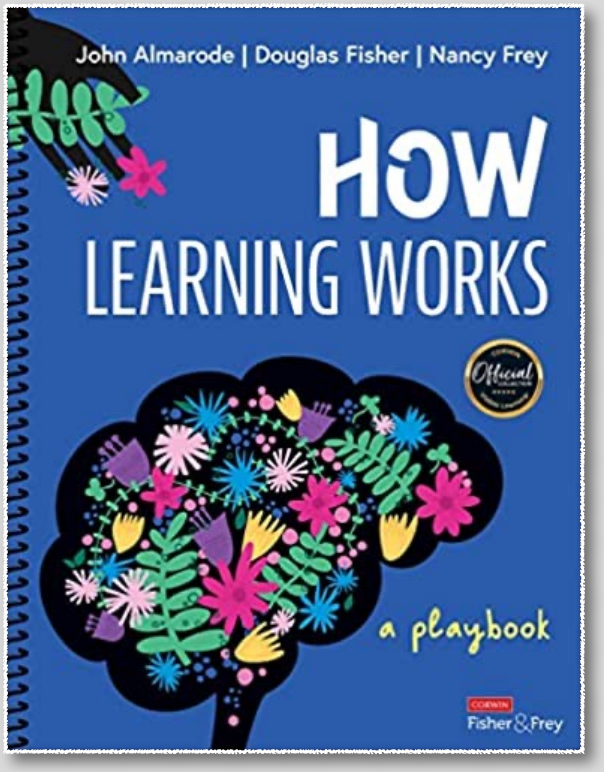
South Lewis Central School

February Faculty Meeting

February, 2024

One District • One Building • One Family

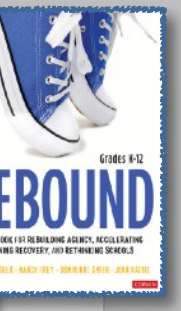
How Learning Works

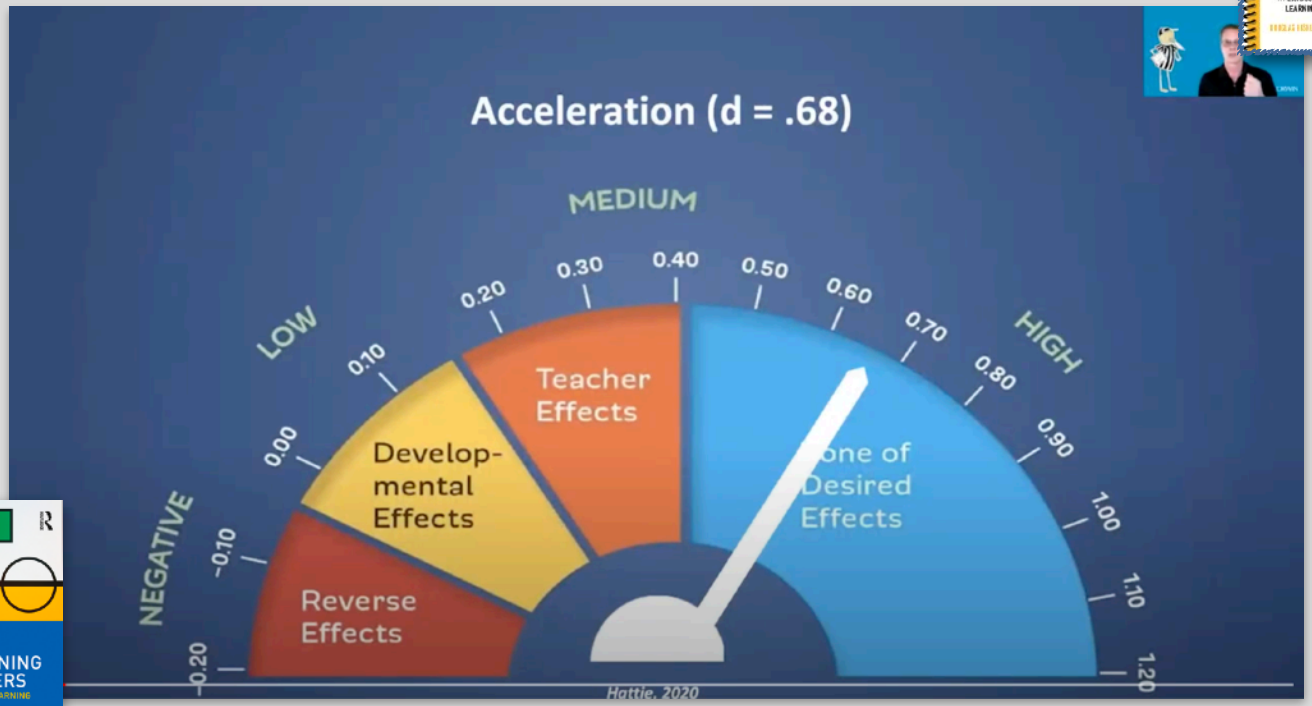


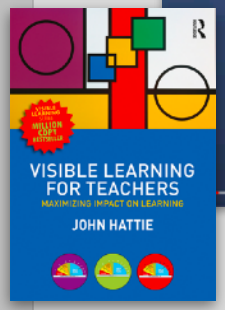
"The purpose of this playbook is to take a closer look at how our students learn so that we can better design learning experiences that align with how learning works" (Almarode, Fisher & Frey, 2022, pg 3).

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

Rebound



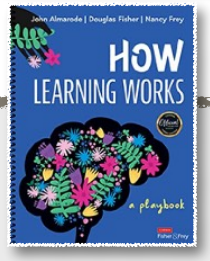




Fisher, D., Frey, N., Smith, D. & Hattie, J. (2021). *Grades K-12 rebound: A playbook for rebuilding agency, accelerating learning recovery, and rethinking schools.* Thousand Oaks, CA: Corwin Press.

South Lewis "Tip of the Month" - January, 2024

Powerful Instruction



How Learning Works: a playbook

A Thought to Ponder.....

"Summarizing requires that learners take information, identify relevant content, skills, or understandings, and then decide how different ideas are related to each other" (Almarode, Fisher,& Frey, 2022, pg. 156).

Learning Strategy 3: Summarizing

Summarizing Process

1. Learners engage with the what, why, and how of the learning and retrieve prior knowledge.
2. Learners extract the key concepts, content, and main ideas based on the what, why, and how.
3. Learners develop a summary using their own words that connects to the concepts, content and main ideas.

Gradual Release of Responsibility for Summarizing.

Turning success criteria into questions helps students focus on the concepts, content, and main ideas of the learning.

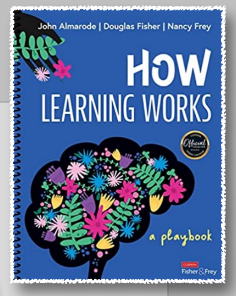
"I DO"	"WE DO"	"YOU ALL DO"	"YOU DO"
Explicit Instruction	**Guided Instruction**	**Cooperative Learning**	**Independent Learning**
The teacher models changing success criteria to questions to identify the key concepts, skills, and understandings.	The teacher and the students change success criteria to questions to identify the key concepts, skills, and understandings.	The students, in a small group, change success criteria to questions to identify the key concepts, skills, and understandings.	The students change success criteria to questions to identify the key concept, skills, and understandings.

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

"The process for explicitly teaching summarizing must start with ensuring learners are attending to learning intentions and success criteria" (Almarode, Fisher & Frey, 2022, pg. 161).

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

How Learning Works



Learning Strategy 4: Mapping

Powerful Instruction – January, 2023

Promising Principle 3: Elaborate Encoding

A Thought to Ponder.....

"Elaborate encoding is the deep processing of information by linking new content, skills and understandings to prior knowledge, background knowledge and/or previous experiences"

(Almarode, Fisher & Frey, 2022, pg. 67).

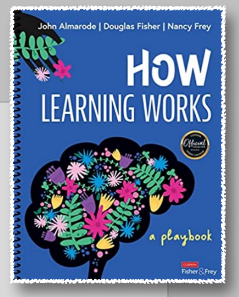
Visible Learning™ 4 Influences on Elaborate Encoding

4. Concept Mapping (Effect Size=0.64). Concept mapping supports deep levels of cognitive processing. The purpose of creating concept maps is to find connections between new learning and previously mastered learning.

Multiple Representations of content, skills and understandings. Multiple representations refers to **different ways of thinking** (i.e. summarizing, self-questioning, use of visuals, graphic organizers, etc.).

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

How Learning Works



Learning Strategy 4: Mapping

Learning Intention:

We are learning three different ways for learners to map out their learning.

Success Criteria:

- I can compare and contrast the three different approaches to mapping.
- I can explain how mapping supports promising principles.
- I can apply the gradual release of responsibility to explicitly teach my students how to map.

Remember: To explicitly teach ***summarizing***, model ***turning your success criteria into questions*** to help ***guide students' attention*** to the ***relevant*** content, concepts, and skills of the lesson.

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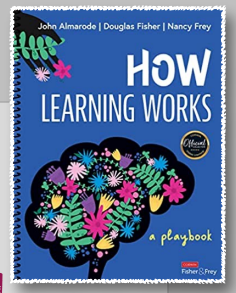
How Learning Works



Learning Strategy 4: Mapping

"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).

- **Mapping** moves learning forward when learners convert **lesson learnings** into **spatial arrangements** of ***nodes***.
- **Three types** of maps include **concept maps, knowledge maps,** and **matrix graphic organizers**.
- ⭐⭐Mapping **must relate and align to** the **what, why** and **how** of the new content to **move learning forward**. ⭐⭐
  - This can be accomplished by **posting your objectives**, conveying **learning intentions**, and **identifying success criteria**.

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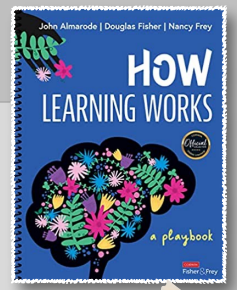
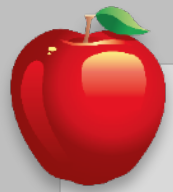
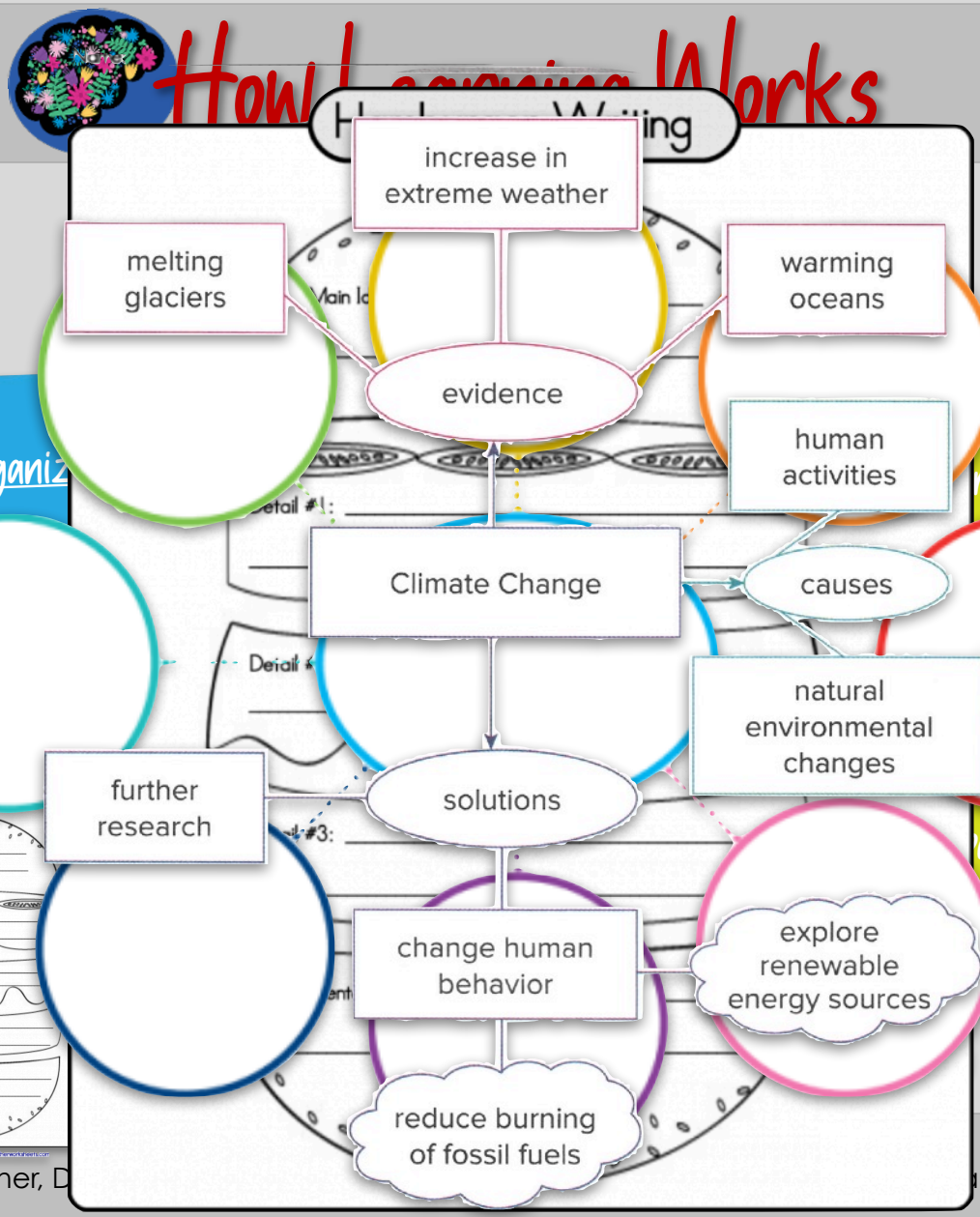
How Learning Works







Graphic Organiz

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Concept Maps

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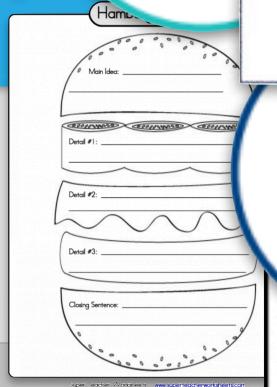

Almarode, J., Fisher, D. ... ks, CA: Corwin Press.

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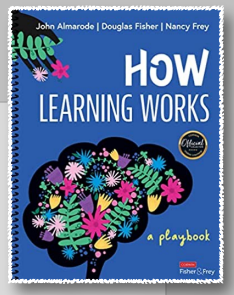

Learning Strategy 4: Mapping

Teaching the Mapping Process

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.

Gradual release of responsibility for mapping.

The "end goal" of this release of responsibility is for students to generate maps without prompting.

"I DO"	"WE DO"	"YOU ALL DO"	"YOU DO"
Explicit Instruction	**Guided Instruction**	**Cooperative Learning**	**Independent Learning**
The teacher models extracting the key concepts, ideas, and details and creation of nodes for each mapping approach.	The teacher and the students extract the key concepts, ideas, and details and creation of nodes for each mapping approach.	The students, in a small group, extract the key concepts, ideas, and details and creation of nodes for each mapping approach.	The students extract the key concepts, ideas, and details and creation of nodes for each mapping approach.

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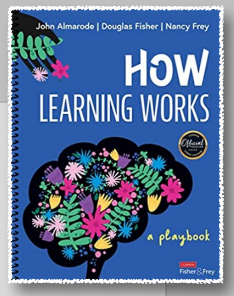
How Learning Works



Learning Strategy 4: Mapping

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

Concept mapping **0.64**

Overview

- **Influence:** Concept mapping
- **Domain:** Teaching Strategies
- **Sub-Domain:** Learning intentions
- **Potential to Accelerate Student Achievement:** Potential to considerably accelerate
- **Influence Definition:** The creation of visual or graphic representations of relationships between information relating to course content.

Advance organizers **0.41**

Overview

- **Influence:** Advance organizers
- **Domain:** Teaching Strategies
- **Sub-Domain:** Learning intentions
- **Potential to Accelerate Student Achievement:** Potential to accelerate
- **Influence Definition:** These organizational tools aim to help students structure the information they are about to learn.

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

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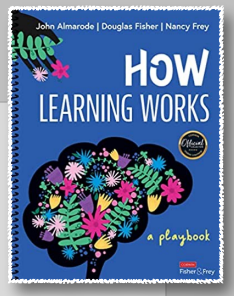
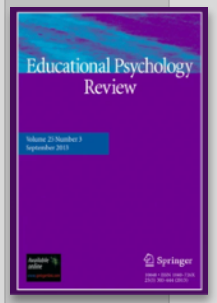
How Learning Works



Learning Strategy 4: Mapping



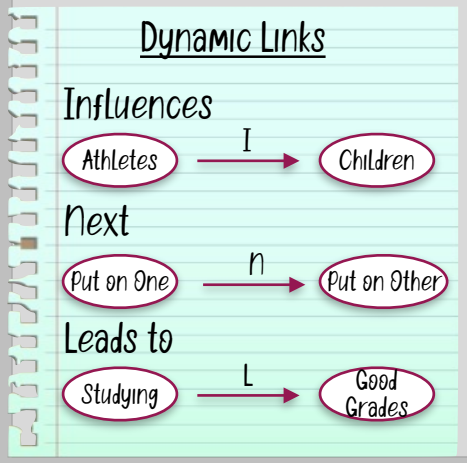
"Knowledge Maps as Scaffolds for Cognitive Processing"

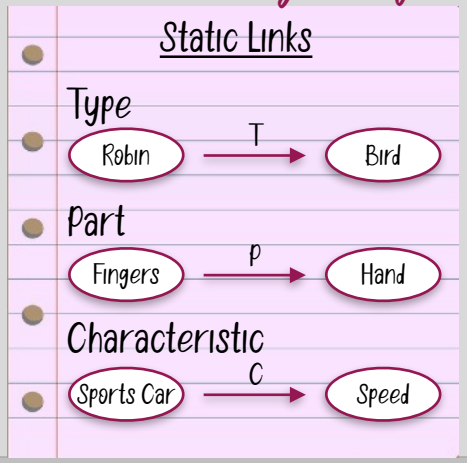
This article provides a review of research across the span of 12 years on mapping utilizing knowledge maps.

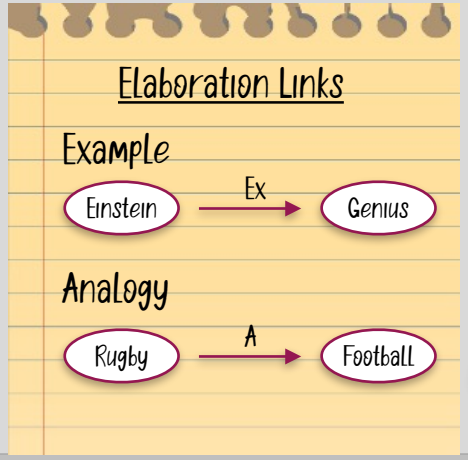
Knowledge maps:

- Visual representations in which ideas are placed in nodes and connected to other related ideas through ***labeled links***.

Three Main Categories of Links







O'Donnell, A., Dansereau, D. & Hall, R. (2002, March). Knowledge maps as scaffolds for cognitive processing. *Educational Psychology Review, 14*(1). Retrieved from: https://www.researchgate.net/publication/259703561_Knowledge_Maps_as_Scaffolds_for_Cognitive_Processing

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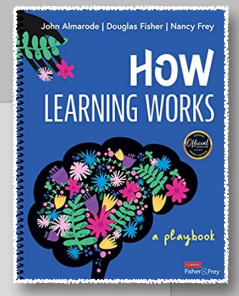
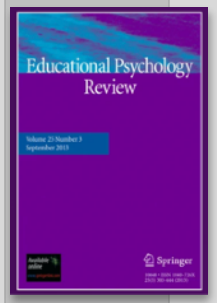


Learning Strategy 4: Mapping



"Knowledge Maps as Scaffolds for Cognitive Processing"

Research Summary:

- Students recall more central ideas when they learn from a knowledge map than when they learn from text.
- Students with low verbal ability or low prior knowledge often benefit the most from the presentation of information in a knowledge map format on measures of recall.
- Students who use knowledge maps as supports when working in cooperative learning groups learn more effectively.
- Information presented in well-structured maps designed to Gestalt* principles is recalled better than less well-structured maps.

Gestalt Principles of Visual Perception: figure-ground, **proximity**, **similarity**, **continuity**, closure, simplicity and **symmetry**.

O'Donnell, A., Dansereau, D. & Hall, R. (2002, March). Knowledge maps as scaffolds for cognitive processing. *Educational Psychology Review, 14*(1). Retrieved from: https://www.researchgate.net/publication/259703561_Knowledge_Maps_as_Scaffolds_for_Cognitive_Processing

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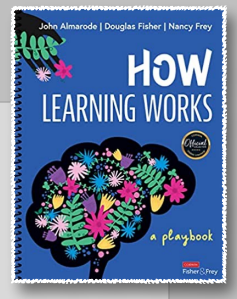
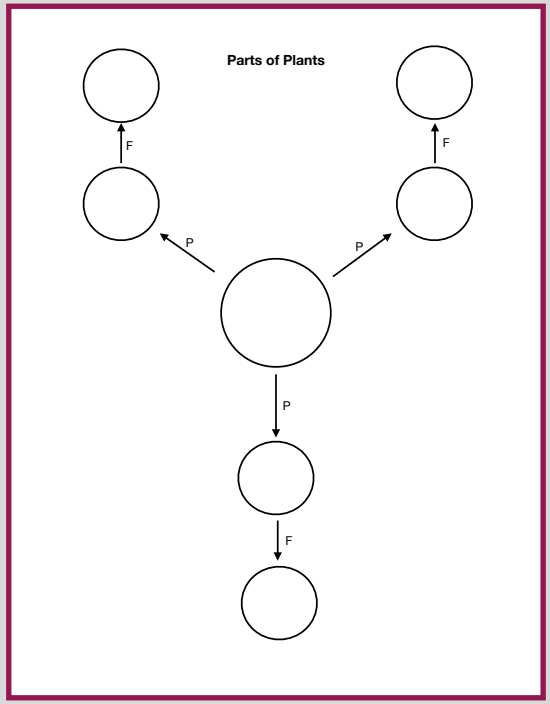


Learning Strategy 4: Mapping

Let's Create a Knowledge Map

Plants

All plants have three main parts. The first part is the root system. Roots hold the plant in the ground. Roots also take in water and nutrients that help the plant grow. Roots are below the surface of the ground. Plants also have stems. Stems move water up the plant and help to hold the plant above the ground. All plants also have leaves. Leaves help the plant breath. Leaves also use the energy from the sun to make food for the plant.



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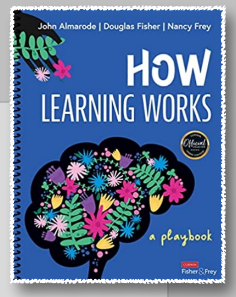
How Learning Works



Learning Strategy 4: Mapping

One final thought…….

"**Mapping** is more than just **writing down all the keywords and phrases** and **drawing a line between a few of these keywords and phrases**. Mapping truly is a **way for learners to spatially represent** their learning and **explicitly draw** the **Connections and relationships** among the learning. Once again, this process must start with **ensuring learners** are **attending to the learning intentions** and **success criteria**" (Almarode, Fisher,& Frey, 2022, pg. 175).

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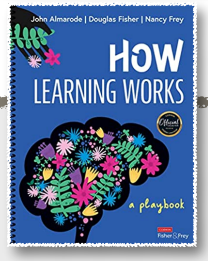
South Lewis "Tip of the Month" - February, 2024

Powerful Instruction



How Learning Works: a playbook

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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.

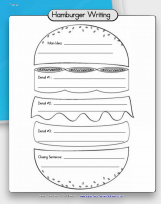
Learners must arrange the concepts, ideas, and details into logical clusters. What goes with what?

Explicitly articulate the connections or relationships using phrases or sentences.

Three Types of Mapping

Graphic Organizer

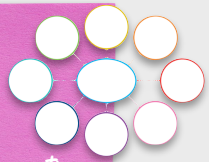
Learners simply fill in or complete the organizer with the required information.



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).

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