How We Learn and Retain Information

10% of what we Read

20% of what we Hear (lecture)

30% of what we See (looking at a visual image or watching a demonstration)

50% of what we See & Hear (at the same time)

70% of what we Say (discuss and talk about in detail, not just repeat; that is why "partner talking" and whole class choral reading is so powerful.)

90% of what we Do (creating, making, manipulating, writing about)

95% of what we Teach someone else (we must know it well to explain it to others)
Thinking Maps®

TOOLS FOR LEARNING
<table>
<thead>
<tr>
<th>Questions from Texts, Teachers and Tests</th>
<th>Thinking Processes</th>
<th>Thinking Maps as Tools</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How are you defining this thing or idea? What is the context? What is your frame of reference?</strong></td>
<td><strong>DEFINING IN CONTEXT</strong></td>
<td>Circle Map</td>
</tr>
<tr>
<td><strong>How are you describing this thing? Which adjectives would best describe this thing?</strong></td>
<td><strong>DESCRIBING QUALITIES</strong></td>
<td>Bubble Map</td>
</tr>
<tr>
<td><strong>What are the similar and different qualities of these things? Which qualities do you value most? Why?</strong></td>
<td><strong>COMPARING and CONTRASTING</strong></td>
<td>Double Bubble Map</td>
</tr>
<tr>
<td><strong>What are the main ideas, supporting ideas, and details in this information?</strong></td>
<td><strong>CLASSIFYING</strong></td>
<td>Tree Map</td>
</tr>
<tr>
<td><strong>What are the component parts and subparts of this whole physical object?</strong></td>
<td><strong>PART-WHOLE</strong></td>
<td>Brace Map</td>
</tr>
<tr>
<td><strong>What happened? What is the sequence of events? What are the substages?</strong></td>
<td><strong>SEQUENCING</strong></td>
<td>Flow Map</td>
</tr>
<tr>
<td><strong>What are the causes and effects of this event? What might happen next?</strong></td>
<td><strong>CAUSE and EFFECT</strong></td>
<td>Multi-Flow Map</td>
</tr>
<tr>
<td><strong>What is the analogy being used? What is the guiding metaphor?</strong></td>
<td><strong>SEEING ANALOGIES</strong></td>
<td>Bridge Map</td>
</tr>
</tbody>
</table>
Here is an example of how all eight Thinking Maps may be applied to organizing information and developing a concept. The example is "red roses."

What do you know about red roses?

How would you describe a particular red rose? What are its qualities?

What are the similarities and differences between a red rose and an iris?

How could you classify a rose?
What are the parts and subparts of a rose bush?

How would you go about giving roses to someone? What are the stages and substages of this event?

What causes you to give roses to someone and what are the effects?

A rose often symbolizes love. Using the term "symbolizes," what is an analogy showing this similar relationship?
# Key Words for Thinking

<table>
<thead>
<tr>
<th>Thinking Map</th>
<th>Thought Process</th>
<th>Key Words</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circle</td>
<td>Defining in Context</td>
<td>List, Define, Tell everything that you know, Brainstorm, Identify, Relate prior knowledge, Describe, Explore the meaning</td>
</tr>
<tr>
<td>Bubble</td>
<td>Describing</td>
<td>Describe, Use vivid language, Observe using the 5 senses, Describe feelings</td>
</tr>
<tr>
<td>Double Bubble</td>
<td>Comparing and Contrasting</td>
<td>Compare / Contrast, Discuss similarities / differences, Distinguish between, Differentiate</td>
</tr>
<tr>
<td>Tree</td>
<td>Classifying</td>
<td>Classify, Sort, Group, Categorize, Give sufficient and related details, Discuss strategies</td>
</tr>
<tr>
<td>Brace</td>
<td>Part to Whole Relationship</td>
<td>Parts of, Take apart, Show structure,</td>
</tr>
<tr>
<td>Flow</td>
<td>Sequence</td>
<td>Sequence, Put in order, Order, Recount/Retell, What happens next, Cycles, Patterns, Describe processes, Describe change, Solve multi-step problems</td>
</tr>
<tr>
<td>Multi-Flow</td>
<td>Cause and Effect</td>
<td>Causes and effects, Discuss consequences, What would happen if, Predict, Describe change, Identify motives, Discuss strategies</td>
</tr>
<tr>
<td>Bridge</td>
<td>Seeing Analogies</td>
<td>Identify the relationship, Guess the rule, Interpret symbols,</td>
</tr>
</tbody>
</table>
Circle Map for Defining Context: Frame for Frame of Reference

Name

Circle Map and Frame
Double Bubble Map for Comparing (similarities) and Contrasting (differences)

Name

Double Bubble Map
Bridge Map for Seeing Analogies (similar relationship between ideas)

Name

Factor
Relating
Thinking Maps® Summary Page

**CIRCLE MAP**
- For defining in context

**TREE MAP**
- For classifying and grouping

**BUBBLE MAP**
- For describing using adjectives

**DOUBLE BUBBLE MAP**
- For comparing and contrasting

**FLOW MAP**
- For sequencing and ordering

**MULTI-FLOW MAP**
- For causes and effects

**BRACE MAP**
- For analyzing whole objects and parts

**BRIDGE MAP**
- For seeing analogies