Summarizing strategies promote the retention of knowledge through the use of engaging strategies designed to rehearse and practice skills for the purpose of moving knowledge into long-term memory.

HSTW Foundational Belief: Most students become “smarter” through effort and hard work. Schools improve student achievement when they create structures that cause students to work hard to learn.

HSTW Conditions to Accelerate Student Achievement:

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Ten Key HSTW Practices:

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Compiled by: Bob Moore
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High Schools That Work
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**Summarizing Strategies**

*Summarizing* is important because students construct personal meaning. Students create a schema for the information and remember it better and longer and they find out what they understand and what they still need to know or have explained. We (teachers) find out what students have internalized, understood, and remembered. We surface confusion, misconceptions, or misunderstandings and can adapt future teaching accordingly.

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*Information compiled by the Guilford County North Carolina Schools and can be found at [http://its.guilford.k12.nc.us](http://its.guilford.k12.nc.us).*

*** Learning Concepts Inc. Dr. Max Thompson and Dr. Julia Thomason. P.O. Box 2112, Boone, NC 28607. (828) 264-1527.

****Coalition of Essential Schools
**Vanity Plates**

**Purpose:** To activate student learning through creative thinking

**Description:** In this activity, students will take on the role of the topic to be studied for the purpose of creating a vanity plate. While in this role, students will need to think creatively about their topic in order to share their vanity plate.

**Procedure:**
1. Assign a topic of study (for example, "The Internet")
2. Have students take on the role of the topic by telling them, "Pretend you are X."
3. Students will then create a vanity plate related to the topic of study. In many states, license plates may have up to 8 characters. However, you may use as many characters as you feel necessary.
4. Have students share their vanity plates by lining up in parallel lines, student facing student.
5. Rotate one line of students so that each student has the opportunity to view all vanity places in the facing line.
6. This motivating strategy will increasing students' desire to learn more about a topic while also increasing their knowledge of a topic.
ABC Review

**Purpose:** To increase comprehension by actively engaging students in a review of topics, concepts, and vocabulary introduced in a unit or lesson

**Description:** Grouped in partners or in teams, students will draw letter tiles and use the tile as the beginning letter of a topic, concept, word, or phrase from the unit or lesson being reviewed.

**Procedure:**
1. In a bucket, hat, or paper bag, assemble a set of letter tiles. Scrabble tiles are perfect, however, handmade tiles with handwritten letters are also appropriate.
2. Group students into partners or small groups of no more than 4.
3. Determine the ratio of tiles to groups. Have each group draw the appropriate number of letter tiles.
4. Using the tiles drawn, groups are to recall a topic, concept, word, or phrase from the unit or lesson that begins with that letter.
5. Depending on time, groups can either write down the topic, concept, word, or phrase, or, may use it in a sentence.
6. As a whole class, the teacher should guide students through the entire alphabet asking for one example of an A, B, C, and so on. As there may be duplicate tiles (as will happen when using Scrabble pieces), the teacher should only solicit one example for each letter unless time permits additional sharing.

**Sample ABC Review Outcomes for Word Processing:**

A. Align  
B. Bold  
C. Center align  
D. Draw  
E. Edit  
F. Format  
And so on…

Carousel Brainstorming
**Purpose:** To activate students' prior knowledge of a topic or topics through movement and conversation.

**Description:** While Carousel Brainstorming, students will rotate around the classroom in small groups, stopping at various stations for a designated amount of time. While at each station, students will activate their prior knowledge of different topics or different aspects of a single topic through conversation with peers. Ideas shared will be posted at each station for all groups to read. Through movement and conversation, prior knowledge will be activated, providing scaffolding for new information to be learned in the proceeding lesson activity.

**Procedure:**
1. Generate X number of questions for your topic of study and write each question on a separate piece of poster board or chart paper. (Note: The number of questions should reflect the number of groups you intend to use during this activity.) Post question sheets around your classroom.
2. Divide your students into groups of 5 or less. For example, in a classroom of 30 students, you would divide your class into 6 groups of five that will rotate around the room during this activity.
3. Direct each group to stand in front of a home-base question station. Give each group a colored marker for writing their ideas at the question stations. It is advisable to use a different color for tracking each group.
4. Inform groups that they will have X number of minutes to brainstorm and write ideas at each question station. Usually 2-3 minutes is sufficient. When time is called, groups will rotate to the next station in clockwise order. Numbering the stations will make this easy for students to track.
5. Group 1 would rotate to question station 2; Group 2 would rotate to question station 3 and so on.
6. Using a stopwatch or other timer, begin the group rotation. Continue until each group reached their last question station.
7. Before leaving the final question station, have each group select the top 3 ideas from their station to share with the entire class.


**Sample Carousel Brainstorming for Databases**

**Question Stations:**
1. What is a database used for?
2. What do you see when viewing a database?
3. What are examples of databases that we use in everyday life?
4. What fields (categories) of information would you place in a database of your friends?
5. What fields (categories) of information would you place in a database of European countries?
6. What types of information do not necessarily belong in a database?

This is a variation of Gallery Walk. Each group has a different colored marker and adds information as they move from station to station. If they disagree they add a question mark.
Challenge Envelopes

Purpose: To facilitate review and/or higher level processing of a topic or concept.

Description: This activity is designed to provide students with opportunities to formulate challenging questions regarding a topic or concept and to be challenged by the questions of others.

Procedure:
1. Divide the class into small groups.
2. Give each group of students an envelope.
3. Have each group write a challenge question on the front of the envelope. Encourage higher level questions that have prompts like:
   a. What might be…?
   b. What could be…?
   c. What if…?
4. Have each group generate the answer or criteria for a response and include a sample response. These should all be placed inside the envelope.
5. Scramble the envelopes and have the groups rotate the envelopes through the class. When a group receives an envelope, the question is to be addressed and then checked against the answer or criteria inside the envelope.
6. Have each group put their own response to the question inside the envelope when they are done. They should then send the envelope back into circulation.
7. As the envelopes begin to fill with responses, the groups are to compare their responses to the others that are in the envelopes.

Exit Slips
(also called One Sentence Summaries)

Purpose: To engage students in summarizing their learning

Description: Using this strategy, students will synthesize learned information, skills, and processes by writing an Exit Slip. An Exit Slip can be a One Sentence Summary of what students learned or can be used in a variety of other ways. Other uses are: to answer a review question, to pose a question related to the topic studied, to make a short list of facts learned, to set a learning goal for the next day, etc.

Procedure:
1. Prior to using the Exit Slip as a summary activity in your classroom, decide upon its purpose (including whether or not it will be used as an assessment or evaluation tool).
2. During the last 5-10 minutes of class, inform students of the purpose/task associated with their Exit Slip.
3. Tell students to take out a half-sheet of paper and complete the assigned Exit Slip.
4. As students exit your classroom that day, collect their Exit Slips as a pass out the door.
5. Note: Homework can be used as an “admit” slip for the next class.

Hint: Exit Slips are a great way to assess your own teaching. They will often indicate whether or not students understood the presented material. When used to pose a question, they can provide discussion questions for the next day's lesson.

Sample Rubric for Admit or Exit Slips

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slip is blank or is impossible to understand</td>
<td>Slip is difficult to read or understand</td>
<td>Slip is organized and easy to understand</td>
</tr>
<tr>
<td>Student makes no effort to answer the question(s). Simply writes, “I don’t know.”</td>
<td>Student makes very little attempt to answer the question that was asked</td>
<td>Student has made a serious attempt to answer the question posed by the teacher</td>
</tr>
<tr>
<td>No effort has gone into the slip</td>
<td>Minimal effort has gone into the slip</td>
<td>Evident that effort has gone into the slip</td>
</tr>
</tbody>
</table>
Final Countdown

**Purpose:** To engage students in reflecting, evaluating, and integrating their learning

**Description:** This activity emphasized the important role that reflection plays in the learning process. Final Countdown provides learners with a framework for reflection, evaluation, and integration of new knowledge into previously learned material.

**Procedure:**

1. Ask students to individually reflect over what they have learned about the topic being reviewed.
2. Using the Final Countdown worksheet, have students write the three most important things they learned about the topic.
3. On the second tier of the Final Countdown, have students write two questions they still have about the topic. These should be questions that they expect to get answers to; likewise, questions they will get answers to.
4. Finally, on the top tier of the Final Countdown, have students write one way in which what they have learned relates or connects to material previously learned.

The First Word

**Purpose:** To activate students' prior knowledge of a concept, idea, or skill

**Description:** The First Word is a variation on traditional acronyms. By going through the process of analyzing words and creating related sentences, students will gain a deeper understanding of the meaning.

**Procedure:**

1. Assign students the name of an object, a topic, or key concept to write vertically down the side of a page.
2. Working in small groups or on their own, students should generate a short phrase or sentence that begins with each letter of the vertical word and offers important information or key characteristics about the topic.
3. Students can illustrate their "First Words" for posting around the classroom. Sharing "First Words" will allow students to identify important concepts that may have been left out of their own work.

**Sample First Word:**

S un is the star at the center of the solar system  
O rbits are the paths that planets take around the Sun  
L unar eclipses occur when the Moon gets blocked by the Earth  
A steroids are big rocks that orbit the Sun  
R ings-- the planet Saturn has them  
S aturn is the sixth planet from the Sun  
Y ou can see some planets with your naked eye  
S ome other planets are:  Earth, Venus, Mars, Jupiter, Pluto, and Neptune  
T he Earth is the only planet with life on it  
E very year, the Earth orbits the Sun once  
M ercury is the planet closest to the Sun

Four Box Synectics

**Purpose:** To engage students in reinforcing their understanding of words or concepts through the use of a creative comparison

**Description:** Synectics promotes fluid and creative thinking by "making what is familiar strange," or comparing two things that would not ordinarily be compared. Synectics, a term coined by industrial psychologists Williams Gordan and George Prince, was originally used as a problem-solving strategy. The term is formed from two Greek roots: syn, *bringing together,* and ectics, *diverse elements.*

**Procedure:**
1. Prepare a chart or overhead transparency of the Four Box Synectics organizer.
2. Put students into small groups of 3-4 each.
3. Ask for four items in an assigned category (e.g., commonly found household objects, animals, things found in a forest, recreational activities, and foods). Place one item in each of the four boxes.
4. Reveal the sentence "A _____ is like a _____ because…" and allow groups three minutes to brainstorm sentences using each of the four items at least once. Students should try to complete as many sentences as they can in the time allotted.
5. After three minutes, STOP. The final step is for each group to choose the two sentences they like the best to share with the rest of the class.


**Sample Four Box Synectics for Database**
*(using common household items)*

<table>
<thead>
<tr>
<th>Closet</th>
<th>Drawer</th>
</tr>
</thead>
<tbody>
<tr>
<td>A database is like a closet because it is used for storing information</td>
<td>A database is like a drawer because it helps to keep information organized.</td>
</tr>
<tr>
<td><strong>Trashcan</strong></td>
<td><strong>Doorway</strong></td>
</tr>
<tr>
<td>A database is like a trashcan because you can delete any information you no longer want.</td>
<td>A database is like a doorway because it is a portal to your information.</td>
</tr>
</tbody>
</table>

A _____________ is like a _______________ because…
Four-Two-One

**Purpose:** To engage students in reflecting, evaluating, and integrating their own learning into prior knowledge.

**Description:** Four-Two-One uses learning partners or small teams to foster in-depth reflection and integration of significant information.

**Procedure:**
1. Ask students to individually generate four words that capture the most important aspects of the learning experience.
2. Share, with learning partners or in small teams, their four words and compile a list of the words they have in common. From this list, determine two words that they agree capture the most important aspects.
3. Determine the 1 word or big idea that best represents the most important learning of the experience.
4. Share the various lists generated by their group in order for the whole class to make as many learning connections as possible.

Hint: As a variation of this activity, have the students to generate phrases or sentences instead of words.

In the Hot Seat

**Purpose:** To motivate student learning

**Description:** In this activity, several students will be asked to sit in the "Hot Seat" and answer questions related to the topic of study.

**Procedure:**
1. Prior to the beginning of class, the teacher will prepare questions related to the topic of study and write them on sticky notes. Four to five questions are usually enough.
2. Place the sticky notes underneath student desks/chairs so that they are hidden from view.
3. At the start of the class, inform students that several of them are sitting on "Hot Seats" and will be asked to answer questions related to the topic of study for the day.
4. Have students check their desks/chairs for the strategically placed sticky notes.
5. Students who have questions on sticky notes will then take turns reading the question and attempting to provide an answer. Due to the nature of this motivational activity, these should be questions that students are able to answer.

**Sample Hot Seat Questions:**
Internet:
1. What is your favorite search engine and why?
2. When was the last time you used the internet to complete a classroom assignment?
3. If you had to recommend a website to a friend, which one would you pick and why?
4. What do you think would be the impact if the Internet was gone tomorrow?
5. Do you think that students should be allowed to use the Internet unsupervised? Why or why not?
Learning Frames

**Purpose:** To increase comprehension by focusing student learning within a controlled context

**Description:** Learning frames are a sequence of spaces connected by key language elements to help students focus their learning. The purpose is threefold: 1) to provide a framework to guide students' understanding and responding; 2) to give a structured format to follow for engaging in a writing activity; 3) to help students develop independent comprehension strategies.

**Procedure:**
1. Display a transparency copy of the Learning Frame on an overhead. Explain to the students that this frame, like the frame of a new house, will allow them to fill the blanks with information from what they just learned.
2. Model the Learning Frame by filling in the frame using information learned in the day's lesson.
3. Read the frame aloud.
4. Next, pass out a blank Learning Frame to each student.
5. Allow students to fill out their Learning Frames in a manner which reflects what they learned from the day's lesson.


**Learning Frame**

Today, I learned about ______________________ with my class. The first thing we learned was ________________________________________________________________.

Next, ________________________________________________________________.

Then, ________________________________________________________________.

After that, ____________________________________________________________.

I also learned that ______________________________________________________.

The next time we study ______________________, I want to learn more about ________________________________________________________________.
**Shaping Up Review**

**Purpose:** To engage students in synthesizing major concepts in this summary strategy

**Description:** Using the Shaping Up Review, students will synthesize major concepts from the lesson using four different shapes. By varying the manner in which students visually summarize their learning, retention of the information learned is increased.

**Procedure:**
1. Pass out the Shaping Up Review worksheet.
2. In the upper left-hand corner, "The Heart," have students write one thing that they loved learning about in the lesson being reviewed.
3. In the upper right-hand corner, "The Square," have students write four things that they feel are important concepts from the lesson being reviewed. One concept should be placed in each corner.
4. In the lower left-hand corner, "The Triangle," have students write the three most important facts they learned from lesson being reviewed. One fact should go in each corner.
5. In the lower right-hand corner, "The Circle," have students write one, all-encompassing (global- like the circle) statement that summarizes all of the important concepts and facts learned in the lesson being reviewed.

Mini-version of worksheet. It should be much larger.
Think-Pair-Share

**Purpose:** To engage students in about their prior knowledge of a topic.

**Description:** During this activity, students will have individual time to think about a question related to the topic of study. They will then pair up with a partner to share their thoughts. Finally, the pairs will select one major idea to share with the entire class.

**Procedure:**
1. Generate a higher-level question related to the topic you are about to study.
2. Group students into pairs.
3. Pass out a Think-Pair-Share worksheet to each student.
4. Give students 5 minutes to write down their individual thoughts in the "Think" section of the worksheet.
5. Then, in pairs, have groups share their individual thoughts. Pairs should summarize their common thoughts in the "Pair" section of their worksheet.
6. Finally, pairs choose one major idea to share with the entire class. This should be written in the "Share" section of their worksheet.

**Sample Think-Pair-Share Questions:**

What are the important elements of a multimedia slideshow presentation?
How would you evaluate the quality of a webpage?
What jobs might require the use of a spreadsheet?
What are some of the things you need to think about before building a database?
What are the advantages and disadvantages of using the internet for research?
Should everyone have access to the Internet?

Three Step Interview

Purpose: To engage students in conversation for the purpose of analyzing and synthesizing new information.

Description: The Three Step Interview is a cooperative structure that helps students personalize their learning and listen to and appreciate the ideas and thinking of others. Active listening and paraphrasing by the interviewer develops understanding and empathy for the thinking of the interviewee.

Procedure:

1. Students work in pairs. One is the interviewer, the other is the interviewee. The interviewer listens actively to the comments and thoughts of the interviewee, paraphrasing key points and significant details.
2. Student pairs reverse roles, repeating the interview process.
3. Each pair then joins another pair to form groups of four. Students introduce their pair partner and share what the partner had to say about the topic at hand.

Sample Three Step Interview Topics:

1. Present a very challenging filter/sort combination problem to the students. Allow them to use the interview to discuss possible solutions.
2. Present students with an ethical situation related to privacy and the internet. Allow students to use the interview as a means of discussing the different components of the issues at hand.
3. Provide students a short (4-5 words) list of vocabulary to be reviewed. In the interview, they are to explain the definitions and applications of the words. By regrouping with the other interview pair, appropriate student use of vocabulary will be reinforced.

Walk Around Survey

**Purpose:** To activate students' prior knowledge through conversation and movement

**Description:** Walk Around Survey can be used as an activating or summarizing strategy. In this activity, students are given a topic of study and asked to move around the room for the purpose of conversing with other students. During these conversations, students will share what they know of the topic and discover what others have learned.

**Procedure:**
1. Assign a topic for the Walk Around Survey.
2. Pass out a survey form to each student in the class.
3. Allow students an allotted amount of time to survey three classmates (informers) on the given topic.
4. When students are completing the survey form, the soliciting student should write the name of the informer on his/her worksheet in the left-hand column. He/she will then record three facts from the student informer on the worksheet in the three empty blocks. He/she will then move on to find a second and third informing student to complete the survey worksheet.
5. Have students return to their seats and complete the Survey Summary.

Hint: This activity can be used as either an activating or summarizing strategy. It can be done in the classroom or, even better, outside on a nice day.

**Sample Walk Around Survey Topics:**
1. What can you do to become a responsible user of the Internet?
2. If you were creating a database about X, what fields would you most likely include?
3. Name ways in which spreadsheets are used in the workplace.
4. How has the Internet changed the way we communicate and interact with others?

Word Sorter

**Purpose:** To engage students in the activity of classifying topics, words, phrases, into categories based upon their knowledge of the content.

**Description:** In this activity, students have the chance to classify topics, words, and phrases into categories. The process of sorting and classifying strengthens the student's ability to comprehend and retain difficult information. Through a discussion of possible solutions, students negotiate the contextual meaning of the topics, words, or phrases they are sorting.

**Procedure:**
1. Generate a list of words related to the topic for review. These words should fall into one of the following categories: Important Characteristics, Uses, Examples, and Non-Examples. (Hint: These categories can be changed to accommodate your topic of study.)
2. Make a copy of both of the word list and the Frayer Model graphic organizer on transparency paper.
3. Cut out the words on the word list and store in a zip-lock bag when not in use.
4. Lay the graphic organizer on an overhead projector.
5. Place word list words in the center of the graphic organizer one at a time (jumble the order) allowing students to identify the appropriate quadrant location for the word.

**Hint:** When using this as a warm-up activity, allow students to make errors that will be corrected as you teach your lesson. When using this as a review activity, identify mistakes and re-teach topics when students make errors.

**Notes:** The Frayer Model (Frayer, Frederick, and Klausmeier, 1969) is a graphic organizer that helps students learn precise meanings of key concepts. This helps student select and organize information related to a key concept by focusing their attention on relevant details as they read. The Frayer Model’s grid design facilitates differentiation of those characteristics necessary to the concept form those that are incidental or nonessential. Students then learn to identify examples as well as non-examples of the concept.

The Frayer Model has several advantages. (1) The process helps student make connections between what they know and what they will be learning. (2) Students learn how to examine a concept from a number of perspectives, how the concept relates to other concepts and information, and how to sort out the relevant features of a concept. (3) The model also allows students to practice extending their knowledge of a concept by classifying more than one example of that concept. Students go beyond merely associating a key term with a definition, thus learning the content more thoroughly and improving retention of the information. The Frayer Model may be used before reading, during reading, or after reading to develop key concepts.
Word Sort Activity Sheet (Frayer Model graphic organizer)

**Word Sort**

<table>
<thead>
<tr>
<th>Important Characteristics</th>
<th>Non-Important Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Examples</td>
<td>Non-Examples</td>
</tr>
</tbody>
</table>
Sample Word List for "Webpages"

- www.nasa.gov: Easy to navigate
- www.discoverychannel.com: Helpful text and graphics
- www.lonelyplanet.com: Reliable information
- charliebrown@aol.com: Loads quickly
- snoopy@birddog.com: Attractive appearance
- URL
- Web Browser
- Research
- Post family pictures
- School Homepage

Sample Word List for "Angiosperms"

- Produce flowers
- Horsetails
- Color of flower
- Peas
- Produces fruit
- Fern
- Size of plant
- Kind of fruit
- Horsetails

- Produces covered seeds
- Seed or Flower structure
- Where it grows
- Grass
- Number of seeds
- Moss
- Roses
- Coleus
- Pine
The 3 2 1 summarizer is used at the end of a class, a reading, a movie, etc. Students are asked to write down:

- 3 things that really interested you
- 2 things you’d like to know about
- 1 idea that you will write about tonight

The 3 2 1 designates how many of each kind of summary statements students are required to construct. The headings attached to the 3 2 1 can be changed to suit the activity or content which is being summarized.

Examples:

Studying a famous person

- 3 most important events in this person’s life
- 2 questions you would ask if you could talk with him/her
- 1 significant contribution she/he made

Learning about another country

- 3 geographic factors which influence the climate
- 2 ways in which it is similar to the USA
- 1 problem that exists there

States of Matter

- 3 liquids (at room temperature)
- 2 gasses (at room temperature)
- 1 kind of matter. Name it as a liquid, a solid and gas and explain how it changes from one form to another
Line-up Review

Purpose: To help students summarize a lesson or unit by revisiting a number of important concepts.

Procedure:

1. Write two prompts on the board. The first should ask the student about what they have learned. For example, after studying the U. S. Constitution what important thing did you learn that you think most people may not know? The second prompt is always a “why” item. For example, why do you think the item listed for prompt one is particularly significant?
2. Give each student an index card. Have them write a response to prompt #1 on one side of the card and a response to prompt #2 on the other side of the card.
3. Next, have students line up in two lines facing each other. (The amount of space may require multiple lines.)
4. Designate one line “A” and the other line as “B.”
5. Explain – Each person in line “A” will read their responses to prompts one and two to the person across from them in line “B.” Then, each person in line “B” reads theirs.
6. When this is completed, have line “A” members move to the right while line “B” members remain stationary. (The person at the end of line “A” will have to move to the beginning of the line each time.)
7. Continue until the people in the line “A” are back where they started.

Debriefing

Students will have shared a great deal of information. That sharing alone will reinforce many concepts. However, the teacher may want to know if someone was surprised by a response to either prompt and why. Students do not have to be identified.
GIST – A Cooperative Summarizing Activity

Purpose: To ask students to write a tight, precise summary of a reading passage. Students are to convey a “gist” of what they read by summarizing the text in 20 words or less.

Procedure:

1. Ask students to read a short reading passage of no more than three paragraphs.
2. Ask the class, or group, to remember important ideas from the passage and list them on the board.
3. Discuss the list of words and reduce it to 20 or less. Delete trivial and repetitious information. Include only essential information. Collapse as many words together as possible. For example, if Robert Fulton, Alexander Graham Bell and Thomas Edison are listed, collapse that into the term “inventors.”
4. Use the words to write a summary of the reading. Write the summary and revise it at least once.
5. (For the first time, many students will not understand what a summary is. A first effort is a teaching vehicle for summarizing as much as it is for the information read.)

Sum It Up – GIST by another name.

Tell students they are to sum up a reading passage and send this summary as a telegram costing ten cents per word. However, they only have $2.00 and can only send a message of twenty words.

Another Variation of GIST? (Thanks to Linda Mabe, Consultant and a former high school principal in North Carolina)

1. Have students write a 20 word summary of an assigned reading onto an index card. The summary should be on one side of the card and should not have the student’s name.
2. The students should stand and move around the room with teacher-provided music, trading cards as they move.
3. When the teacher stops the music, each student should choose a partner.
4. With the partner, students read and evaluate the summaries on the two cards they are holding. On the back of each card, the pair gives the summary a total of 1-7 points in such a way that the two cards’ totals equal 7.
5. Repeat steps 2-4 three more times including scoring on the back of the cards.
6. Students return to their seats after the last scoring, taking the card they are holding.
7. Students total the scores on the reverse of the cards they are holding.
8. The higher the score, the more likely the better the summary.
9. The teacher calls for the summaries with the highest totals to be read aloud to the class.
Roundtable/Round Robin (Share Around)

The teacher assigns a topic, concept, or question with many possible responses or answers. Students individually take turns recording responses on a group paper, passing the paper and pen around. Round Robin is an oral form of roundtable.

**Numbered Heads Together**

In their cooperative groups students number off 1 to 4. The teacher gives the group a problem and time to think and write. Students put their head together to make sure everyone knows and understands the answer. The teacher calls on a number and the students with that number either raise their hands or stand up. The teacher then calls on a student to answer or the teacher can ask for a simultaneous response from all students with that number. (A good way to do this is with small dry-erase boards – 2’ X 2’ for example.)

For more active participation, the teacher can ask all students to give a thumbs-up or a thumbs-down for each response.
THE FINAL WORD: A text-based protocol
(Coalition of Essential Schools)

Purpose: Expanding a group’s understanding of text in a structured way and in a limited amount of time, providing equal opportunity for all members to participate.

Structure: Groups are organized. People sit in a circle or around a table.

- A facilitator and timekeeper are chosen for each round.
- Time is organized into rounds of discussion with the number of rounds equaling the number of groups members.
- Each round lasts 7 minutes (if groups have 4 members), 8 minutes (if groups have 5 members), 9 minutes (if groups have 6 members).
- Timing for each round:
  - The person who starts gets 3 minutes.
  - The second and remaining group members responding get 1 minute each.
  - The person who started gets 1 more minute to have “The Final Word”.

Preparation: After reading and reflecting on a common text, each person in the group selects two or three significant quotes or sections that appear important, interesting or of value.

Procedures:
1. One person begins the round by explaining the significance of his/her selection from the text (3 minutes).
2. Each remaining person in turn then comments on that same selection from the text (1 minute):
   - In response to what the first person said
   - In any other way that extends the understanding of that section
3. After each remaining person has commented for one minute, the person who began the round now has “The Final Word” to add any insights or to comment on what has been raised by other members of the group (1 minute).
4. A new round begins with the next person in the group becoming the first person.
SUMMATION PYRAMID

One of the best ways for a teacher to assess comprehension of printed text is to ask the reader to summarize what was read. A skilled reader can usually handle this task with minimal teacher assistance. A reader who struggles, however, may have difficulty recognizing and extracting critical information. The summation pyramid is a graphic organizer that can aid in helping middle and high school students create summaries of text information by helping draw out summary information in small manageable parts.

The summation pyramid is helpful as a tool to guide students in the selection of a few key words and phrases that capture the essence of the text. After completing the pyramid, students should use the key works/phrases to write a summary.

1. The summation pyramid has six sections. Starting at the top of the pyramid (section one), the student is to write one word that states the topic or main issue of the text.
2. Then, in section two, write two words that “expand or add” information related to the word listed in the top section.
3. Continue filling in the pyramid with phrases that contain the number of words matching the section number. The information written in each section should comprise a connected thought that adds new critical information from the text or expands one of the preceding sections.
4. If desired, students may jot down 1-2 additional facts or dates at the bottom of the pyramid to help clarify what was written.
5. Using the critical elements from the pyramid, students should construct a brief summary of the text.

Note: To guide students in successfully selecting words/phrases for the pyramid, teachers are encouraged to model the process using the think-aloud strategy. It is also helpful to remind students to ask themselves to distinguish between important/unimportant, critical/nonessential, or major/minor data.
Write your summary paragraph here:
SUMMARIZING RULES

Rules for summarizing:
1. Delete trivial
2. Delete redundant
3. Substitute one word for a group of words when possible.
4. Select a topic sentence or invent one from the remaining text.

Example:

The adult human brain weighs about 3 pounds (1300-1400 grams). By comparison, a sperm whale brain weighs about 7800 grams, or 17 pounds! A dolphin brain weighs about 4 pounds and a gorilla brain about 1 pound. Your dog’s brain weighs about 72 grams, which is only 6 percent of your own brain’s total weight.

Humans have large brains relative to body weight. Close to the size of a large grapefruit or cantaloupe, it’s mostly water (78 percent), fat (10 percent), and protein (8 percent). A living brain is so soft it can be cut with a butter knife.

From the outside, the brain’s most distinguishing features are its convolutions, or folds. These wrinkles are part of the cerebral cortex (Latin for “bark” or “rind”). The cerebral cortex is the orange peel thick outer covering of the brain. The folds allow the covering to maximize surface area (more cells per square inch). In fact, if it were laid out, the cortex would be about the size of an unfolded single page from the daily newspaper. Yet it is only a grapefruit-sized organ. Its importance can be attributed to the fact that it makes up critical portions of the nervous system, and its nerve cells are connected by nearly 1 million miles of nerve fibers. The human brain has the largest area of uncommitted cortex (no specific function identified so far) of any species on earth (Howard 1994). This gives humans extraordinary flexibility for learning.

Summarizing statements: The adult human brain weighs about 3 pounds and is made up of mostly water (78 percent), fat (10 percent) and protein (8 percent). It’s most distinguishing features are the convolutions of the cerebral cortex which allow the covering to maximize surface area. With its one million miles of nerve fibers connected to the nervous system and and its large area of uncommitted cortex, the human brain has flexibility for learning.
Some Notes on Teaching Strategies, Robert Marzano

This booklet of summarizing strategies is designed to be a toolkit for teachers. These “tools” are but a FEW of the strategies necessary for quality instruction to occur.

What are instructional strategies that work? Robert Marzano (and others) conducted a research review of over 30 years of research (meta-analysis) and found 9 general categories of strategies that contributed the most to student achievement. (Note: These strategies work when conducted in a quality manner. Simply using them does not constitute increased student achievement.)

Marzano’s findings are compiled in two publications published by ASCD, Association for Supervision and Curriculum Development. These are: Classroom Instruction That Works and A Handbook for Classroom Instruction That Works. The categories of strategies with brief definitions and listed randomly, are:

- **Cooperative learning** (learning groups) – Creating opportunities for students to develop positive interdependence, face-to-face interaction, individual and group accountability, interpersonal and small group skills and group processing.
- **Reinforcing effort and providing recognition** – Teaching students about the role that effort can play in enhancing achievement and recognizing students for working toward an identified level of performance.
- **Homework and practice** – Providing students with opportunities to learn new information and skills and to practice skills they have recently learned.
- **Nonlinguistic representations** (representing knowledge) – Helping students generate nonlinguistic representations of information, including graphic organizers, pictures and pictographs, mental pictures, concrete representations, and kinesthetic activity.
- **Identifying similarities and differences** – Helping students compare, classify, and create metaphors and analogies.
- **Setting goals and providing feedback** – Helping students set their own learning goals in order to establish direction and providing students with timely feedback about their progress.
- **Generating and testing hypotheses** – Helping students generate and test hypotheses through a variety of tasks, through systems-analysis, problem-solving, historical investigations, invention, experimental inquiry, and decision-making.
- **Summarizing and note taking** – Helping students analyze, sift through, and synthesize information in order to decide which new information is most important to record and remember.
- **Activating prior knowledge** (Cues, questions, and advance organizers) – Helping students retrieve what they already know about a topic.

NOTE: These strategies are designed to be used at different times, in different contexts, and to address different learning objectives. **NO INSTRUCTIONAL STRATEGY WORKS EQUALLY WELL IN ALL SITUATIONS.**
Excerpts from: *Classroom Instruction That Works: Research-based Strategies for Increasing Student Achievement*

Robert Marzano, Pickering, D., and Pollock, J.

The premise for the study is that individual teachers can have a profound influence on student learning even in schools that are relatively ineffective. Researchers at Mid-continent Research for Education and Learning (McREL) analyzed selected research studies on instructional strategies – a meta-analysis to determine the average effect of a given technique. An effect size expresses the increase or decrease in achievement of the experimental group in standard deviation units. This can be translated into percentile gain.

<table>
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<th>Categories of Instructional Strategies That Affect Student Achievement</th>
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<th>Percentile Gain</th>
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* Emphasis area for this booklet