

KAGAN STRATEGIES

Dr. Spencer Kagan in his book *Kagan Cooperative Learning* (2009) introduced a number of structures and activity frames which can be used to develop a cooperative and active learning environment.

Our lessons include a range of different Kagan Strategies that you can adapt and use in your computer science lessons.

Kagan Strategies are a great tool because they are very versatile and can easily be adapted for any class or learner ability because students learn by working cooperatively in groups and by sharing their work with one another.

1-10

1-10 is a strategy used to assess where students are in terms of their knowledge of a particular concept or skill. Teachers can ask students to give a number that represents what they know or are able to do in a particular area. For example, a student is asked to write a number from one to ten to reflect their knowledge of events contributing to crisis in the Balkans.

30 Second Speech

The 30-Second Speech is a strategy to give intentional and extended ‘think time’. It allows students process time so that their thinking is more organized and goes deeper than a surface response.

30-Second Speech works like this: Students have just been given new information or content (maybe from reading, a video clip, a lecturette, etc.) and you know they need time to make sense of this new content. You, as the teacher, pose a question to the class and ask them to “Plan a 30-second speech”. Students can jot down thoughts or just quietly examine their thinking. Students are then paired-up (A/B partners; shoulder buddies; whatever grouping makes sense) and each person gives their 30-second speech to their partner.

The opportunity to orally process information and engage in social interaction is aligned with brain research that informs us that much learning occurs during social interaction.

3-2-1

3-2-1 is an exit slip strategy that provides a quick “dipstick” of students’ learning. Students are instructed to use a piece of paper or index card to record the following:

Three things that are clearer to them regarding the day’s topic or concept; two connections they are making to the new concept and their prior knowledge or experience; and one question/piece that needs further clarification. The teacher collects the slips as students leave the room and uses the information to inform the next day’s lesson and/or to differentiate instruction for students.

A-B Each Teach

A-B Each Teach is a shared reading strategy for processing information as participants read. A-B partners may be designated in any number of ways (example: shoulder partners, stand-up hand-up pair-up, shoe partners, etc.). The strategy works like this ...

- Pairs designate one partner as A and one as B
- Person A reads one section of the text
- Person B reads another section of the text
- When both are ready, they teach their section to their partner

Variations of this strategy include: Pairs conclude by developing a summary of the text or pairs join another pair and develop another summary.

Air Traffic Controller

Air Traffic Controllers manage the tower at the airport, directing the order in which planes are to land. In the same way, teachers or facilitators can “manage” their classrooms.

This strategy works well when several individuals or students want to respond to a particular question.

Air Traffic Control works like this ...

- Before listening to any responses, the teacher assigns numbers to those with raised hands, and advises students to remember their numbers
- The teacher then calls on #1 and he or she identifies him/herself and gives a response
- Then the teacher calls, “#2?” The person who has been assigned this number identifies him or herself and provides his/her response, and so on

This strategy works best when the facilitator does not comment on individual responses. Participants will hear many responses in a short amount of time, and, since individuals know when they will be called, they will be less anxious.

Attention First

Educational researchers report that the average classroom teacher can lose up to twenty days each year....just getting students’ attention and redirecting their focus as they transition from one activity to the next. The good news, however, is that teachers can recapture eighteen of those lost days through the *consistent* use of an attention first signal.

The Center generally uses a “hand-up” signal and asks that when adults or students see the teacher or facilitator’s hand go up that they put their hand in the air and finish their sentence, and not start a new paragraph. The key to the success of this strategy is the CONSISTENT use of whatever attention first strategy that you use. It is important to wait patiently until everyone has stopped talking....it will speed up over time! So, if you feel that you are losing too much valuable time on task, give the attention first strategy a try.

Billboard

This is a time management strategy that honors the groups’ work by not interrupting with verbal messages. Billboard works like this. The facilitator or teacher walks around the room with a sign stating, for example “four minutes left to work.” This allows groups to continue working and monitor their own time.

Brainstorming

This is a common, but sometimes misused strategy, to collect ideas from all participants. It is intended to be free from judgment and cross-talk....we are going for quantity, not quality in this strategy. The goal is to separate the generation of ideas from dialogue and discussion. Brainstorming protects the principle of one process at a time.

The guidelines for brainstorming are quite simple. The teacher or facilitator names a topic and offers a timeframe. Note that brainstorming should not last more than 5 to 7 minutes. The teacher then encourages all ideas...everything goes; there is no right or wrong answers. It is important for teachers to remind students of the guidelines...no questions, no comments, no cross-talk....just ideas! Check for understanding of the guidelines and allow about one minute for silent reflection. Start the timer and use a flip chart (2 recorders speed up the process) and record the ideas.

Circle-Triangle-Square

Circle-Triangle-Square is a strategy to help students focus their reading; summarize important information; and make sense of informational text. It uses a simple graphic organizer to foster clearer thinking regarding new information in any content area.

Circle-Triangle-Square works like this: Each student is given a sheet of paper (or a sample can be drawn on a board and students recreate it for their own use) with a Square and the statement: *What Squares with my thinking?* In other words, what part of the reading matches my own thoughts, knowledge, beliefs, or emotions? Students use the space next to the square or within the square to record their thinking. The second shape on the paper is a triangle with the following question next to it: *What three points (things) do I want to remember about this text?* Students then summarize their reading and record three things they wish to remember in or next to the triangle. The third shape on the paper is a circle. The question connected to the circle is, *What questions are still circling around in my head about what I read?* Students then focus on what questions they have about the concept or information presented in the text. Once completed, the graphic organizers can be used in conjunction with round

robin or other cooperative learning strategies to engage students in conversation to debrief text.

Teachers may want to add color to the shapes to increase student retention of information. Visual-Spatial learners respond well to graphic organizers such as this one to help them summarize and make sense of text. Students with a strong need to interact will respond positively to an opportunity to share what they have written on their squares, triangles, and circles, while bodily-kinesethic learners will appreciate movement added to sharing their responds to the questions. Movement can be included in strategies such as Stand-up, Hand-up, and Pair-up.

Corners

Corners is a Classbuilder strategy to get the entire group to stand, move around, and engage with others in the room. The Center often uses Corners as an “opener” or at the beginning of a session.

Corners involve posting different words, pictures, quotes, or statements, etc. on large pieces of paper around the room. Each individual is then asked to choose one that appeals to them and one about which they wish to have a conversation. For example, a teacher might post statements about different aspects of a country (such as economic system, government, physical features, and cultural traditions) and ask participants to choose one and write down on a piece of paper along with why they wish to discuss it. Students go to “their” corner and discuss the topic with their classmates who chose the same “corner.”

Corners is a good way to get students up and moving around the classroom as they engage in standing conversations around a chosen topic. It can be used to begin a topic or unit or as a review at the end of a lesson. Teachers sometimes use corners as sentence starters and prompts to “prime the pump” for students’ writing.

Dots in Quadrants

Dot in Quadrant is a strategy for assessing the knowledge of a group. It works like this, when participants or students enter a room or at the end of a lesson, they are each given a dot of the same color and asked to place it in the appropriate quadrant. A poster or piece of paper containing four quadrants is placed on the wall. The four quadrants are labeled: New Concept; Somewhat Familiar; Beginning Understanding; and Comfortable with the Concept. The facilitator or teacher thus has a snapshot of where the whole is in terms of day’s concept.

Fan-N-Pick

Fan-n-Pick is a Cooperative Learning strategy that helps engage all students in the learning process. Fan-n-Pick fosters positive interdependence, individual accountability, equal participation, and simultaneously interaction. While frequently used as a review strategy, Fan-n-Pick can also be used to introduce a concept and encourage analysis, synthesis and evaluation.

Fan-n-Pick uses a set of cards for each group of four students. These cards can be purchased questions from Kagan, teacher constructed cards, or student-developed questions on index cards. An example of a question might be: How might the city we’ve been studying be different if it was located on the ocean? Or, which character in the story do you most identify with and why? Each student has a role and the roles rotate after each hand of the card game.

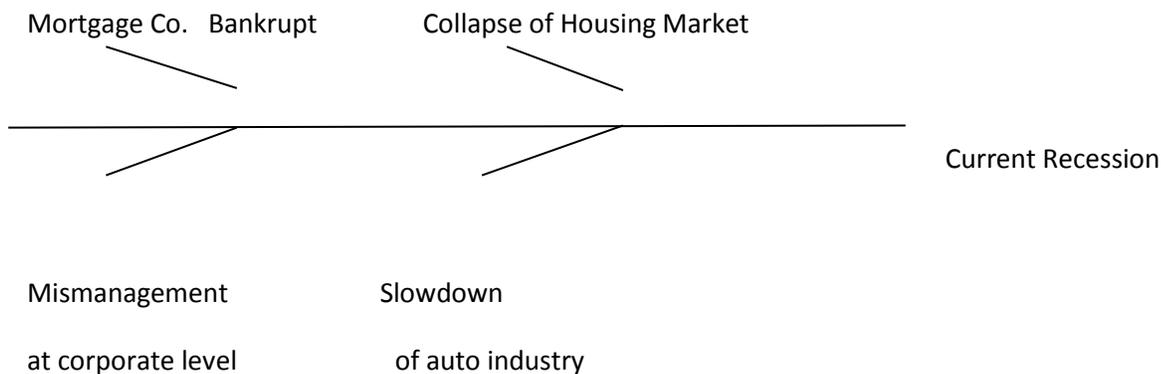
Student 1: Fans the Cards and turns to the person next to him and says, Pick a Card, Pick Any Card,

Student 2: Picks a card and reads the question out loud, Student 3: Answers the question, Student 4: Paraphrases the answer given by Student # 3.

Cards are then rotated one person to the right and the steps are repeated. Fan-n-Pick encourages thinking skills; teambuilding; and listening and communication skills.

Fish Bone Graphic Relational Organizer

Graphic organizers are visual frames used to represent and organize learning information. They are especially helpful to visual-spatial learners. Reasons to use graphic organizers are numerous: foster higher-level thinking, aid in comprehension and memory, align with brain research, and respond to intelligences other than verbal/linguistic. Relational Organizers, such as the Fish Bone assist learners with the relationship between parts or parts and the whole. The Fish Bone focuses on cause and effect.



Fish Bowl

Fish bowl is a modeling strategy that allows students or participants to observe a process or a dialogue among their peers. It is generally done to allow participants to observe communication skills in action.

Fish bowl works like this: a group of individuals (usually 4-7 people) are seated in a circle to engage in dialogue or a protocol. Participants surround the seated models and observe the process. The debrief of the fish bowl is a critical part of the strategy with participants asked to notice consider what they are noticing about the content and depth of the dialogue

Focused Read

Focused read is a reading strategy to help guide students as they read informational text. Often times students struggle with what it is they need to pay attention to when reading new material and *Focused Read* provides them with a lens for reading. It works like this: Students are assigned a piece of text (story, chapter, and article) and instructed to make tracks in their reading. For example, the teacher may ask students to, "Place an exclamation point (!) after anything that is new learning for them, and a question mark (?) after anything that is puzzling to them and a check mark (✓) after anything that makes

sense to them in the reading.”

This process helps students remain focused while they are reading informational text and it also allows the teacher to ask students to share with one another (stand-up/hand-up/pair-up or shoulder partner) to deepen their understanding of what they have read.

Folded Value Line

Folded Value Line is a strategy to help students take a stand on an issue. It is a great instructional strategy to add physical movement in your classroom. This strategy also gives students a chance to practice listening and speaking skills and to think of rationale to support their statement/stance on an issue.

Folded Value Line works like this: The teacher poses a statement, such as, “Our government should support genetic engineering research.” Each student is asked to jot down on a piece of paper a number from 1 – 10 indicating their opinion on this issue...from a “1” meaning they are absolutely opposed to government funding of this research; to a “10” indicating that they fully support this research funding. Students are next asked to write down a couple of reasons for the number they have written on their paper.

Students now stand on an imaginary line (side by side) from 1 – 10. Each end (person who is a “10” or a “1”) now goes to stand in front a student who is approximately a “5” ...in other words the two ends of the single line fold into the center to form two lines.

Teacher then labels one line “A” and the other “B”. First the “A” partners have 30 seconds to share their opinion on the issue while their “B” partner listens. Now B’s paraphrase their “A” partner and the process is reversed.

Follow-up to Folded Value Line can include research, development of a paper, a class debate or other activities.

Freeze Frame

Freeze frame is a facilitator move to engage the participants in meta-cognitive thinking. As implied in the title, it freezes participants at a point in conversation. The facilitator then encourages groups to take a balcony view by asking a question such as “What are you noticing about yourself or others engaged in this dialogue?”

Gallery Walk

The Gallery Walk is a strategy that allows students to view other’s thinking and works. It sharpens observations skills and serves to clarify students’ thinking.

The Gallery Walk works like this: Students (often in cooperative groups) have created a chart,

constructed a graph, created a poster, brainstormed a topic, or developed a graphic organizer. Each group is asked to post their work in an area around the room. Students are then told to do a “Gallery Walk” of the room noticing the thinking of each group. You may ask students to make comments and post them on sticky notes during the Gallery Walk or take notes for themselves as they travel around the room.

The Gallery Walk also provides the opportunity for movement during the class and gets the oxygen traveling to the brain!

Give One, Get One

Give One, Get One is a strategy for mixing a group, creating connections among participants and exchanging information. In the classroom or at a meeting, it also provides participants with a structured opportunity to move around the room...get on their feet and get the blood flowing to their brains!

Each participant is generally given a 3x5 card and asked to respond in writing to a prompt. For example, participants might be asked think about school improvement goal that they feel is important and to write it on the card. Students might be asked to recall one of the laws of physics or to list one of the core democratic values and give an example of it.

Next, music is played and participants walk around the room greeting one another until the music stops. Each person then finds a partner; reads his/her card and listens to their partner’s card. Then partners exchange cards and circulate around the room again until the music stops and the process is repeated. Teachers and facilitators can add in paraphrasing to make sure he/she understands what is written on their partner’s card before traveling on to the next person to share the new information.

Graphic organizer

Graphic Organizers are visual frames used to represent and organize learning information. G.O.s respond to students as visual learners and they increase the retention of information.

Educators use G.O.s to encourage higher-level thinking. Some research suggests that when students create graphic organizers using color and symbols or pictures, students retain 85% more information.

Commonly used Graphic Organizers include: Venn Diagrams; Line Graphs; Mind Maps; T-Charts; Fish Bones; PMI Charts; Pyramids; and Matrix.

Gum: Chewing Ratio

The Gum: Chew ratio is a metaphor for thinking about content and process. It reminds us that we can only get a certain amount of “gum” in our mouths before we need to start “chewing” it. In the same way, students need to process the new information and can only handle so much content before they begin processing it. The gum, or content, may be delivered in any of the following ways: reading, video, lecturette, demonstration, read aloud, etc. The chewing, or the process, can be any number of

cooperative learning strategies, such as Round Robin, Rally Table, Mix & Match, Quiz-Quiz-Trade, Inside/Outside Circle, etc.

Inside/Outside Circle

Inside/Outside Circle is a Classbuilding strategy identified by Spencer and Laurie Kagan. It is intended to get all students (or participants) up moving around the room and interacting with one another. Because participants are standing and moving it helps get the blood flowing to their brains and breaks the 'sitting at their desks' routine. It also allows students to interact with several other students in an organized, productive manner.

Inside/Outside Circle works like this: one-half of the participants stand and form a circle facing **OUT**. The other half of the participants forms a circle around (outside) of the first group, the **outside** circle participants face **inside** so that each participant is facing a person from the 'other' circle. Next the teacher instructs one circle to rotate. For example, the teacher may say, "Outside circle move two persons to your right". The newly formed partners then respond to a question. For example: "Inside partner explain to your outside partner one possible cause of erosion". Next the teacher may say, "Inside circle rotate three persons to your left" and then ask, "Outside partner predict how the read-aloud story we are reading might end".

Inside/Outside Circle works well as a review strategy and it can also be used at the beginning of a lesson or unit to bring to mind previous knowledge regarding a concept or topic. Inside/Outside Circle also works well as a get-acquainted strategy at the beginning of the semester or the year....it helps students build community.

Invitational language

The tone in which information is provided, and the words that are used send the brain important messages. Inviting, as opposed to challenging, communicates respect. Invitational language, therefore, communicates respect to the participants and allows them the "decision" to participate. Consider the following phrases:

- "I'm inviting you to think about..."
- "We welcome your ideas for..."
- "Consider your perspective on the following..."

Notice how the language used in the phrases above provides an invitational and safe environment for sharing. Invitational language helps open thinking and provides respect and appreciation for the different perspectives of participants.

Jigsaw

Jigsaw strategy, also known as Expert Groups, is a cooperative learning strategy for working together and sharing new information. Originally developed by Elliot Aronson, the jigsaw strategy enables each student of a base group to become an “expert” and bring the information back to other group members. Just like a puzzle, each piece of information is necessary for the final product to be complete. The Jigsaw works like this ...

- The teacher places students into groups of 5, known as base groups
- Students number off 1 to 5, and each number is assigned a reading
- All of the number ones, twos, threes, etc. move into “expert” groups of like numbers
- In the expert groups, students read the material and have dialogue about its meaning
- Expert group members determine what ideas should be shared with their base groups
- Students return to their base groups and share what they have learned in their expert groups.

Students and teachers alike will agree this is an efficient way to learn, with accountability as well as support in place in the classroom.

Just Like Me

Classbuilders are critical at the start of the year. Classbuilders help build community, help students to get to know one another, help get students’ voices in the room, and get them up and moving around. One great Classbuilder is called, “Just Like Me” and it goes like this: The teacher makes statements such as, “I went to the beach this past summer”; “I have an older sibling”; “I will be playing a sport this year”, or “I am good at math” etc. Each time a statement is made, students who identify with the statement, stand and say “Just Like Me”. This helps students to identify with the whole class and make connections with other students. High School teachers might want to ask about current events and stances on issues, or popular movies or music. While Elementary teachers might want to use statements such as “My first name begins with the letter J” or “I have a pet”. Middle School students desperately want to “fit in” so it is important to make positive statements and add enough variety to ensure that everyone stands on several of the choices.

The final touch to Just Like Me is to ask students think about “what they are noticing” and what are they learning about their classmates.

Ladder

The Ladder is a graphic organizer to help students sequence steps or processes. The teacher provides students with a paper containing a graphic of a ladder with boxes for rungs that allow students to fill in each step of a process. For example, students might list the order of operations in an algebra class; or the steps in a laboratory procedure.

Learned Affirmed Challenged

Learned, Affirmed, Challenged (LAC) is a strategy for engaging in debriefing and/or reflecting on written content. LAC is helpful in nudging students to identify new learning from what they have read, viewed, or heard. It also guides students to acknowledge what they already knew and had affirmed (confirmed) and this builds student efficacy. Finally students are asked to identify questions that remain for them and/or how the new learning may be challenging their thinking...perhaps their misconceptions.

The three questions for LAC can be posted on the board, or printed on a handout. Once students complete the reflection individually, they may be asked to share with a partner or with a group of four students. Finally the whole class may debrief what was learned, affirmed, or challenged.

Line Up

Line Up is a Kagan Cooperative Learning strategy to help students understand ordering, take a stand on an issue, or find a random group or partner. It is a great instructional strategy to add physical movement in your classroom. This strategy also gives students a chance express themselves in a tangible, visual/kinesthetic manner.

Line Up works like this ...

- The teacher asks students to line up in any number of ways, such as: order of height, birthdays, alphabetical order, and number of blocks from school, characteristics, estimates, values or other assigned items
- If students are lining up according to their birthdays, they would stand on an imaginary line (side by side) with January birthdays at one end and December at the opposite
- Each student then finds their place in the line

The teacher may wish to put parameters on the activity, such as no talking, or trying to finish as quickly as possible.

A Line up can be used in a variety of ways to promote communication and to develop certain concepts as movement is incorporated into the day.

Match Mine

Match Mine is a Cooperative Learning strategy in which students work in pairs to communicate to one another without the use of visuals. It is a great strategy to increase accuracy of verbal communication. It also sharpens students' ability to follow verbal directions.

Match Mine works like this ...

- Each student has an identical set of figures (tanagrams, Lego pieces, or graph paper, for example)
- A visual barrier is set up between the students (such as a folder)
- The "sender" sets his/her figures in a pattern
- He/she then describes the pattern as clearly as possible, and the receiver attempts to match the pattern described to them by the "sender"
- The barrier is then removed and pairs check to see if they are "a match"

This strategy is often used with tanagrams or coordinates on an X and Y axis and resembles the popular game of Battleship. Sets of Legos can also be used to create matching configurations. It is important for students to be instructed to use correct terminology, for example: parallelogram, equilateral triangle, etc. to practice using the terms or identifying locations on an axis.

For elementary students, teachers might have them use different shapes and colors. Students could also draw a snowman, for instance, then describe it accurately to their partner so he/she can replicate on their own paper.

Simile Speaking

Simile Speaking is a thinking strategy used to engage participants in analyzing information and making new connections. This strategy stretches the brain and fosters deeper and more divergent thinking. Often Simile Speaking is used with adults and students as an 'opener' to begin participants in thinking about a particular concept.

This is how the strategy works ...

- Participants are given photos/pictures of four different objects
- A group may see a flashlight, a book, a pair of glasses, and an electrical plug on the screen
- Groups of four to six are then asked to come to consensus choosing one of the objects
- Depending on the concept or topic of lesson or meeting, each group completes a metaphor such as Democracy is like _____ because _____; or Communication is like

_____, because _____

- Each group completes their sentence and shares it with the whole class or group
- Groups come up with creative and unique sentences that can be a catalyst for further conversation and learning about a particular concept

Metaphorically Thinking

Metaphorically Thinking is a thinking strategy used to engage participants in analyzing information and making new connections. This strategy stretches the brain and fosters deeper and more divergent thinking. Often Metaphorically Thinking is used with students as an 'opener' to begin participants in thinking about a particular concept.

This is how the strategy works ...

- Participants are given photos/pictures of four different objects
- A group may see a flashlight, a book, a pair of glasses, and an electrical plug on the screen
- Each student then chooses an object (picture/graphic) and completes a metaphor such as "Learning is like _____ because _____"; or "A friend is like _____, because _____."
- Each group completes their sentence and shares it with the whole class or group
- Groups come up with creative and unique sentences that can be a catalyst for further conversation and learning about a particular concept

This helps elementary students think about how two very different things or concepts might be the same....an important thinking skill throughout life.

Minute Fingers

Ever have students working in cooperative groups and need to know how much time each team needs to finish their work? Minute Fingers is a great strategy to provide the teacher with feedback to guide his/her decision about moving forward with the lesson. It works this way....

- The teacher asks each group to come to consensus about how much time they need to complete their work
- The key is to give the groups parameters about how much time they may request. For example they may signal with a closed fist indicating that they do not need more time; with an index finger raised if they need one more minute; or two fingers for two more minutes
- Always give groups a maximum number of minutes that they can request

- Once each group has raised their hands indicating the number of minutes they need, the teacher or facilitator calls out each, saying "I see one minute; I see zero minutes; I see two minutes; I see one minutes, etc. So, we are going to take 1 minute 15 seconds more to complete your work"
- It is important to call out the "minute fingers" because it allows everyone in the room to gauge how every group may be at a different place in the work
- The strategy also allows teachers/facilitators to honor the need for more time to complete quality work

Mix-Freeze-Group

Mix-Freeze-Group is a classbuilding and content mastery strategy developed by Kagan. It allows for movement, music, and the opportunity to talk with others in the room in a structured format. The strategy works like this: Participants / students move around the room until the music stops (a variation without music is to have the teacher call "Freeze"). The facilitator or teacher then poses a question or sentence starter, such as "The best thing about my summer was _____." Students are asked to "group up" or find a partner and share their responses. This strategy can also be used to review content. The teacher might ask a question such as, "What were some of the factors leading to the Crisis in the Balkins?" When the music stops or the teacher calls "Freeze", groups form and share their answers.

Mix & Match

This is a classbuilder (Cooperative Learning) strategy to get everyone up and moving and interacting with other members of the class or group. The intention is to create an opportunity to share either content or non-content information. It can be used to practice or review content or to simply get-acquainted with others.

Mix and Match works like this: Each person is given a card with a word, picture, or symbol on it. These can be digital or analogue clocks or elementary students; percent and their matching fractions for older elementary/middle school students; chemical elements and symbols for high school students, or Spanish and English words for foreign language.

Each person is given a card with "half" of a pair or set. Participants mix around the room (often to music) and exchange cards as they greet one another. The music stops and each participant must then find their partner...the one with the matching card. The teacher then gives students a question to answer with their partner. The questions, of course, can be either content or get-acquainted- based.

Most Important Point

Most Important Point (MIP) is a strategy used for reflection, review, and formative assessment. Students or adult participants reflect on the content of the session or lesson and summarize their MIP. These are generally written on post-it notes (can post on the board as a Ticket Out the Door) or on 3 x 5 cards and shared at table groups. This allows the facilitator or teacher to “dip-stick” and check for content or concepts that have “stuck” with students.

Orchestra

Orchestra is a strategy for processing information that allows students to organize their thinking. It is particularly good for the kinesthetic learning as it integrates body movements with learning. Teams or groups decide on a sound and motion to represent understanding of the concept. The orchestra conductor (teacher) allows teams to “warm-up” and then conducts a short musical piece allowing each group to express their learning through a sound and motion.

Numbered Heads

This Kagan Cooperative Learning strategy includes the four principles of cooperative learning: Positive Interdependence; Individual Accountability; Equal Participation; and simultaneously Interaction. Numbered Heads is used to promote full attention and to check for understanding.

Numbered Heads works this way: Groups of four or five participants or students form a team and are seated together. Each group numbers off so that each person has a number or letter (1, 2, 3, or 4 or A, B, C, or D). Each table or group is also given a collective number or letter. So, a person might be person # 3 at Table C. Next, the teacher poses a question for groups to consider. For example: What are two ways that “John” and “Sam” (characters in the story) are alike and different? Participants or students dialogue and come to consensus about the answer (given two or three minutes) and then the teacher spins a spinner or draws a table number out of the hat and a participant number or letter out and asks for that person to stand and report their table’s answer. This process is repeated several times with different questions.

It is important to note that the questions that are asked are critical...whether it is an elementary classroom or a senior course, it is important to create questions that foster higher-level thinking questions such as analysis, synthesis, and evaluation.

Pairs Squared

Pairs Squared is a cooperative learning strategy for information sharing which builds on the familiar “Pair Share” strategy. Pairs Squared works like this: A-B partners share information around a given question or topic. Then each pair is asked to form a foursome by matching with another pair. The new group then shares information and synthesizes the collaborative thought of the four individuals.

Quick Write

A strategy called “Quick Write” is used with the intention of opening up thinking and allowing participants to “go deep” with their thoughts. It encourages “freedom” in writing and promotes focus. It also gives students time to collect their ideas before verbalizing them to others. Quick Write works like this: Individuals are given a question, topic, or writing stem from which to work. Individuals are provided a set amount of time for responding (usually between one and ten minutes), and the room is completely silent for that amount of time. Students are asked to simply write whatever comes into their heads. The Quick Write strategy can be used to introduce topics and have students focus on what they already know or what questions they have. It can also be used at the end of a lesson to promote synthesis and reflection. The Quick Write strategy is often followed by some sharing of the information students have been writing.

Quiz-Quiz-Trade

Quiz-Quiz-Trade is also a Kagan Cooperative Learning strategy that gets students up, moving around the room, and interacting with other students. This strategy is most often used as a review strategy and helps students clarify their understanding of the content without the overly-used worksheet approach.

Students are each given an index card or a small slip of paper and instructed to write a question on the front of the card. The questions may be about a specific chapter of the book, a portion of a story or book, a concept, vocabulary words... whatever it is you want students to learn. A note of caution, teachers may need to guide students to ask good questions...questions that prompt higher-level thinking and are not true/false or yes/no questions.

Once students have their questions written on cards, they are instructed to turn the card or paper over and write the answer to their question on the back of the card. The teacher plays music and the students walk around the room greeting each other and swapping cards until the music stops. Students then form pairs and ask one another their question. If a student is stuck, his/her partner can use “tip, tip, tell” to help their partner. Pairs then trade cards, the music starts again and the process is repeated several times.

Rally Table

Rally Table is a cooperative learning strategy that has students working in pairs to engage in processing new content or to practice a new skill.

Rally Table works like this ...

- Each pair of students has one piece of paper, one worksheet, one map or whatever the lesson requires, and two pencils
- Students take turns writing, drawing, working steps of problems, etc. and then passing the paper to their partner who continues the next part of the assignment

Rally Table works well in solving math problems; working one step at a time; constructing a paragraph or piece of writing; in science for identifying steps in a process. Sometimes teachers have each student use a different colored pen/pencil to complete the work so that individually accountability is increased.

Round Robin

Round Robin is a strategy developed by Kagan Cooperative Learning which encourages social interaction and verbal processing of information. It might be that students respond to a question, offer an idea, or complete a stem offered by the teacher.

Round Robin works like this ...

- Students are placed in groups of four, and the teacher offers a question or a sentence stem
- The teacher then identifies which student will start the process, such as “student A” or the student with the brightest colored shirt
- Students respond to the question in a clockwise manner
- Round Robin allows a large percentage of students to process information at once and is aligned with brain research that informs educators that much learning occurs during social interaction.

Save the Last Word (first turn last turn)

Save The Last Word is a strategy used to debrief an article, chapter of a book, or other written material. It provides a structure for deep dialogue and provides everyone with an opportunity to be part of the conversation. It also gives readers a focusing strategy for their independent reading. Save The Last Word also equalizes air time for all participants and eliminates ping-pong conversations.

Save The Last Word, sometimes called First Turn, Last Turn, and works like this:

- Participants are placed in groups (4-6 usually works best) and each person reads the article or other material individually
- Participants are each asked to highlight two or three sentences or phrases that seem important to them while they are reading

When everyone has completed their reading and highlighted their sentences, one person shares ONE of his/her highlighted items (reading the highlighted section without making comment). Each group member (using the round-robin strategy) then comments on the portion of the article read by the first participant. During this process, no cross talk is permitted...everyone makes their own comment in response to the stated sentence or phrase and then the next person comments on the same phrase.

After everyone has had a chance to speak about the sentence highlighted by participant number one, he or she gets to share their own thinking about the importance of this passage in the article...hence the name "Save the Last Word". This process is then repeated around the table with person number two sharing one of his/her highlighted passages. Everyone comments before he/she has his/her Last Word.

Say Something

Say Something is a shared reading strategy used to "chunk" up the text and provide an opportunity for students to "chew" on the content in pieces. It helps students verbalize their thoughts and thus focus on the content.

Say Something works like this ...

- Students are placed in pairs (Student A and Student B) and then the class decides together on dividing the reading material into to "chunks"... usually no more than a few paragraphs in a "chunk"
- Students then read the first portion of the text independently and silently and then Student A "Says Something"
- This student can do one of the following ...
 - Make a personal connection to the reading
 - Pose a question about what has been read
 - Make a summary comment about the reading

Person B then has the opportunity to do the same. The next “chunk” is then read silently and independently and the “say something” process continues until the complete text has been read and discussed in pairs.

For early elementary students the teacher may read aloud each part of the text/story and then have pairs add a comment before continuing the story. Elementary students are often asked to make a prediction about the next part of the story during their say something time.

Shoe Partner

Shoe Partners is a strategy to pair up students or participants in a random manner. Shoe Partners is a fun, interactive strategy that is non-threatening and engaging for all students. It works like this ...

- Each individual is asked to look around the room and find an individual who is wearing shoes similar to their own. For example, participants may match by color, style, boots, heels, flats, etc.
- Once participants find their shoe partners they then share or exchange information around a particular concept or question.
- This strategy provides opportunity for physical movement and standing conversations.

Show, Don't Say

Show, Don't Say is a focusing strategy that causes students to use a new modality...to go from auditory learning to visual learning. It is effective in refocusing students so that they look up to see the hand signal from the teachers.

Show, Don't Say works like this ...

When wanting to let students know how much time they have for a task, the teacher raises his/her hand with a number of fingers extended indicating the number of minutes left

Teacher then says to the class, “You have this many minutes left to complete your work.”

Students must look up to see how much time is left

Simultaneous Roundtable

Simultaneous Roundtable is enjoyed by students because they are working in groups (usually 4 persons to a team) and have structured interaction. This strategy is important because it helps students express their learning on paper as they write and then read what their peers have written.

Simultaneous Roundtable work like this ...

- Students are given something to write about (a story starter for creative writing; a description of

a process or insect in science; a mult-step problem in math; an issue in social studies)

- Each member of the team begins a two-minute write
- Time is called and students pass their unfinished work on to the student on their right
- Students are given 1 minute to review the work given to them and another two minutes to add to their peer's work. This process continues until all students on the team have added to each other's work.
- Papers are then read aloud by the team and shared with the whole class

Simultaneous Roundtable provides students with chance to learn from other students while building on another's thinking. Students love this AND they are writing!!!!

Spend a Buck

Spend-A-Buck is a decision-making strategy to help students prioritize choices without polarizing the decision. It teaches students that we are varying degrees opinions regarding choices that we make.

Spend-A-Buck works like this: Each student is given an equal sum of "play money"...for example, ten one dollar bills. Choices are then spread around the room or on a chart and students can place their dollars on their top choices. One student might want to spend five dollars on one choice, three on another, and two on another and not spend any money on the other choices offered. While another student might spend all of his/her dollars on one choice. The dollars are totaled for each choice and the winner is selection with the most "dollars" on it.

Snow Globe

Snow Globe work like this ...

- Students are either given an outline of a snow globe or asked to draw one on a blank piece of paper.
- Students then are asked to draw symbols or figures (can also use some words) to capture the essence of the concept or story. For example students might create a snow globe of photosynthesis, a constitutional amendment; the scientific method; or The Three Little Pigs story

This activity can be done as a group or individually.

Stand-up, Hand-up, Pair up

This is a grouping strategy where the teacher asks students to Stand-up and put their Hand-up while traveling around the room (can be done to music) and when the teacher calls “stop” students are to find a partner near by them and put their hands down.

Students with their hands in the air, still need to find a partner.

Stand-up, Hand-up, Pair-up provides students with a way to process information and share it with another student.

Stir-the-Class

Students stand in groups of four. One person is 1, another 2, etc. The groups stand in a circle around the classroom. The teacher asks a question or presents a problem. Students in each group turn to face each other and put hands on each other’s shoulders, like a football huddle, and discuss the problem or question. When everyone has something to share, students unhuddle and form a line so the teacher knows they are ready. When the groups all unhuddle, the teacher call a number and ask the students with that number to take a step forward. Those students then rotate to a new group. Have students huddle again with their new group and share their ideas. Repeat with new groups and a new question or problem.

Tea Party or Meet & Greet

Students or Participants use an index cards to record a significant excerpt from the text.

Students/Participants then move around the room (can be done with music) to meet and greet and exchange “excerpts” by reading aloud their excerpt and explaining why it was important to them.

You may debrief this activity by inviting the whole group (class) to share some of their significant noticings from the reading.

Text Featuring

Text Featuring is a strategy to foster reading comprehension and is particularly applicable for students learning to read text books. Participants/students are given a copy of a chapter or article without any text features, such as: title, bolded words, graphics, charts, sub-titles, etc. Students then work in pairs or groups to cut and paste the article/chapter adding the features that would normally support the text. Text Featuring helps students see the value of the features that are included in their textbooks.

Text-Rendering

Text-Rendering is a strategy to foster reading comprehension and shared understanding among participants. Text-Rendering helps readers focus on important concepts and ideas in the text. It is also a summarizing technique for students. It forces the mind to condense the information and make decisions about the importance of various concepts in the text.

Text-Rendering works like this ...

Students are given an article, a portion of a chapter, or a story to read individually

Each student is instructed to highlight or underline the following three things: one sentence that, for them, summarizes the text; one phrase that speaks to them; and one word that seems the most reflective of the total message of the text.

Participants are then given three strips of chart paper (one long; one medium strip; and one shorter strip). Students use markers to write their sentences on long strips; their phrases on medium strips; and the shortest strip to write their word. Next students in groups of four or five share their strips and the thinking behind their choices and following this they come to consensus on one sentence, one phrase, one word that they will post for other groups to view. Following the gallery walk to see the thinking of each group the class can engage in dialogue about what themes are emerging from the text.

Thinking Matrix

The Thinking Matrix provides a framework for teachers and students to generate powerful questions to enhance creativity and deeper understanding of content. The matrix teaches students a simple and concrete system for thinking, questioning, and responding more thoughtfully to classroom questions.

On the vertical axis of the matrix are seven fundamental types of thinking. On the horizontal axis of the matrix are the Focus Areas of the subject. At the intersection of the Type of Thinking and the Focus Areas, thinking questions can be crafted. Below is an example.

→

Types of Thinking ↓	Focus Areas →				
	Setting	Plot	Conflict	Character	Moral
Recall					
Cause/Effect					
Similarity					
Difference					
Ideas to Example					
Example to Idea					
Evaluation					

Three Balloons

This is an information processing strategy. Three balloons helps students and participants organize and integrate information. Three balloons works like this. Each member is asked to imagine that they have three balloons on which they have space to write a word or phrase capturing an important idea from the day's work. Members then record their ideas and then report to the group.

Tic-Tac-Toe Sentences

Tic-Tac-Toe Sentences is a summarizing strategy to help students synthesize information obtained during a lesson or unit. It can also be used after a particular piece of reading or discussion. Tic-Tac-Toe Sentences is a powerful strategy for determining knowledge and skills acquired before the formal assessment. It works like this ...

- Students are placed in groups (groups of 3 work best)
- Each group is given a set of 9 blank index cards

- Each group member is then assigned an appropriate role, such as facilitator, recorder, spokesperson, etc.
- Students are provided with (or determine on their own) the nine most important terms and/or concepts from the unit, lesson, or reading and asked to write one term on each of the index cards
- Students mix up the index cards. 6. Groups place cards face up into a 3x3 pattern that resembles a tic tac toe board
- Students are now challenged to make true sentences using three concepts across, down or diagonally to synthesize the concepts into complete thoughts
- Each group's spokesperson shares their best sentence with the entire class

Tic-Tac-Toe Sentences has multiple variations: Students can be challenged to be as creative as possible, use the words in a specific order, or come up with more words to make a 4x4 or 5x5 grid. Students can also do it alone or with partners.

Visual paragraph

This strategy is a great one; especially for bodily kinesthetic and visual/spatial learners. It provides "space" or containers for participants to store and access information. It makes directions and steps in processes much easier to understand and remember.

Visual Paragraphing works like this ...

- The teacher stands in one spot and gives the first step in the process or first message. For example: The teacher says, "Students please take out your journals from yesterday."
- Then the teacher pauses and moves (without speaking) one step to the students' or audience's right and then gives the second step in the directions. For example: "Students, the second thing you will be doing is to exchange journals with you're A/B partners."
- Then the teacher pauses; and silently moves one step further to the participants' right and proceeds to give the next step in the process or directions. For example: "the last step is that you will read your partner's entry and write a summary paragraph beneath their entry."

It is important to move from the students' left to right and not to speak in between the steps in the process. This is absolutely magic in helping students focus on content and directions!

Wagon Wheel

The Wagon Wheel is strategy to debrief text as a group. It works like this: Each student or participant individually reads an article, chapter, or book and makes tracks in their reading. It is important for participants to highlight key concepts or ideas. It may also be helpful to provide individuals with graphic organizers to help them pull specific content from the reading. Next four chairs are placed back-to-back facing outward and another four chairs are placed in an outer circle (like inside/outside circle only seated instead of standing). Participants are now seated and will work with their partner who is facing them to debrief the article while taking notes on their shared dialogue. The facilitator or teacher then indicates that the inner circle should rotate one person to their right and the process continues until each person as dialogued with each three other individuals.

Walk About

A “Walk About” is a strategy for engaging participants in conversation as they have dialogue about various concepts or ideas that are posted around the room. Teams of 3-5 people are matched up and asked to travel together around the room, stopping at each posted concept or idea. As they stop, they are invited to engage in dialogue about the relationship of that particular concept to their work. Teams are given a graphic organizer and asked to identify a recorder and a facilitator for the group. Walk About fosters standing dialogue to engage in deep thinking around school improvement or other concepts.

What questions do you have?

This is a simple and powerful strategy to open thinking and invite inquiry in the classroom. Instead of the usual: “Do you have any questions?”

“What Questions Do You Have?” Presupposes that students will have questions. Questions mean students are thinking. Questions are good; they provide clarity and allow deeper thought and dialogue.

Sometimes when we ask students, “Do you have any questions?” It sounds to them like: “Do you have any questions, Dummy?” Asking, “What Questions Do You Have?” invites inquiry.

Give this simple rephrasing a try and see if your students inquire more!

Whip Around

The Whip Around strategy is one used when the goal is to hear from many voices in the class without taking more time than the group has available. Whip Around is generally used after groups or individuals have been working independently on the same topic, and it works like this: The facilitator asks a question that should have a short answer, and starts at one end of the room calling on individuals for a response. All individuals may respond, or one representative may speak on behalf of the group. There is no cross-talk, no questions, and no comments from others; only responses given from

participants as the facilitator calls on them. Whip Around can generally be completed in less than five minutes and gets many voices in the room.

Window Closing

This is a time management strategy that provides a visual to let participants know how much time will be used for a particular activity or set of responses. The strategy works like this: When eliciting responses from the group, the facilitator or teacher holds her hands straight out in front of her. She gestures by moving her hands closer or farther apart, representing the amount of "space" available for responses. As less time is available, the facilitator moves his or her hand closer together, announcing, "The window is closing." Often this strategy will "bring out late shoppers"; in other words, as participants know the time available for responses is limited, it encourages them to share their response.

Windshield

Windshield is a strategy for assessing each student's understanding of a particular concept. Each student is asked to respond to the question, "Is _____ (concept) clear, cloudy, or mud-covered?" Students raise their hands to indicate how well they comprehend a concept and use the analogy of a car windshield.

Working Agreements/Learning Agreements

Working agreements, sometimes referred to as Group Agreements, Norms, or Learning Agreements help establish guidelines in your classroom. The most powerful aspect of working agreements is that they are *respectful* to students and set a tone of building community in the classroom. There are two important notes about developing Classroom Agreements:

First, establishing agreements in your classroom....whether in elementary school or high school physics should **NEVER** take place until after you have begun building community in the classroom with classbuilders and other ice breaker types of activities. In our zeal to "get control" educators often begin by slamming students with the book of rules.

Secondly, the students should be the ones who identify the working agreements. You might ask them to think of a great learning environment or a favorite class from the past year and to think about what made that great. Have students "go inside their heads" and think about possible norms or agreements that would make the classroom both productive and enjoyable.

Next, begin charting ideas from class members and once you have a list of perhaps five or six guidelines, ask students if these are ones we can all agree to 'live by'. Some teachers post the agreements and have all students sign the poster signaling their willingness to follow and help maintain the agreements.