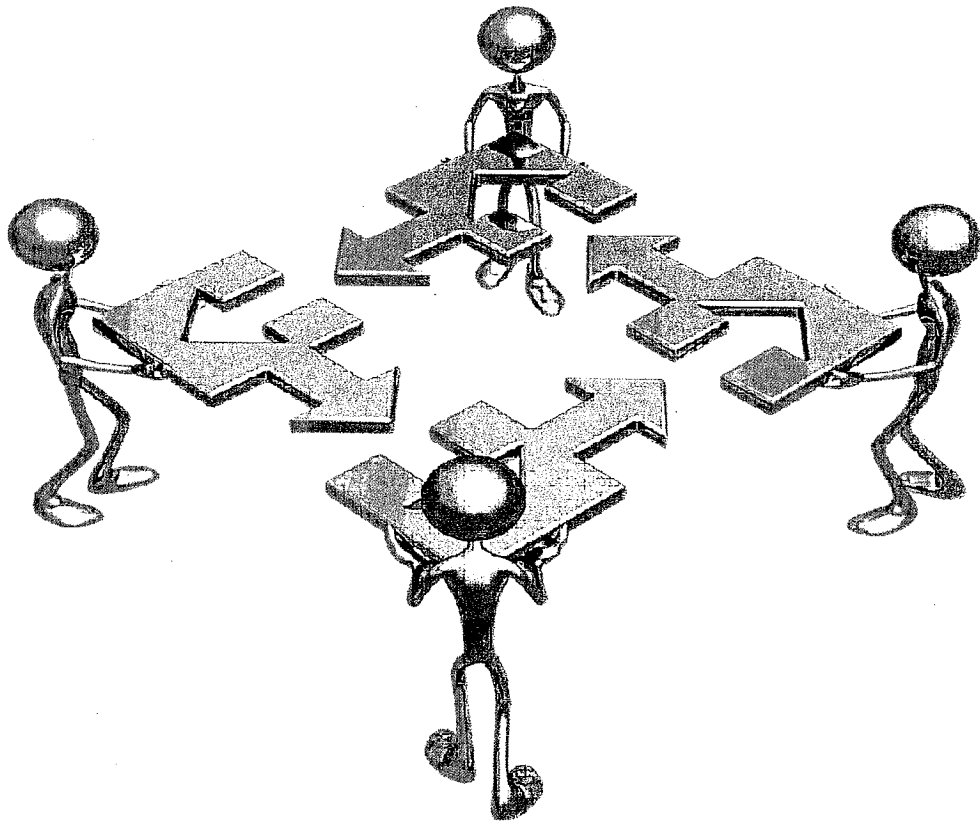


TEACHING STRATEGIES THAT MOTIVATE AND ENGAGE MIDDLE SCHOOL STUDENTS



Formative Assessment Strategies

Homework, Quizzes, and Tests

1. The easiest form of information to collect or analyze about your student's learning is their regular work in the form of homework, quizzes, and tests.
2. This information will be richer if you include questions that require students to explain their thinking. It is especially helpful to ask questions that require students to apply their thinking to a new situation that you have not discussed in class. This requires flexible thinking on their part and should reveal how they are thinking better than questions that allow them to say back what they have memorized.

Exit Tickets

1. Give students "tickets" – small pieces of paper designed to look like tickets, but with space for writing.
2. Ask students two questions, one that requires a factual answer about the big idea of today's lesson, but in their own words. A second question should require more explanation of a concept.
3. Give students five minutes at the end of class to write their answers. Their names do not go on these exit tickets. They must give you an Exit Ticket to leave class for the day.
5. Analyze the tickets to learn how many students got the big idea and how they understand it or misunderstand it.

One-Minute Papers

1. Give students an open-ended question and one to three minutes to write their answers.
2. Good questions: What is the most important thing we discussed today? Or: What was the most confusing idea presented today?
3. Collect the papers and use for promoting discussion, identifying misconceptions, or confusion.

Concept Mapping

1. Provide small groups of students with a list of about 15 related words that might fit well in an outline.
2. Give them small sticky notes to write the words on.
3. Ask them to create a concept map by moving the sticky notes around on a piece of paper until they have them in the right place.

The Learning Line: Draw a line across the entrance into the classroom. Role- play and discuss crossing the learning line and transforming into behaviors and expectations that make for a productive Classroom learning environment.

Beach ball review- The kids love this activity and it will assure 100% participation. Purchase a small/medium multi-colored beach ball from a pool store, Wal-mart, etc. On each color write with a sharpie thought provoking questions, review questions, kick-off activity questions or other ideas that come to mind. Instruct the students you will hit the ball around the room and when you make a designated sound they should catch the ball and where their right thumb is answer or discuss that question/statement.

Appointment Clock: One O'clock, Two O'clock, Three O'clock Rock

Carousel Brainstorming: Take butcher paper or something similar hang it around the room in 4 to 5 places for groups of 4-6 students. Each sheet has a question written on it for review, critical thinking, lesson summary, etc.

1. Assign students in groups of 4-6 at each station.
2. Give each group a different colored marker.
3. Select a recorder
4. Brainstorm responses to the question.
5. At the teachers signal rotate as a group to the next question.
6. Brainstorm again and add to your new question.
7. Complete all Questions

You can post questions on a clipboard and pass it around but it does not get the students moving.

Chalk Talk: On your chalk/dry erase board, flip chart, or other set up place/write/draw a thought provoking statement, question, picture or other prompt in the center. Now explain to students there is no talking during this 5-8 minute activity. This is an active silent brainstorm session. Have a set of markers for students to use and write responses, ideas, etc. to your prompt. They can respond directly to the prompt or to other responses that have been made on the board. This can become a giant mind map. Afterwards debrief with the class the various responses and discuss conclusions, insights etc.

Exclusion Brainstorming: This can be done on your board, overhead or a flip chart. Write a topic on the board surrounded by a list of words, some that are part of the topic and some that have nothing to do with the topic. Students come up and cross out those that have nothing to do with the topic and circle the ones that have to do with the topic. They can only do one during their trip and they must explain why they included or excluded their word.

Commercial Breaks: Each team or partner is assigned a topic or they choose one for review. Throughout class they offer impromptu commercial breaks, breaking news flash, Sports Center update, etc. Create 30-60 commercial that advertises topic of study, emphasizing most important concepts.

Foldables: Used for review, assessments, various teaching methods, differentiation, experiential, creativity and much more!

Paper plate Math, Coca Cola and, Dry erase boards

Agree/Disagree: Create a continuum on the classroom floor, ceiling, etc with an A on one side for strongly agree and a D on the other side for strongly disagree. Select 5-7 students and ask them to place themselves on the continuum on how they feel about the question posed, issue or other statement made by the teacher. The students must be able to support and defend their choices. Teachers here are the facilitator and question the students and audience. Ask students in the audience if they agree with Billy? Why, why not, where would you stand, explain? Allow for students to change their position but always question why? **FOUR CORNERS?**

Interactive slide show: Carefully select a few powerful images/slides. Pose questions that are inquiry based and that provoke discussion and spiral from simple to complex. Challenge students dramatize the slide with act-it-outs by coming up and assuming the role of individuals and have a reporter interview a Native American who is on the trail of tears..

10 + 2 (Ten Plus Two)

Teacher presents for ten minutes, students share and reflect for two minutes, then the cycle repeats...

5 + 1 (Five Plus One)

Teacher presents for five minutes, students share and reflect for one minute, then the cycle repeats...

Charades: Index cards with facts, definitions, concepts, parts of speech, parts of cell, historical documents, math equations/steps, etc. Teams 4-5 pull card act out if your team cannot solve other teams can guess.

Card Classification:

The teacher gives each student an index card containing information or an example that fits into one or more categories. Such as:

- Science: Periodic table elements, parts of a cell, scientific method
- Social Studies: Generals of a war, Battles, Branches of Government, Parts of the Constitution
- Math: fractions in lowest terms, Conversion of %, decimal, fraction, (.25, 25%, ¼)
- Language Arts: Nouns, verbs, books by, incomplete sentences

Students mill around the room forming groups of the same category. You may announce the category ahead of time or let them discover or predict the category. Students with the same category present themselves to the class and support and defend answers. Teacher may give important points during this time or even ask the groups to make a teaching presentation about the category.

Stations: Various spots set up in the classroom where students work on different tasks simultaneously.

Centers:

Learning Center an area in the classroom that contains a collection of activities or materials designed to teach, reinforce or extend a particular skill or concept. Interest center is designed to motivate student's exploration of topics in which they have a particular interest. Centers focus on learning goals. They provide clear directions and the materials address a wide range of reading levels, learning profiles and students interests.

Assembly-Line: Give students text, pictures, etc and cut them into pieces and have students place them into order. Write explanation supporting their work. Once assembled have students answer set of questions, discussion, KWLS

Games: Board games teacher and/or student created.

Cooperative Learning:

Turn to your neighbor and: write, discuss, draw....

- 3 elements of the periodic table
- Causes of the civil war

- Nouns in the room
- 2 ways you will review tonight
- Call on students randomly to share their group response

Think Pair Share:

- Teacher poses a question
- Students think about what they know
- Pair with a partner to get more information
- Share with the whole group

Pairs of Pairs

- Students create a list of responses to a question posed by the teacher.
- Next two students are combined to make their two lists into one list.
- Next two pairs are combined and create one list from their two
- Teacher collects all ideas from the groups until all are listed

Think, Ink, Pair Share and Now Square: Just add ink!

Learning buddies:

3-4 students who meet often to:

- clarify, process information
- ask questions
- Review for an assessment
- missed work, absent

Dynamic discussions:

Best applied after a big event such as: guest speaker, field lesson, debate, important news event, assembly, etc
In the group 3-5 people discuss the following and write down after group consensus:

- 2 most important aspects
- groups favorite/least favorite part
- New ending
- something that surprised the group
- What next, predictions
- How does this impact you, the school, etc.

Solution/Practice pairs:

Pairs work on the same set of problems, questions or other and then compare answers. Where they differ, discuss why and find a solution. Also, they decide one is correct and explain why. One set of answers is turned in for the pairs.

Jigsaw:

- Students are in groups of 4-6
- Divide the topic, lesson, reading etc. into 4- 6 segments.
- Assign each student in the group one segment to be an expert on
- Students are given time to read and become familiar with their segment
- Each person presents their segment to the group
- Float from group to group observing the process
- At the end debrief, discuss and assess the students

Expert jigsaw: Have one student from each group with the same segment meet as an expert on that segment. Give them time to discuss main points of their segment and how to best present it to their jigsaw group.

All the right moves Moves:

Winning – A teacher’s positive attitude and enthusiasm attract students’ attention.

Dramatizing: Act out or perform material related to the lesson.

Enlisting – A teacher enlists a student’s voluntary engagement in curriculum activities.

Props: Use items related to the activity or content.

Alerting – A teacher reengages students and maximizes participation.

Pre-Alert: Let students know in advance that you will be calling on them.

Wait-Time: Provide 3-5 seconds of silent think-time after asking a question.

Numbered heads Together: Put students in groups of 4 assign each student a number 1-4 if you have more than 4 students you can double up on numbers in the group or add a 5 if there are enough groups with 5. Teacher now asks /poses a question, problem low level question or high level analysis. Make it clear to the students everyone in the group needs to know the answer. Students work together to come up with best answer. After the allotted time teacher calls out a number and all of those numbers stand teacher calls on randomly. This can be open so that there are many answers like causes of Civil War, why exercise, etc.

Team practice drill:

Math facts, vocabulary, definitions, elements, other review topics are placed on flash cards. Label two envelopes "ours and "not Yet Ours". Put them in the correct envelope based on whether or not everyone in the group knows them. You can also do individual flash cards Mine and Not yet mine.

Group Homework:

Students are in homework check groups to review homework when assigned. These groups should change every 3-6 weeks. The group members encourage each other to have their homework complete and in on time. Grids can be kept in a folder for monitoring individuals. Group members now compare answers. The group should come to a census for all answers. Now the group turns in one homework sheet with consensus answers signed by all group members showing understand and agreement. The individual homework sheets are attached to the group sheet.

Debriefing, Response, Reflection Journals: Time to write, reflect etc.

Answer Cards

Answer cards are a great way to involve an entire class and quickly see who's on the right track. Place inside a library book pocket 6 or more 3x5 notecards. Across the end of each card put one response such as: A, B, C, D, YES, NO, TRUE/FALSE or others you may use. The students remove the cards they will need. Then I state the question and answers, repeat once, then tell them to think (wait time), say "answer ready", "now, show your answer". All answers must be held up at the same time. You can see in a second who needs help. If many are wrong you can re-teach, give clues, discuss.....

Deal or No Deal:

This can be used to review, test, independent practice and many other ways in the classroom. The teacher divides the students into groups of 3-4 students. Then a representative from each group is called back to the teachers designated area. Now, the teacher places a large number of index cards face down on the table, more cards then groups. Each card has a question, problem, scenario, reading, mystery or other option. Each group rep draws a card and may or may not be able to take back to group to examine. If the rep chooses this challenge they go back to group and get to work and if not they can exchange for another card but must accept the second card. Upon completion of the work the teacher may collect or have each group reps rotate around to share and get feedback.

Exit or Admit Slip or Ticket out the door: One thing I learned, One thing I enjoyed. Student writes to demonstrate comprehension of the standard, essential question or key question. Writing can be major point(s) of lesson, one thing learned, one thing still unclear or a brief summary of the lesson. (Exit slip due as students leave class on the day of the lesson; Admit slip due as students enter on the day following the lesson.

Scrap This:

As students walk in the door hand 10 scrap pieces of paper out randomly. Students know that if they get a scrap of paper they have to write a comment, summary, question, statement or other about the class topic that day. It may be a question from a classmate. Use to check for understanding or clarification. This also allows students to ask questions anonymously as I shuffle the papers and others can grab a sheet to add to the stack.

5-5-5 Conversation

1. Take 5 minutes to read through the new Student Discipline Code. Record your 'aha' ideas in the first box.
2. Take 5 minutes to share ideas with your tablemates. Record new ideas in the second box.
3. We will debrief as a whole group for 5 minutes. Capture ideas from our whole group debrief in the third box.

Prediction Pairs

Students are paired as they listen to passage read aloud. At each planned pause, the teacher prompts students to discuss with their partner what they predict will happen next in the reading.

3-2-1- Have students write 3, 2 and 1 of something from your lesson.

3 things I liked about today's lesson, 3 key terms they have just learned

2 things I struggled with, 2 things I would like to learn more about

1 thing I will work on from the lesson. 1 thing I know well enough to teach to another

The possibilities are endless and have the students create ideas for the 3-2-1 activity.

There are many Variations of 3-2-1 you can develop

Minute Papers

An end-of-class reflection in which students write briefly to answer the questions: "What did you learn today?" and "What questions do you still have?"

Caution Light

Each student has a green, yellow and red card. Teacher asks students to display green to indicate understanding of a correct answer, yellow to indicate uncertainty or need for additional help and red to indicate lack of understanding or an incorrect answer. You can also use paper towel or toilet paper tubes paint one end red other green.

Luck of the Draw:

The teacher summarizes the previous day's lesson as usual. The teacher draws a name out of a hat, tub, etc and that student will summarize today's lesson tomorrow and pick tomorrow's winner out of the hat. This allows for all students to come prepared and experience success.

Reciprocal Learning:

Students will work in pairs one as the coach and one as the player. The player works on a set of questions from the teacher. The coach always encourages their best efforts, provides praise when correct and helpful hints when incorrect. When finished switch roles.

Inductive learning:

Students are provided with a list of familiar and unfamiliar words, phrases, pictures, sayings, etc related to topic of study. They work alone to form associations between items. Now they work in pairs or groups and work to further form larger connections. The groups now make predictions, develop hypothesis, and pose questions.

Idea Spinner

Teacher creates a spinner marked into four quadrants and labeled- Predict – Explain – Summarize - Evaluate. After teaching a new standard, the teacher spins the spinner and asks students to answer a question based on the location of the spinner point. For example, if the spinner lands in the "Summarize" quadrant, the teacher might say, "Summarize key concepts just of (standard or element)."

It’s a Mystery to me:

Present the content for the students as a mystery to be solved, question to be answered, or other similar format. Students gather information from clues to develop logical solutions and create possible hypothesis. As they gather more clues they can test and refine any hypothesis they have formulated. Now, they present and defend their conclusions in front of an audience.

Cheat Notes

Summarization technique - Students prepare a single note card of information they believe will be on a test. Students may be allowed to bring these notes to test; however, as students gain confidence, withdraw use of cards.

Boggle:

- 2minutes review previous notes, content
- 2 minutes to write down as many big ideas and key concepts as you can remember
- 2 minutes to review with a group, share lists and add any ideas you feel necessary

RAFT

Role: Who are you: soldier, King, President, slave, doctor, athlete, etc?
Audience: Who s your audience, ancient Romans, Supreme Court, 1607 Jamestown, teachers...
Format: letter, speech, newscast, song, obituary, etc
Topic/Time: Why educate all people, equal treatment, why freedom, stop the war, etc

<u>KWLH/S:</u> What we Know	What we Want to	What We Learned	How Can We	Still want
	Find Out		Learn More	to know

Agendas:

- personalized list of tasks that a student must complete in a specific tine frame
- May last a student 1, 2 or 3 weeks based upon needs assessment
- Usually, students determine order of completion of tasks
- Set aside time each day, week as agenda time
- Can be used as an anchor activity if students finish work early
- During the time when students work on their agenda, the teacher moves among the students, coaching and monitoring understanding and progress

Grab Bag

At the conclusion of a lesson, have a student draw an object from a bag. The student must explain or illustrate how the object is related to what they have learned. Instead of objects, have students draw high-taxonomy “questions” for a variation.

Save The Last Word For Me:

Students work in groups of 4-6. Students independently read a selected piece from the teacher. They mark two or three key sentences they find interesting, troublesome, or just feel strongly about one way or another. Once everyone is finished the first person selects one of their selected sentences and reads it to the group without any further comments or response of any kind. Each member now responds to that sentence and after everyone is done the first student now has their turn, saving the last word for them. A sentence may only be used once during the activity.

Triad Questioning:

- Call on student one to answer question.
- Call on second student and ask do you agree or disagree with the first student. They can add, argue or clarify points of the first student. The second student must support or refute with evidence.
- Call on third student to evaluate the second student's comments and add their own opinions.
- First student gets the last word they can reverse earlier comments, argue or disagree with classmates.

Learning Contracts:

Starts with an agreement between the teacher and student and allows for more individual freedom, choices and for differentiation of instruction. Provide rules of the contract in writing with input from both teacher and student. Establish clear and rigorous expectations for success from the start. Focus the contract on concepts, themes, problems or big idea and integrate various skills into the projects or products produces. Continue to meet with and evaluate the work of students on the contracts.

Chronological Sequencing

An approach in which: a) teachers present information to learners or b) teachers ask students to present information in a prescribed, chronological order. Compare: General-to-Specific, Known-to-Unknown, Part-to-Part-to-Part, Part-to-Whole, Part-to-Whole-to Part, Spiral, Step-by-Step, Topical, Unknown-to-Known, Whole-to-Part

Howard Gardner "Entry Points"

He proposes student exploration of a given topic through as many as 5 avenues or entry points.

- **Narrational Entry Point:** Presenting a story or narrative about the topic or concept question
- **Logical-Quantitative Entry Point:** using numbers or deductive/scientific approaches to the topic
- **Foundational Entry Points:** Examining the philosophy and vocabulary of the topic or concept
- **Aesthetic Entry Point:** Focusing on sensory features of the topic or concept
- **Experiential Entry Point:** Using hands-on approach where the student deals directly with the topic or concept
- **Emotional Entry Point:** Using feelings, personal reflections and opinions about the topic or Concept

Develop What if Propositions?.....

- driving age was changed to 18
-everyone had to serve two years in the army
-school ended after 8th grade
-Jack B. was the god of education
-no one ever died
- the British had won the war or the South
-everyone could read and write

What if Germany, Japan and Italy had won the war? How might this of happened?
What would be different today? How would this impact history overall?

How would this impact you personally?

Would this have impacted the USA? How?

Question, Think, Share:

1. Provide input, background or essential questions for the students.
2. Use higher level questions which will have more than one right answer.
3. After posing questions provide 3-5 seconds of wait time.
4. Divide students into small groups to discuss answers and select group representative.
5. Students are brought back for all class group discussion.
6. The group representative reports to the entire class.
7. After each student response provide wait/think time
8. Record responses on the board, flip chart or computer.
9. Teacher as facilitator: Can you elaborate, why, etc.

Charade review:

Students are in Groups of 4-6 and one student from each group picks a card with Vocabulary, terms, other and acts it out to the group with 1-2 minutes to get the correct answer and if not the other groups can answer.

Fishbowl:

- One day prior to this the teacher provides students with an assignment like: series of questions, an experiment, reading etc
- Create an inner circle with about 10 desks and 8 will have students seated in them and two empty.
- The remaining desks in the classroom form an outer circle around the inner circle.
- The teacher posts questions for discussion on overheard, board etc
- Students in the inner circle begin discussion.
- Students in the outer circle listen carefully and may even take notes
- Students may leave the fishbowl (inner circle) once they make a contribution. Now they can leave and ask another student to come in. The teacher may also ask any student to move into, or out of, the fishbowl taking an empty seat.
- If no empty seats a students from the out circle may ask someone who has contributed already to exchange seats with them.
- Teacher is monitor of the discussion not participant.

I have... Who Has...

Index cards for each member of the class. On the top of each card is "I have.. with the answer to a question. "Who has.. with a different question written on the bottom of each card. The teacher begins by reading the question at the bottom of their card.

Inner-Outer circles:

Form two large groups within the class. One group forms an inner circle seated with their backs to the inside. The other group forms a circle on the outside facing in, with each student seated facing a member of the inner circle. Teacher poses a question, problem, invites an opinion or other. Each pair discusses, helps each other, and/or listens to a brief presentation prepared or from something on the spot posed by the teacher. If discussion slows the teacher may have the students stand in the outer circle and rotate.

Lecture Listening Groups:

Teacher divides the class into 4 groups and each group has an assignment.

1. Questioners: After the lecture ask at least two questions about the material covered.
2. Agreers: After the lecture, tell which points you agreed with or found helpful and explain why.
3. Nay-sayers: After the lecture, comment on which point they disagreed with or found unhelpful, and explain why.
4. Example givers: After the lecture give specific examples or applications of the material.

Rock-N-Review:

Using index cards number the 1- how many desks you have in the room or number of students. On the opposite of the card write a question, vocab word. Etc. Have the number face up on the desk. Explain to the students this is a silent activity? Give an answer sheet with numbers in a box or lines provided for answers. Have the students start at their desks or assign them to a desk to begin. All cards are face down until you start the music. Give them 30-60 seconds stop music they turn card over rotate to next desk. Demonstrate rotation method on overhead or board. If they star at desk #8 they start with slot #8 on the answer sheet.

What's My Line?:

Write material to be studied or reviewed in the form of I am....

I am a: person, event, theory, concept, skill, quotation, formula or other. Write them on slips of paper place in a box. Now divide the class into groups and have them draw a slip of paper. The teacher gives the group 5 minutes to select the mystery guest from the group and anticipate possible questions to be asked. The teacher now randomly selects a panel from the other groups to ask questions. The teacher begins by asking the mystery guest to reveal their category (event, person, formula etc)

What works in Classroom Instruction: Robert J. Marzano

1. Identifying similarities and differences
2. Summarizing and note taking
3. Reinforcing effort/Providing recognition
4. Homework and practice
5. Non-linguistic representation

Debonos Six Thinking Hats:

White: Neutral, objective
Yellow: Positive
Blue: Leader, facilitator
Green: Creative

Red: Emotional
Black: Reality, concerns

RATA: Read aloud think aloud applying the 7 habits of a successful reader

Mystery Box/Bag: Decorate place in front of room on Monday with sign stating do not open until Friday. In the box place items to begin, end, summarize a lesson. This has many possibilities be creative.

Paper Fight: Pair students and they write a question, vocabulary, math problem on one sheet of paper and the answer on another sheet of paper. Pairs go to opposite sides of room with imaginary line down middle of room. At the teachers signal students toss papers across line repeat 2-3 times for good mix. Students with questions find students with answers teachers verify. Try: Students write questions they have, summary, comments, answer questions, etc. Have students toss in designated box, can etc teacher moves around the room. Share responses that day, next or use for your formative assessment.

Questions & Concerns: Arrange students in circle give one index card to each student. Have them write a question they have about the days lesson, concept etc. No names on cards pass them around the room in same direction and as each card comes by a student have them put a check on the card if they have the same question or concern. Pass the cards around until teach student has their original card. Teacher collects use for formative assessment, clarify, re-teach, etc.

I Declare and Share: Divide class into small groups. They discuss a question posed by the teacher and should be open ended or have numerous possible answers. The groups discuss until everyone in the group feels confident they have something to share with the entire class. The groups stand when all students are ready and when the entire class is standing the teacher calls on a student. When the student answers they have a seat and all other students who have the same answer have a seat. This continues until everyone is seated.

Group reporters: Students work in groups of 4-5. Prior to class the teacher prepares a number of problems, discussion questions, review items, reading, art work, etc. Each group can have the same work or different work in each group. In each group assign a reporter. The reporter records responses, answers, review items, etc. After 5-7 minutes the reporters rotate to the next group record responses and this continues until they are finished with all groups and are back with their original group. They share new ideas, responses, and summarize the best possible answer.

Place Mat: Have students in groups of 3-4. Create topic, question places in center of paper. Then have 3-4 areas so each student can write responses. Students share responses. Discuss, reflect support and defend their answers, responses.

Frustration Model: Word in the center, definition, characteristics, examples and non-examples. You can also add or substitute pictures, drawings other representations.

Anticipation Guides: Create graphic organizer chart with before you read agree/disagree columns

Before you read		Statements	After you read	
Agree	Disagree		Agree	Disagree
Evidence:				

Knowledge books/Interactive notebooks:

Scrapbook of learning no limits think outside of the box. Great way for some differentiation, meet various learning styles. Left side of notebook can be pictures, free writes, journaling, poems, cartoons, right side can be notes, articles, summary of work, standards.....

Preview Coming Attractions:

Preview lesson, stimulates interest and hooks students can be used in opening of lesson or prior day to set curiosity for next day. Think about songs, movies, shows, or other catch phrases from things they can relate to in their world. Come see who is voted off the island, front row seating is a must, you will want to move here, I promise.

Dramatize key points: Whisper it, shout it, Drum roll, noise maker, lead in, Heeeeere's, air write, exaggerate your letters, sing it, reveal slowly.....

Debates, Socratic seminars, role plays, graphic organizers, analogies, metaphors, other????????????????????

Interactive Slide/picture lecture:

First select slides, pictures or other visual that can easily be displayed for the entire class to view. Powerful images work best here and especially slide where the students can step right into the picture. Select visuals that relate to your objective and content being taught. Develop questions that lead to inquiry, discovery, interactions and more questions. Set your classroom up for the interactive show arranging seating and visuals. Challenge students to act-it out, dramatize the scenes and use their visual senses to expand. Debrief the lesson and record notes on overhead, board etc.

Skill builders:

Relate and build the teaching of skills into your content. Have a life skills objective along with the curriculum objectives. Skills such as: problem solving, map reading, summarizing, analyzing, interpreting, writing and much more. Teach the skill and practice the skill and model the skill with the students. Build in multiple intelligences in the process of learning and applying the skill. Have students work in pairs as they master these skills and later small groups and individually. Reinforce the skill by having it used frequently and provide frequent and immediate feedback on progress. Debrief entire class and develop connections with life and content.

Experiential Exercises:

Create and/or recreate situations with brief memorable activities and experiences. These experiences will tap into kinesthetic and intrapersonal and other intelligences. Have clear expectations and prepare for student reactions. Jump in and play the dramatic part or reading and be animated and involved. Have students respond and share their feelings and provide personal reflections. Make connections with the exercise and the lesson or objectives.

Writing for Understanding:

Writing should be an instrument for learning, just for assessment and evaluation. Provide students with multiple intelligence/sensory experiences so that all students can find their connections. Give purposeful writing assignments with a variety of choices such as: diary, newspaper, letter, etc to better meet their needs and use their motivation. Develop and use pre-writing activities to get everyone involved and warmed-up. Give guidelines and expectations of the writing assignment. Have the students follow the writing process as a skill that you are developing and to produce their best work. Finally, publish and celebrate!

Response groups:

These groups are used to discuss controversial issues, dilemmas, look at multiple perspectives and taps on the creative higher thinking abilities. Have students work in small groups 3-5. Teacher provides or poses a thought provoking higher level question from past background knowledge, previous reading, or something you give them at the moment. Assign the role of the presenter that will rotate during class. The presenter is the facilitator during the discussion and represents the group to the class. This role should rotate with each question. Debrief and facilitate a dynamic discussion with the entire class.

Problem solving cooperative group work:

Teach students the procedures for cooperative group work that you have developed for your classroom. Provide students with an assignment that uses higher order critical thinking skills and multiple intelligences. Place students in groups of 3-5. Provide roles for each group and let them determine the role for each member based on their strengths. As a teacher remain flexible as you work with the groups. Have a list of possible products the students might produce and brainstorm more as class. This provides for differentiation of instruction and assessment as they select power point, storybook, museum or other product that meets the requirements of the assignment, as well as their learning styles and multiple intelligences.

* Six Powerful Teaching strategies are adopted from History Alive and the Teacher's Curriculum Institute.

59 writing prompts for math teachers

Prompts for math journals (assessing disposition)

- My best experience with math was when_____.
- My worst experience with math was when_____.
- I love math because...
- I hate math because_____.
- I want to become better at math so that I_____.
- Is math your favorite subject? Why or why not?
- What did you like most about your math class last year? What did you like the least?
- People who are good at math_____.
- One mathematics activity I really enjoy is _____ because _____.
- When I study for a test, I_____.
- When it comes to math, I find it difficult to_____.
- When I hear someone say math is fun, I_____.
- When I see a word problem, the first thing I do is _____.
Then I _____.
- Does mathematics or math class scare you in any way?
- Draw a picture of a mathematician and describe what a mathematician does.
- Explain how you feel about mathematics now as compared to before you took this class.

Prompts for learning logs (assessing learning)

- My three personal goals for this term are_____.
- Explain everything you know about _____.
- What is a _____? Write all you can about _____.
- Find something that you learned today that is similar to something you already knew. Write about these similarities.
- How would you use what you learned today in your life?
- The main idea today's lesson was_____.
- Write a definition in your own words of a _____.
- What is the most significant thing you learned this week?
- What questions are still unanswered at the end of this week?
- Last week in math I learned _____.
- My favorite part of math last week was _____.

- The hardest part of math last week was _____.
- This is how I used math this week (outside of school)_____.
- Describe any discoveries you made about mathematics today, this week/month/year.
- Give two examples of situations in which you have used, seen or can find the concept of _____. OUTSIDE of this classroom.
- I want to learn more about _____.
- I wish I knew more about_____.
- I need more help understanding _____.
- My math grade now is _____ because_____.
- What was your grade on the exam/quiz/project? If you were not satisfied with your score, what can you do to improve? If you were happy with your score, what did you do well?
- Write instructions for a (insert grade level here) grader to follow when (adding fractions, finding percentages, calculating averages, etc.)
- How would you describe a _____?
- The difference between_____ and _____ is_____.
- Compare and contrast the terms _____.
- What patterns do you notice in _____.
- You know several ways to_____(solve an equation, add fractions, etc.) Which method is your favorite? Why?
- Make a list of objects or figures in the room which have _____. How can you tell?
- Write a letter to your teacher explaining what you understand about _____, and what is still giving you trouble.
- Write and solve a word problem whose solution involves _____.
- Describe practical uses for _____.
- Write___ possible test questions for this unit.
- Write a letter to a student who will be taking this class next year, giving some advice about this class.

Prompts to use for problem-solving (assessing process)

- The most important part of solving a problem is_____.
- Describe the process you undertook to solve this problem. (Problem needs to be provided.)

- I knew I was right when_____.
- Tips I would give a friend to solve this problem are_____.
- Could you have found the answer by doing something different? What?
- What strategy did you use to solve this problem and why?
- Was this problem difficult or easy? Why?
- Were you frustrated with this problem? Why or why not?
- Where else could you use this type of problem solving?
- What would happen if you missed a step? Why?
- What other strategies could you use to solve this problem?

Qualities Teachers Look For in Writing

Ideas

- ▶ Clarity
- ▶ Focus—a small, easy to manage topic
- ▶ *Good* information—from experience, imagination or research
- ▶ A fresh perspective
- ▶ Important, helpful details that go beyond the obvious

Organization

- ▶ A snappy lead that gets the reader's attention
- ▶ Order and logic
- ▶ Clear connections to a main idea
- ▶ In tech or business writing, *gets to the point!*
- ▶ Easy to follow—but not too predictable
- ▶ A graceful ending—doesn't just STOP

Voice

- ▶ Sounds human—not like technospeak
- ▶ Has the mark of *this particular writer*
- ▶ Brings the topic to life
- ▶ Is appropriate for the audience, topic, purpose
- ▶ Shows conscious concern for reader's interests, informational needs
- ▶ In tech writing, doesn't bore the reader, but doesn't overwhelm the message, either

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Word Choice

- ▶ Moments that stick with you
- ▶ Strong verbs, precise nouns—no modifier overload
- ▶ Word pictures
- ▶ “Just right” language—suits the topic, the audience, the purpose
- ▶ Simple language used well—not written to impress
- ▶ Minimal redundancy
- ▶ Technical terms defined as needed

Sentence Fluency

- ▶ Rhythmic
- ▶ Easy to read aloud—inviting
- ▶ Varied sentence length—some long, some short
- ▶ Tendency toward shorter, crisper sentences in tech/business writing
- ▶ Purposeful sentence beginnings:
▶ *Now, After a while, Because of this, Nevertheless, As a result, Consequently, However, Therefore. . .*

Conventions

- ▶ Looks clean, edited, proofread
- ▶ Easy to decode & follow—conventions enhance meaning
- ▶ No BIG, GLARING errors that distract the reader or distort the message
- ▶ Specifically (at a minimum)—
 - *Spelling correct on simple words, correct or close on difficult words*
 - *Terminal punctuation correct; internal punctuation not misleading*
 - *Paragraphs for new topics, new speakers*
 - *Quotation marks to set off dialogue*
 - *Capitals on all proper nouns and to begin all sentences*
 - *Noun-verb agreement*
 - *No arbitrary shifts in tense*
 - *Layout has eye appeal*



WRITING PROCESS HOW DO THE TRAITS CONNECT?

PREWRITING

IDEAS, VOICE

Writer's Questions:

- Who is my audience?
- What do they know now?
- What do they need/want to know?
- What info is new/interesting?
- What info is common knowledge?
- How well do I know this topic?
- What form should this take? (Report, letter, brochure, story, poem, etc.)

DRAFTING

IDEAS, ORGANIZATION

Writer's Questions:

- Do I have enough information to answer readers' questions?
- Do I have so much info it's overwhelming?
- What's an organizational pattern that makes sense? Time? Space? Comparison-contrast? Main point and support? List of key questions with answers?
- Where do I begin?
- Where do I go next?
- How do I know when I've covered the bases?
- How do I know when to stop?

EDITING

WORD CHOICE, TERMINOLOGY, SENTENCES, CONVENTIONS, AND PRESENTATION

Writer's Questions:

- Is this text as error-free as I can make it?
- Is it readable? Can I breeze right through it?
- Does the language communicate with this audience?
- Is it formal/informal enough?
- Do the sentences show enough variety to keep a reader awake?
- Are sentences in informational or business writing concise and to the point?
- Did I read it both silently and aloud?
- Did I seek the editorial help I needed?
- Did I use page layout in a way that will attract the reader's eye and make main points easy to find?

