



# South Lewis Central School

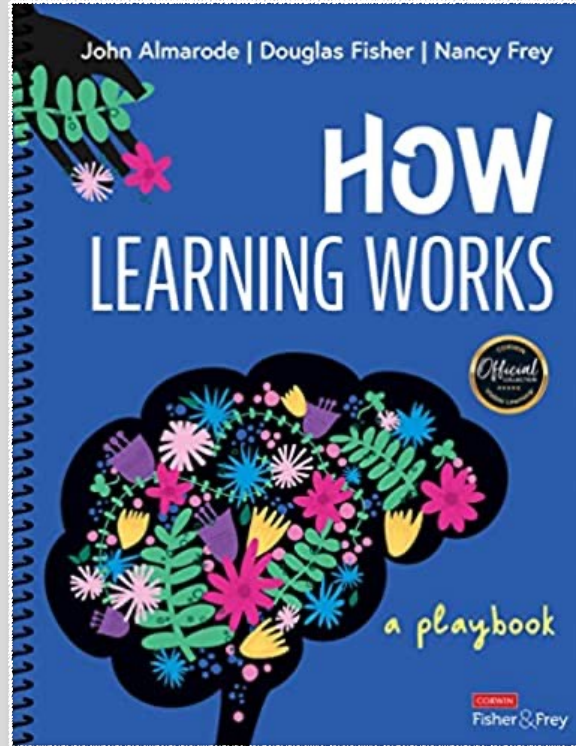
**December Faculty Meeting**

December, 2023

*One District • One Building • One Family*



# How Learning Works



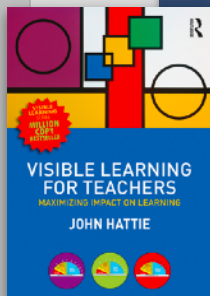
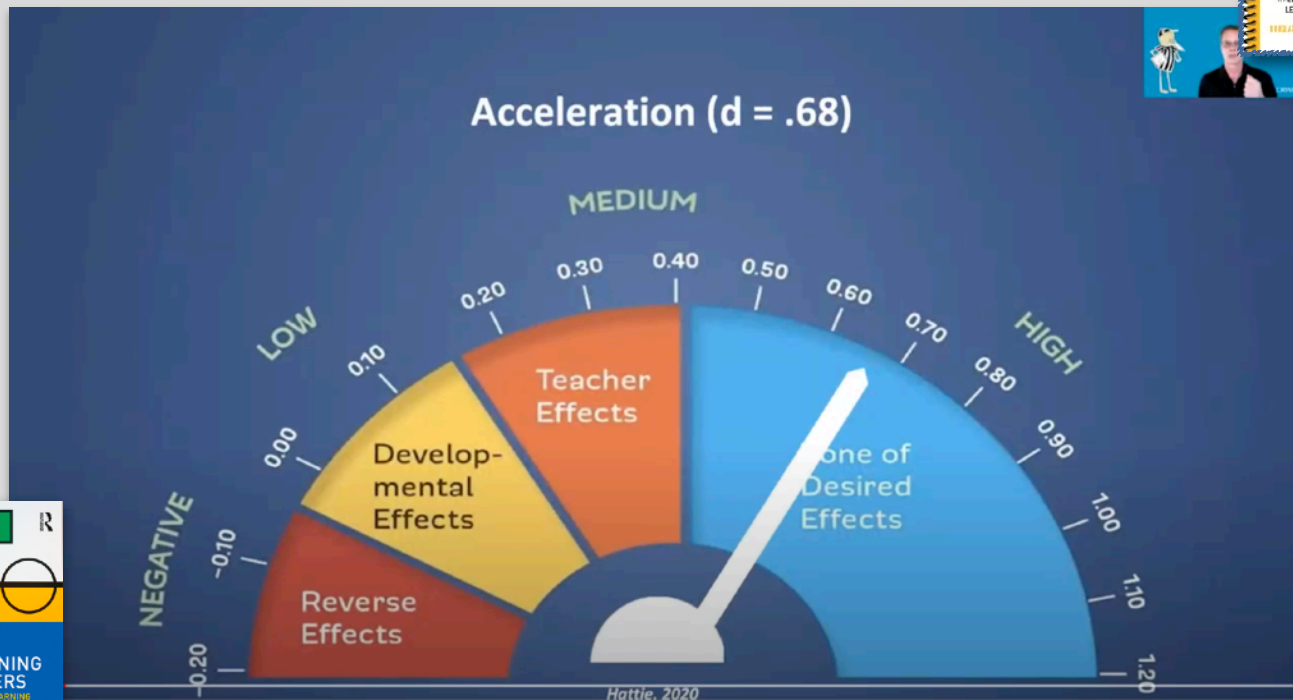
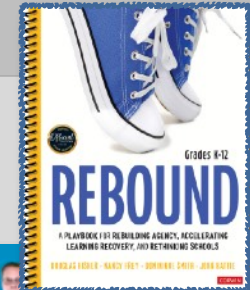
“The purpose of this playbook is to take a closer look at how our students learn so that we can better design learning experiences that align with how learning works” (Almarode, Fisher & Frey, 2022, pg 3).

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

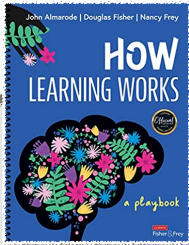




# Rebound



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.....

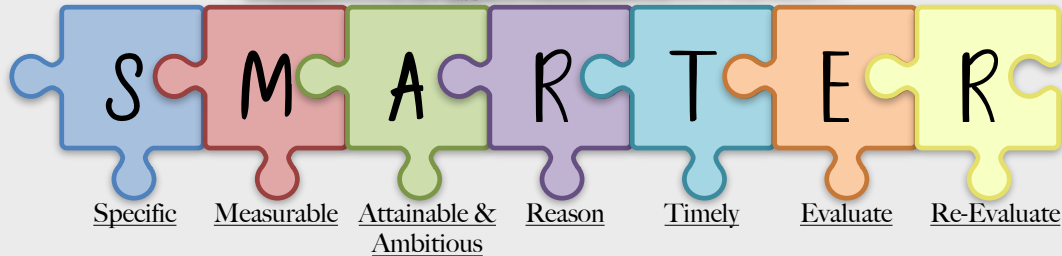
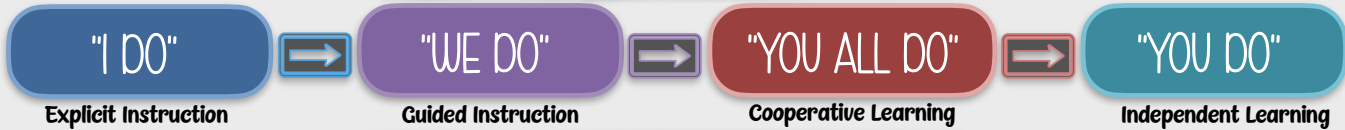
Goal setting helps transfer the responsibility of motivation from the teacher to the student.

Explicit Strategy Instruction

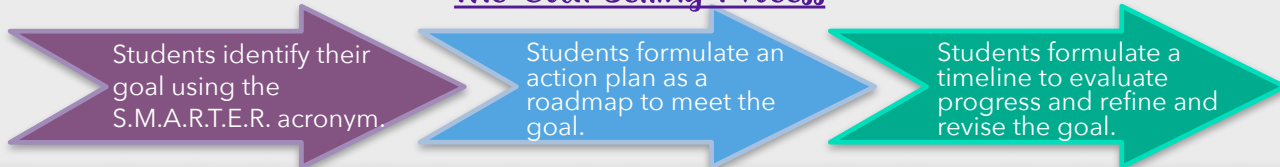
Learning Strategy I: Goal Setting

★ Gradual Release of Responsibility ★

Not all of the responsibility for learning falls on the educator! Students must have an active role in their learning.



### The Goal-Setting Process

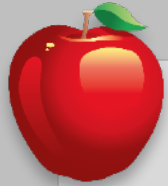


**S.M.A.R.T.E.R. goals help students focus their learning and provide a roadmap for the acquisition, consolidation, and storage of knowledge. (Hint: This is the learning process!)**

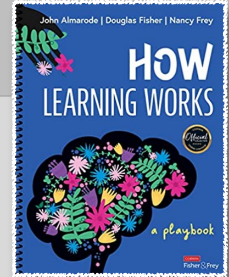




# How Learning Works



## Learning Strategy 2: Integrating Prior Knowledge



“Integrating knowledge into new learning supports learners as they make meaning of their new learning, while at the same time it retrieves previous learning” (Almarode, Fisher, & Frey, 2022, pg. 145).



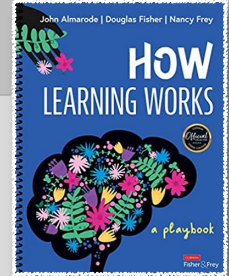
- Integrating prior knowledge is a learning strategy that may be explicitly taught to students.
- Students make connections and attach new learning to what they already know.
- ★★ Students need to know the what, why and how of the new content to access relevant prior knowledge. ★★
  - This can be accomplished by posting your objectives, conveying learning intentions, and identifying success criteria.





# How Learning Works

## Learning Strategy 2: Integrating Prior Knowledge



The process is actually quite simple. First, you arrange things into different groups depending on their makeup. Of course, one pile may be sufficient depending on how much there is to do. If you have to go somewhere else due to lack of facilities, that is the next step; otherwise, you are pretty well set. It is important not to overdo any particular endeavor. That is, it is

**“The *context* of the learning *strongly influences* the way we *attend to the content*”** (Almarode, Fisher, & Frey, 2022, pg. 146).

easily arise. A mistake can be expensive as well. The manipulation of the appropriate mechanisms should be self-explanatory, and we need not dwell on it here. At first, the whole procedure will seem complicated. Soon, however, it will become just another facet of life. It is difficult to foresee any end to the necessity for this task in the immediate future, but then one never can tell. (Seidenberg & Farry-Thorn, 2020)

**\*\* Please read the passage and circle or underline what you think is the most important information.**

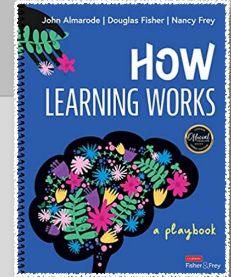
Almarode, J., Fisher, D., & Frey, N. (2022). *How learning works: a playbook*. Thousand Oaks, CA: Corwin Press.





# How Learning Works

## Learning Strategy 2: Integrating Prior Knowledge



Step 1: Preheat the oven to 350 degrees F (175 degrees C).

Step 2: Cream sugar and margarine in a large bowl until light and fluffy. Beat in eggs, one at a time, then stir in vanilla.

Step 3: Combine flour, cocoa, baking soda, and salt in a separate bowl. Add to the creamed mixture and mix until just blended. Stir in walnuts. Drop spoonfuls of dough 2 inches apart onto ungreased cookie sheets.

Step 4: Bake in the preheated oven until edges are set and centers are soft, 8 to 10 minutes. Let sit briefly before transferring to wire racks to cool completely.

Step 1: Sand all edges until they are smooth.

Step 2: Clean all edges of dust and any other residue.

Step 3: Remove backing from foil and place the edge equidistantly on the adhesive side.

Step 4: Press the foil and use your fid to ensure maximum adhesion and ensure the foil is flat.

Step 5: Apply flux on foil edges to ensure adhesion.

Step 6: Heat soldering iron and apply solder to fluxed edges.

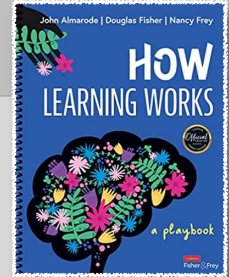




# How Learning Works

## Learning Strategy 2: Integrating Prior Knowledge

### "Effect of Prior Knowledge on Good and Poor Readers' Memory of Text"



Recht, D., & Leslie, L. (1988). Effect of Prior Knowledge on Good and Poor Readers' Memory of Text. *Journal of Educational Psychology*, 80(1), 16-20. Retrieved from: [https://www.researchgate.net/publication/232584848\\_Effect\\_of\\_Prior\\_Knowledge\\_on\\_Good\\_and\\_Poor\\_Readers'\\_Memory\\_of\\_Text](https://www.researchgate.net/publication/232584848_Effect_of_Prior_Knowledge_on_Good_and_Poor_Readers'_Memory_of_Text)

- **Subjects: 32 seventh and 32 eight-grade students of high and low reading ability - pretest on baseball knowledge**
- **Students were given a silent reading passage of a half inning of a baseball game in five parts.**
- **Students were asked to reenact the action of the text on a model field.**
- **Students were asked to summarize the selection and sort sentences.**



Journal of  
Educational  
Psychology

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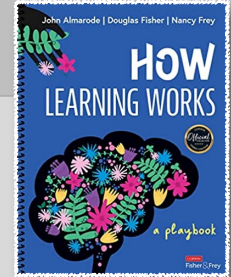




# How Learning Works

## Learning Strategy 2: Integrating Prior Knowledge

### What are the "Big Deals" of the Research?



- **Students who had more background knowledge of baseball were able to recall more than students with less background knowledge.**
- **Students with high reading ability/low knowledge were no better able to recall or summarize than students with low reading ability/low background knowledge.**
- **Students with high reading ability/high knowledge did no better than students with low reading ability/high knowledge.**
- ***"The finding that summarization of poor readers with high knowledge of baseball was far superior to that of good readers without such knowledge demonstrates the powerful effect of knowledge on memory"* (Recht, & Leslie, 1988, pg. 19).**



Recht, D., & Leslie, L. (1988)

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

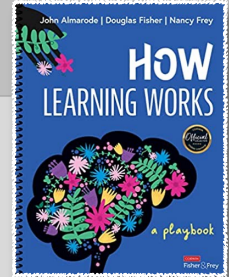




# How Learning Works

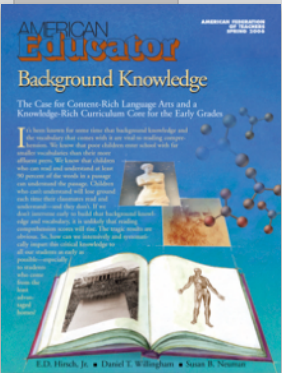
## Learning Strategy 2: Integrating Prior Knowledge

*"How Knowledge Helps: It Speeds and Strengthens Reading Comprehension, Learning-and Thinking"*



Willingham, D. (2006). How Knowledge Helps: It speeds and strengthens reading comprehension, learning-and thinking. *American Educator*, 30(1), 30-37. Retrieved from: <https://www.aft.org/ae/spring2006/willingham>

- Many reading passages rely upon the reader's ability to "fill in the gaps" of the unwritten with inferences.
- This is a subconscious process that naturally occurs with the proper background knowledge - you do not need to stop and think through every sentence.
- If this process does not produce connections, it requires greater cognitive load to attempt to make sense of the words.
- Greater background knowledge produces more automaticity in this subconscious process.



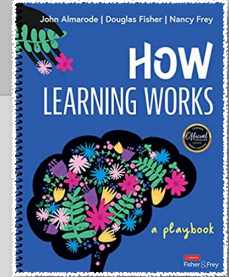
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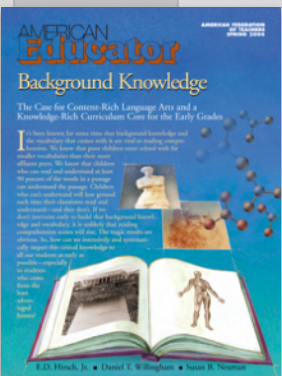
# How Learning Works

## Learning Strategy 2: Integrating Prior Knowledge

*"How Knowledge Helps: It Speeds and Strengthens Reading Comprehension, Learning-and Thinking"*



- **“Chunking” information helps expand the capacity of working memory and reduces cognitive load.**
- **The increased working memory capacity allows for attention to other tasks.**
- **If a student has prior knowledge to relate to new content, it makes it more likely the student will remember it.**
- **This does not just apply to reading, it applies to all subject areas. If a student does not have prior knowledge of the distributive property, he/she must use more cognitive load every time he/she encounters this type of problem.**



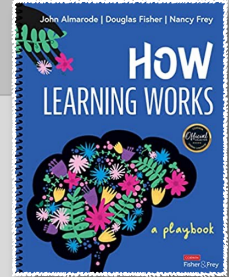
Willingham, D. (2006)

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# How Learning Works



## Learning Strategy 2: Integrating Prior Knowledge

### Integrating Prior Knowledge Process

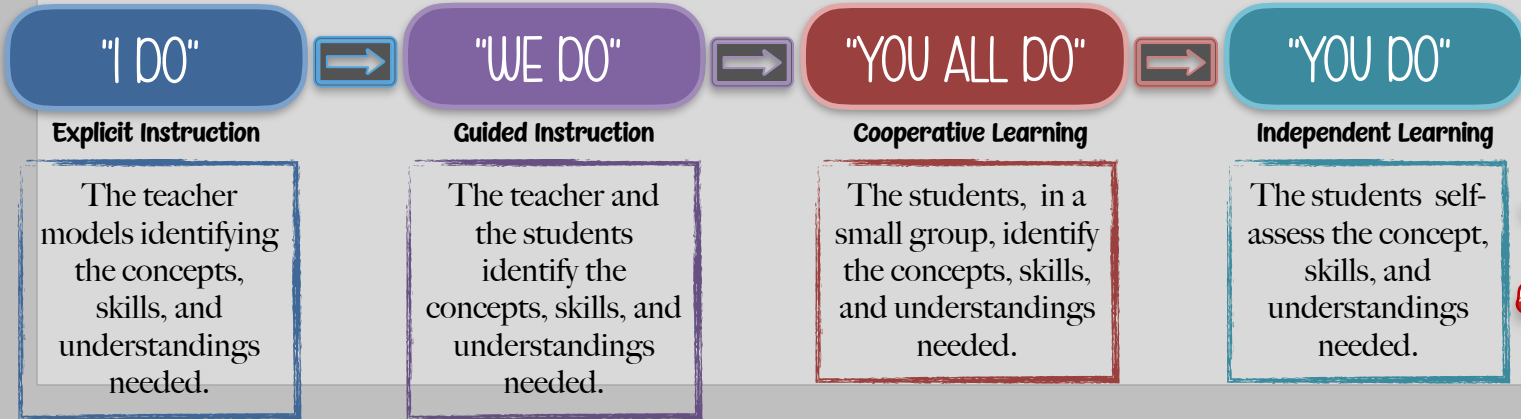


Gradual release of responsibility for self-assessment of prior knowledge.

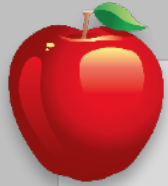
I am very familiar with this.

I have heard of this before.

This is new for me.

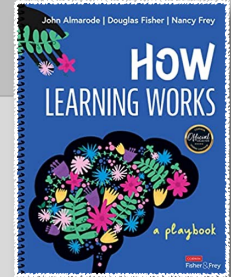


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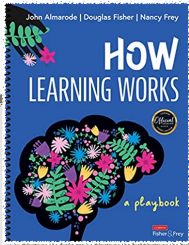
## Learning Strategy 2: Integrating Prior Knowledge



One final thought.....

“**Research** has been **very clear** on the role of **integrating prior knowledge** into **new learning**. Furthermore, learners develop a **tool kit of strategies** that support their capacity for **self-monitoring, self-reflecting, and self-assessing** what they **know** and **don't know** about a particular topic. This, in the end, **increases the probability** that they are **attending** to the **most relevant information** during learning” (Almarode, Fisher, & Frey, 2022, pg. 153).





## How Learning Works: a playbook

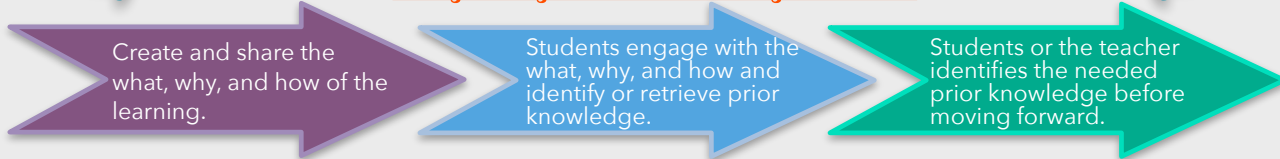
### A Thought to Ponder.....

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### Learning Strategy 2: Integrating Prior Knowledge



### Integrating Prior Knowledge Process



Gradual release of responsibility for self-assessment of prior knowledge.



I am very familiar with this.

"I DO"

Explicit Instruction

The teacher models identifying the concepts, skills, and understandings needed.



I have heard of this before.

"WE DO"

Guided Instruction

The teacher and the students identify the concepts, skills, and understandings needed.



"YOU ALL DO"

Cooperative Learning

The students, in a small group, identify the concepts, skills, and understandings needed.



This is new for me.

"YOU DO"

Independent Learning

The students self-assess the concept, skills, and understandings needed.



☆☆ Students need to know the what, why and how of the new content to access relevant prior knowledge. ☆☆

“The context of the learning strongly influences the way we attend to the content. Knowing the what, why, and how of the content sets the context of the learning” (Almarode, Fisher & Frey, 2022, pg. 146).



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

