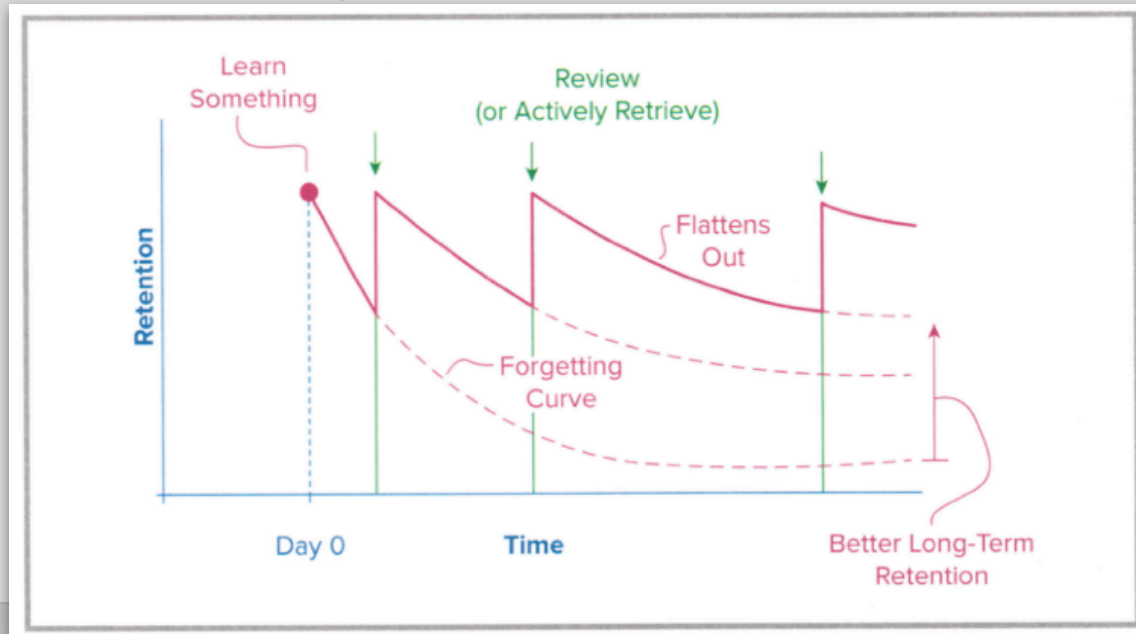
How Learning Works



Learning Strategy 5: Self-Testing

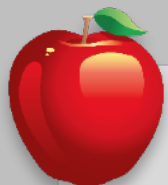
Timing of Retrieval Graph

...we should **space out retrieval** during the learning experience, day, week, or unit AND offer **opportunities to retrieve** just as **learners are about to forget**” (Almarode, Fisher,& Frey, 2022, pg. 81).



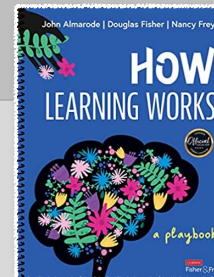
Almarode, J., Fisher, D., & Frey, N. (2022). *How learning works: a playbook*. Thousand Oaks, CA: Corwin Press.





How Learning Works

Learning Strategy 5: Self-Testing



Some Considerations Regarding Self-Testing:

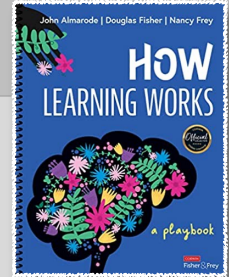
- Sometimes educators are hesitant to teach students the strategy of self-testing *due to concern that they will get practice questions incorrect*. However, this should *not be a deterrent* from teaching this strategy!
- To move learning forward, self-testing students *must have access to corrective feedback*.
- “When *effective corrective feedback* is provided, *making mistakes* and then *correcting* those errors *based on the feedback* enhances the benefits of self-testing” (Almarode, Fisher, & Frey, 2022, pg. 182).





How Learning Works

Learning Strategy 5: Self-Testing



ACTIVATING BACKGROUND KNOWLEDGE: EFFECTIVE FEEDBACK

“*Effective feedback* must be *specific* about *what additional steps will close the gap* between *where learners are* and *where they are going*”

(Almarode, Fisher, & Frey, 2022, pg. 116).

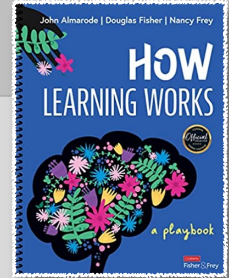
CHARACTERISTICS OF EFFECTIVE FEEDBACK

- ✓ Focuses on the *learning*, not the *individual*.
- ✓ Feedback needs to come at the *right time*, taking into consideration the *individual student to whom it is being given*.
- ✓ Feedback should vary in *timing*, *amount*, mode of *presentation*, and should be based on the *audience* (i.e. is it individual or to a group?)



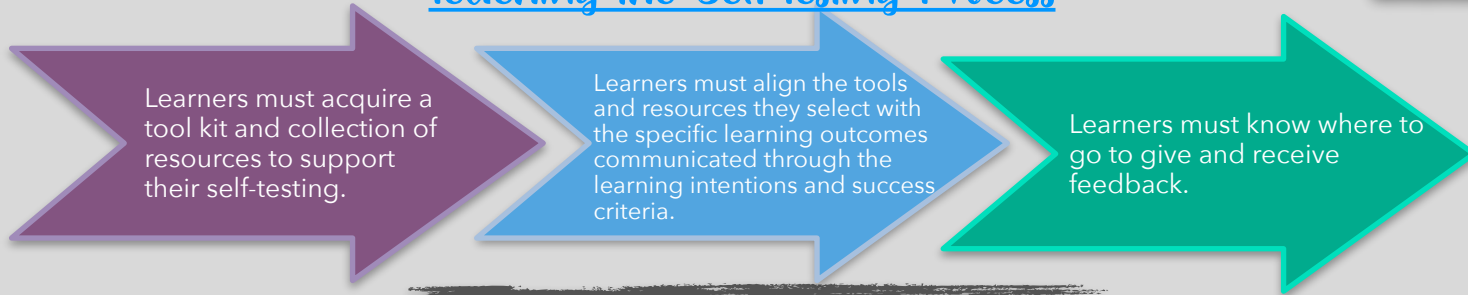


How Learning Works



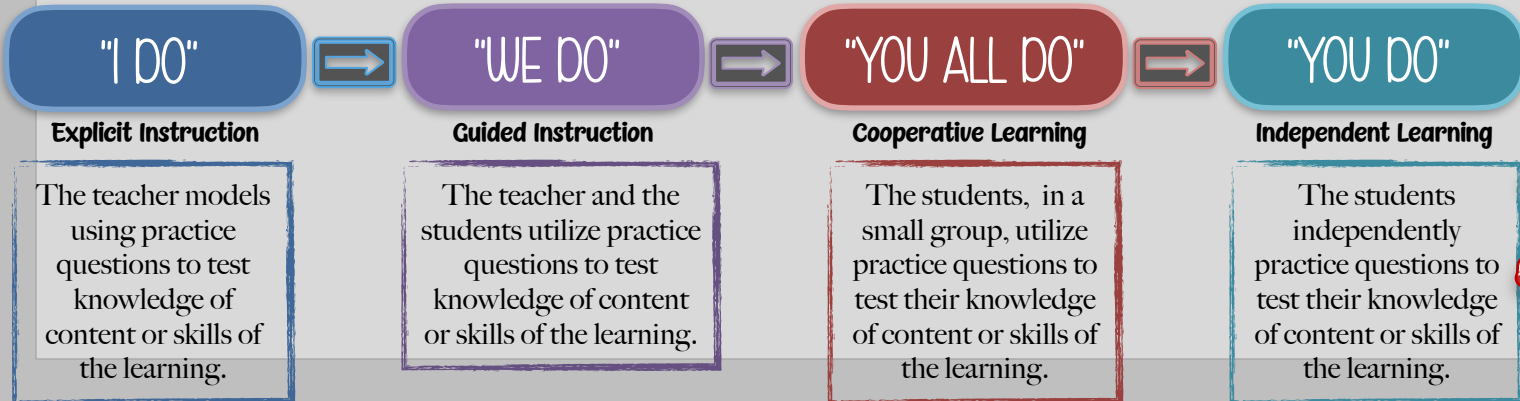
Learning Strategy 5: Self-Testing

Teaching the Self-Testing Process



Gradual release of responsibility for self-testing

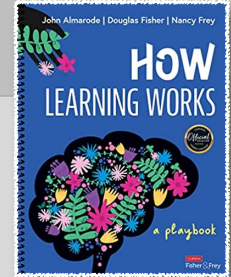
The “end goal” of this release of responsibility is for students to be self-motivated to self-test on their own.



Almarode, J., Fisher, D., & Frey, N. (2022). *How learning works: a playbook*. Thousand Oaks, CA: Corwin Press.



How Learning Works

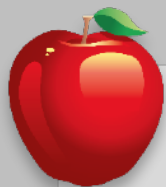


Learning Strategy 5: Self-Testing

EXPLICITLY TEACHING SELF-TESTING

- ✓ **Model** self-testing and **explicitly** make the **connection** between **self-testing** and **growth**.
- ✓ **Model** the process of **choosing a strategy** when learners **do not know what to do** and you are not there to immediately help.
- ✓ **Learning intentions** give the **roadmap** of **what** to practice and **success criteria** give the **direction** on **how** to practice.
 - The **verbs** in your success criteria **show the how**.
 - I can explain the human impact on the weather. How does the learner practice human impact on the weather? By explaining.
- ✓ **Feedback** is a **critical component** of self-testing. Model **how** and **where** to get feedback and **what to do with it** when it is given.

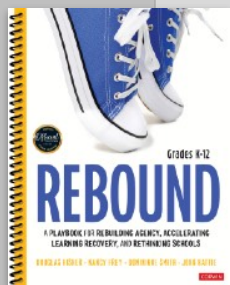
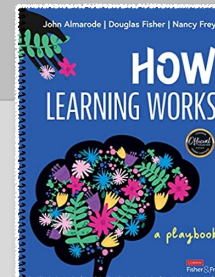




How Learning Works

Learning Strategy 5: Self-Testing

Instructional Strategy: Reciprocal Teaching



Reciprocal Teaching. Students work in groups of four with a common piece of text. Each member has a role: summarizer, questioner, clarifier, and predictor (Palincsar & Brown, 1986). These roles closely mirror the kinds of reading comprehension strategies necessary for understanding expository text. The reading is chunked into shorter passages so that the group can stop to discuss periodically. (Rebound Module 5, Recovering Learning through Instructional Practices, December, 2021)



This strategy combines the high effect size strategy of *working collaboratively* with the high effect size strategy of *self-testing*.

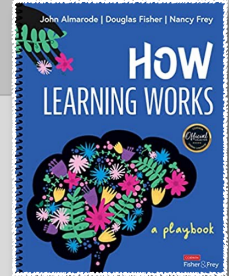
Fisher, D., Frey, N., Smith, D. & Hattie, J. (2021). *Grades K-12 rebound: A playbook for rebuilding agency, accelerating learning recovery, and rethinking schools*. Thousand Oaks, CA: Corwin Press.

Almarode, J., Fisher, D., & Frey, N. (2022). *How learning works: a playbook*. Thousand Oaks, CA: Corwin Press.





How Learning Works



Learning Strategy 5: Self-Testing

Hattie's Research That Supports Our Learning Strategy

Key for rating

- Potential to considerably accelerate student achievement
- Potential to accelerate student achievement
- Likely to have positive impact on student achievement
- Likely to have small positive impact on student achievement
- Likely to have a negative impact on student achievement

Overview ● Self monitoring ● **0.50**

- **Influence:** Self monitoring
- **Domain:** Student Learning Strategies
- **Sub-Domain:** Meta-cognitive/self-regulated learning
- **Potential to Accelerate Student Achievement:** Potential to considerably accelerate
- **Influence Definition:** When students monitor and evaluate their progress and performance relative to success criteria or standards.

Overview Feedback ● **0.66**

- **Influence:** Feedback
- **Domain:** Teaching Strategies
- **Sub-Domain:** Feedback
- **Potential to Accelerate Student Achievement:** Potential to considerably accelerate
- **Influence Definition:** Feedback is information provided by an agent (e.g., teacher, peer, book, parent, self/experience) regarding aspects of one's performance or understanding that reduces the discrepancy between what is understood, what is aimed to be understood, and where to move next in their learning.

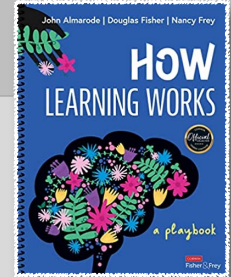
Retrieved from: https://www.visiblelearningmetax.com/influences/view/outlining_and_summarizing

Almarode, J., Fisher, D., & Frey, N. (2022). *How learning works: a playbook*. Thousand Oaks, CA: Corwin Press.





How Learning Works



Learning Strategy 5: Self-Testing

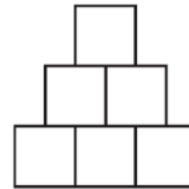
Let's Try it Out!

1. Independently self-test yourself on this Math content.
2. Pair up with a partner and provide feedback to your partner on their practice.
3. Switch roles and receive feedback on your practice.

34

This question is worth 2 credits.

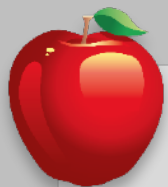
The figure shown below is made up of equal parts.



What fraction of the entire figure is each part?

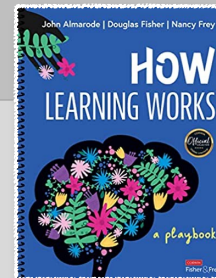
Explain how you know your answer is correct.





How Learning Works

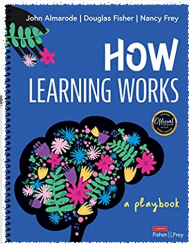
Learning Strategy 5: Self-Testing



One final thought.....

“In the end, we want learners, **without prompting**, to **practice**. Whether through **goal setting, self-assessing** or utilizing **one of the other learning strategies** presented in this playbook, we want our learners to **self-regulate** both the **strategy of self-testing** and when to use **practice testing to enhance their learning**” (Almarode, Fisher, & Frey, 2022, pg. 188).





How Learning Works: a playbook

A Thought to Ponder.....

“Self-testing is a very efficient strategy that supports learners in self-monitoring, self-reflecting, and self-evaluating their learning” (Almarode, Fisher, & Frey, 2022, pg. 179).

Learning Strategy 5: Self-Testing



Learners must acquire a tool kit and collection of resources to support their self-testing.

Learners must align the tools and resources they select with the specific learning outcomes communicated through the learning intentions and success criteria.

Learners must know where to go to give and receive feedback.

EXPLICITLY TEACHING SELF-TESTING

- ✓ **Model** self-testing and **explicitly** make the **connection** between **self-testing** and **growth**.
- ✓ **Model** the process of **choosing a strategy** when learners **do not know what to do** and you are not there to immediately help.
- ✓ **Learning intentions** give the **roadmap** of **what** to practice and **success criteria** give the **direction** on **how** to practice.
 - The **verbs** in your success criteria **show the how**.
 - I can **explain** the human impact on the weather. How does the learner practice human impact on the weather? By explaining.
- ✓ **Feedback** is a **critical component** of self-testing. Model **how** and **where** to get feedback and **what to do with it** when it is given.

“Self-testing not only capitalizes on retrieval and practice, but when learners engage in practice testing, they also leverage the other promising principles and practices...” (Almarode, Fisher & Frey, 2022, pg. 181).



We all own this
We're all in this together.....

