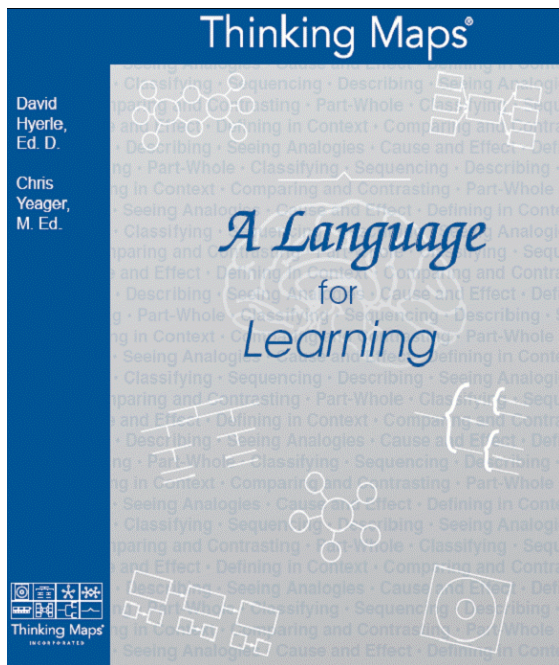
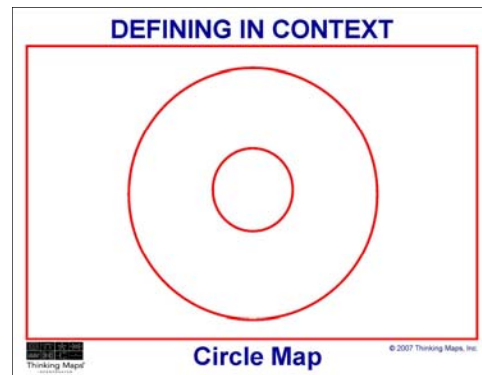


Thinking Maps®: A Language for Learning

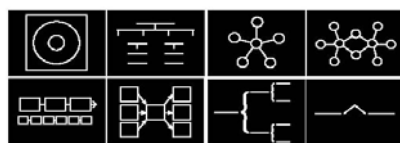
Includes. . .



**Training Manual
in 3-ring binder format**



**Set of 8
Thinking Maps Posters**



Thinking Maps®
INCORPORATED

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Acknowledgments

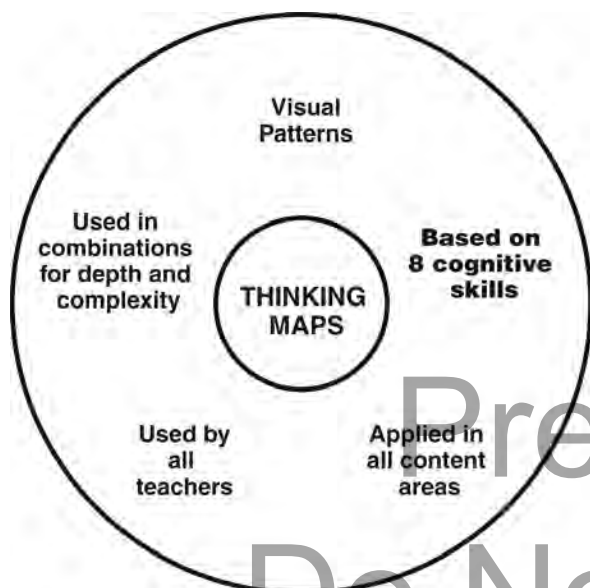
The examples, activities, and anecdotes contained in this manual have been gleaned from the thousands of students, teachers, and administrators who have successfully implemented Thinking Maps in their individual schools and school districts. Their personal experiences and applications have helped to make this manual more “user-friendly.” For their invaluable contributions we are truly grateful.

A special “thank you” to the entire Thinking Maps, Inc. consultant team whose time, ideas, and special contributions have helped create a training manual that has certainly been a team effort. Dr. Hyerle, Ms. Yeager, and I gratefully acknowledge the expertise of all who assisted in the creation of this resource manual.

*Sherwin Suddreth
President*

THINKING MAPS ARE BASED ON 8 COGNITIVE SKILLS

Each visual representation is linked to a specific thought process. By connecting a **dynamic visual design** with a specific thought process, students create **mental visual patterns** for thinking based on these 8 cognitive skills.



“The true discrimination that comes out of poverty is the lack of cognitive strategies. The lack of these unseen attributes handicaps, in every aspect of life, the individual who does not have them.”

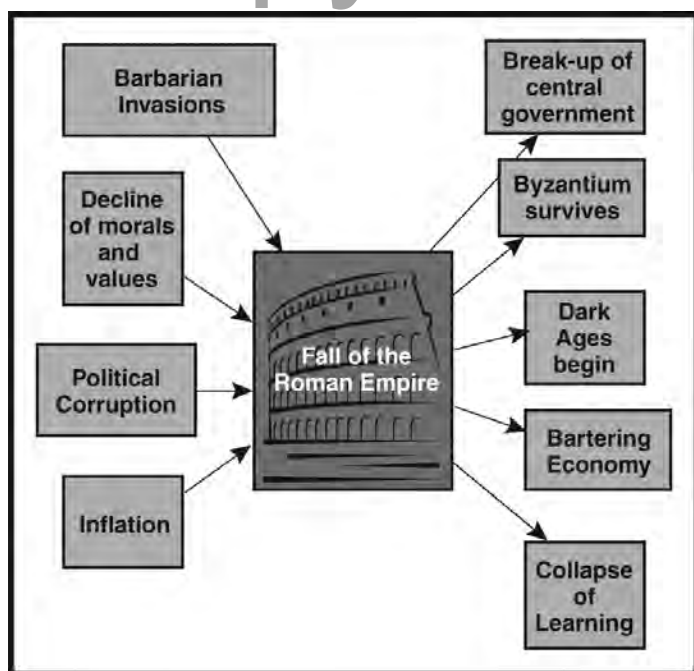
— Ruby K. Payne, Ph.D., *A Framework for Understanding Poverty*

Just giving students ready-made graphic organizers is not enough.

- We must go beyond helping students graphically organize information.
- Students must become independent critical thinkers.

In essence, students using Thinking Maps learn what thinking looks like.

- Students hook a visual image, because **the brain loves pictures**, with an abstract concept (like cause and effect reasoning) in order to make thinking more visual.

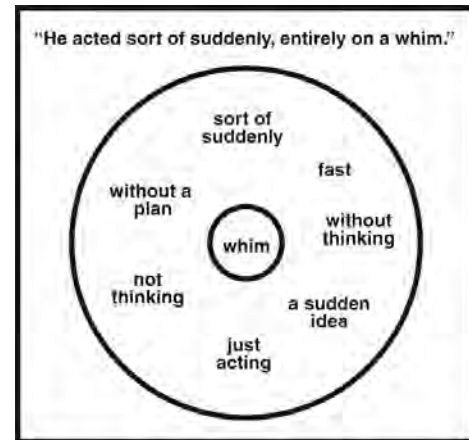




Applications: Using the Circle Map across Disciplines

Vocabulary Development

Defining vocabulary terms and concepts by generating context clues and brainstorming ideas in any content area can be done using a Circle Map.



Brainstorming for Writing

The Circle Map is an essential starting point for generating ideas during the prewriting stage, especially when it is followed by the use of other Thinking Maps for organizing information and producing a well-developed piece of writing.

Assessing Prior Knowledge

Before a lesson, ask students to create a Circle Map “telling everything they know” about an upcoming concept, theme, term, or topic. Add a Frame of Reference to identify the sources of their prior knowledge.

Reviewing after a lesson

Students can use the Circle Map (completed without their notes) to review major concepts prior to an assessment.



Guiding Questions for Constructing a Double Bubble Map

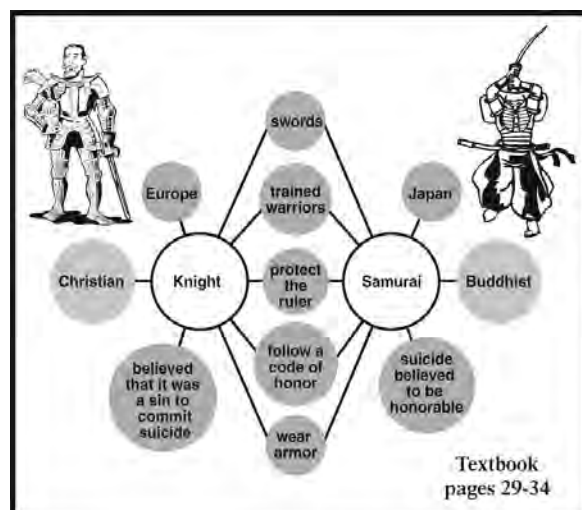
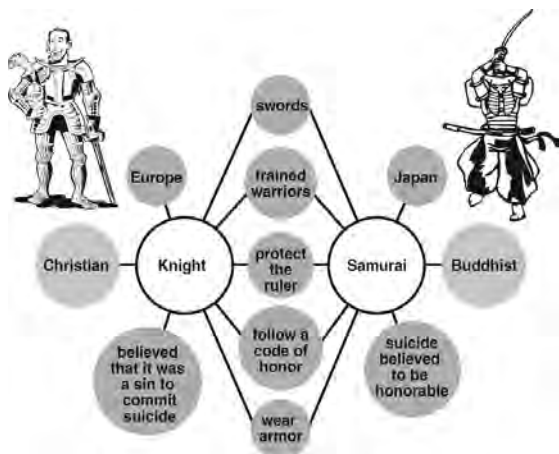
- What are the similarities and differences between these two things?
- How are these two things alike and different?
- Which similarities do you think are the most important?
- Are there any details that are unique to one thing and not the other?

Key Words

Compare
Contrast
Similarities
Differences
Distinguish between
Differentiate

Adding the Frame of Reference to the Double Bubble Map

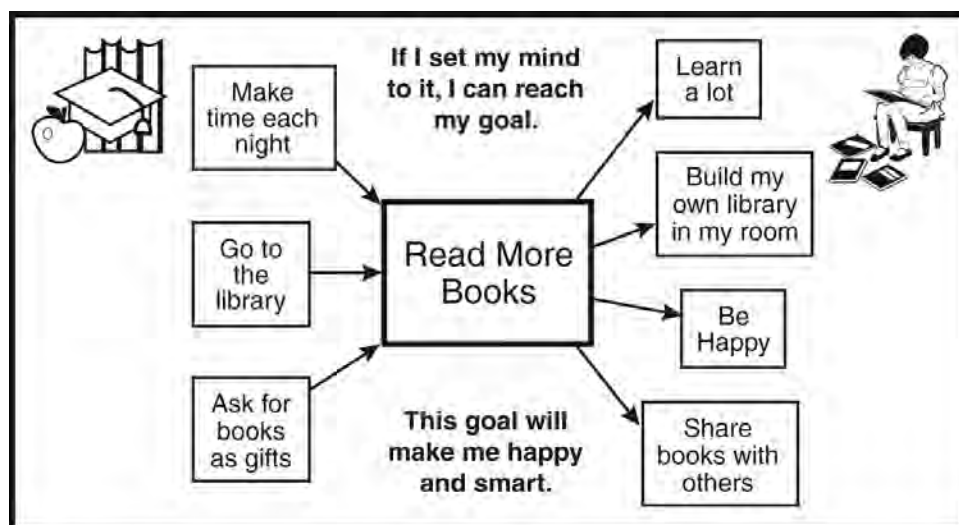
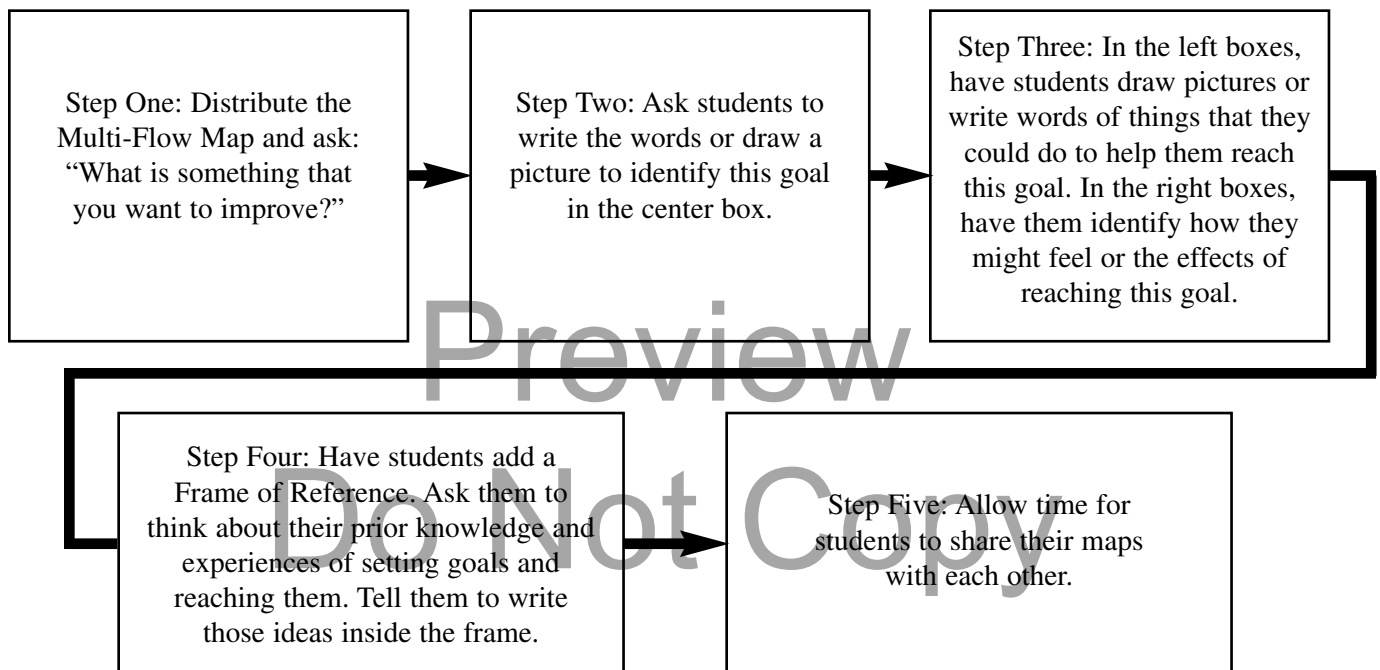
- How do you know these similarities and differences?
- What source are you using to make these comparisons?
- Is a specific point of view influencing the information you have included in this Double Bubble Map?
- Why are these similarities and differences so important?
- What have you learned by constructing this map?



TEACHING THE MULTI-FLOW MAP (K–5)

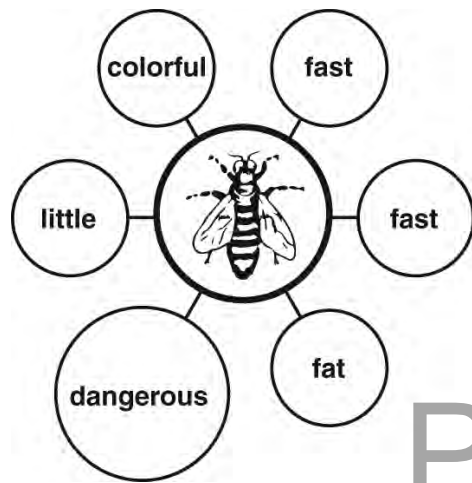
Tell students they will be learning how to visually
represent the thought process of

CAUSE AND EFFECT



Sentence Frames for English Language Learners

The sentence frames below can be used with any map to help support English Learners as they develop grammatical skills. The language proficiency of each learner should be used to determine the type of sentence frames used with each map.

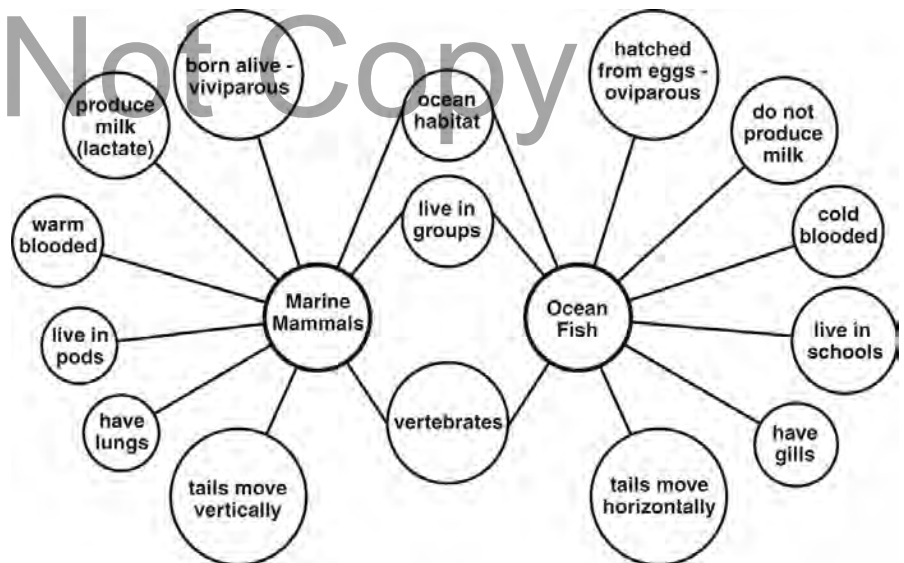


Bees are _____, _____ animals.

Some bees are _____.

They are _____ and _____.

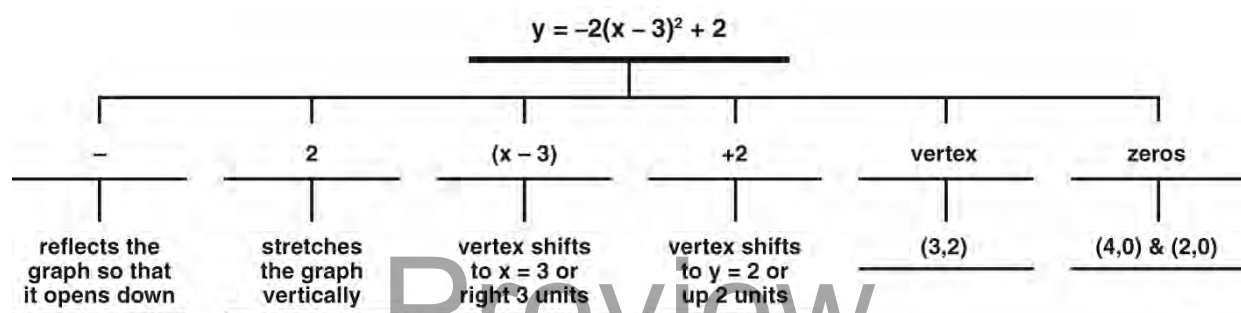
The sentence frames below for the Double Bubble Map can be adjusted for the level of language proficiency as well.



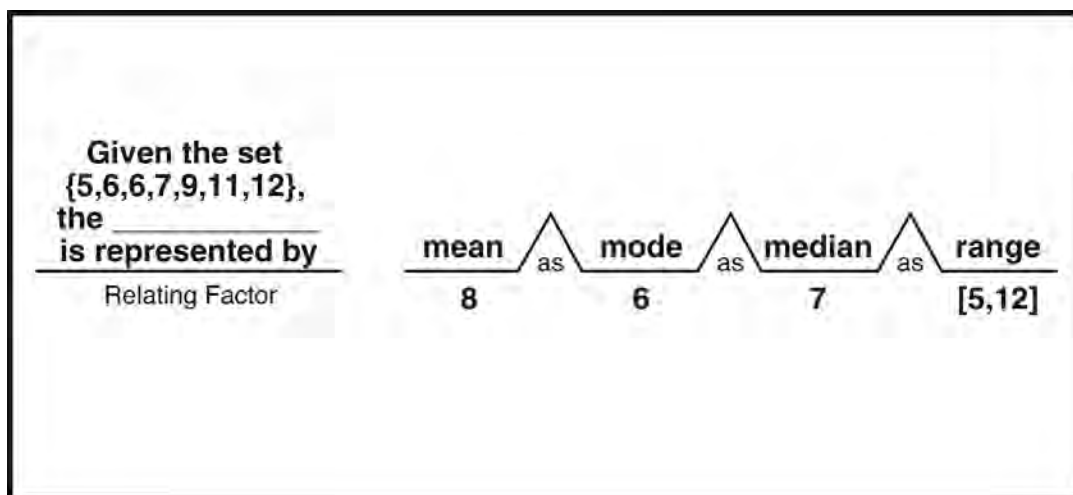
A _____ is _____. A _____ is _____. _____ are _____, but
 _____ are _____. While _____ have _____, _____ have _____.
 _____ and _____ are similar because they both _____.

Data Analysis and Probability

Students can use a **Tree Map** to classify the ways different parts of an equation affect the graph of the equation. Another way to add rigor to graphical analysis is to examine the movement of a graph based on the sequence in which you apply the parts of an equation.

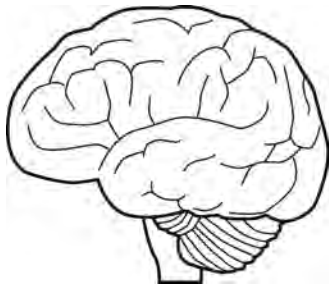


The **Bridge Map** shows students understanding of statistical terms.



Lesson Planning

Before any discussion on lesson planning, it is important to focus on what we know about how the brain processes information. The **Flow Map** on the next page is designed based on a combination of the research by many brain research experts including Pat Wolfe, Eric Jensen, David Sousa, and Daniel Goleman.



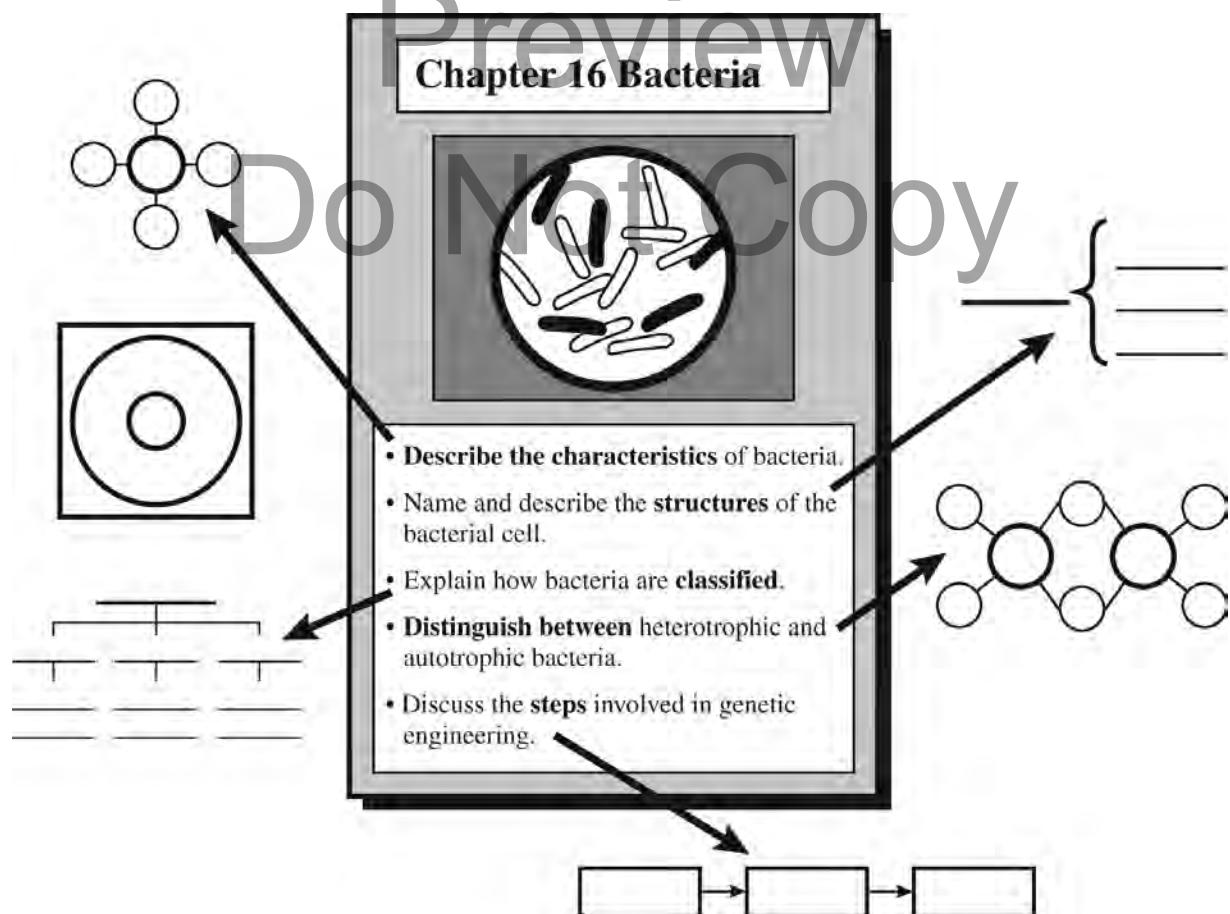
Connecting this brain research with lesson planning and Thinking Maps as effective instructional strategies that support the current research are all based on asking the following questions:

- How does the brain decide what to pay attention to?
- How much new information can the brain process and how long can the brain stay focused?
- What brain functions cause information to “move” from short term memory to long term memory?
- How can Thinking Maps be utilized to enhance thinking and learning?

Lesson Planning:

Before, During and After Instruction

Before students begin to read a text, have them look for key words to help them identify the concepts that will be covered. The key words identify patterns the writer will use to present a concept. Connecting these key words to a Thinking Map gives students a ‘conceptual net’ that will help them focus on the critical information. As students read or listen, they can collect the key points in their maps. After the students have completed the texts, they check their maps to see if they “caught” all of the needed information. The example below shows how students can use key words in a text introduction to create Conceptual Nets.



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