e-Booklet

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THE BRAIN STORE

Amazing Memory Applications for School Success

Memory is the cabinet of imagination,
The treasury of reason,
The registry of conscience,
And the council chamber of thought.
—St. Basil

In the school environment, we must contend with multiple learning goals and agendas that are often in competition for our time. First, there's the learning that you desire because you're curious and you find the subject meaningful. Then there's the curriculum your teacher wishes to impart. Then there's bureaucratic and parental expectations. Additionally, a student must learn what they'll be tested on. The subject of testing brings up another consideration. Some tests measure your knowledge, others your skills. Some may ask you to analyze a case-study, others require you to know a formula. Where one test may reward you for improvisational thinking and creativity, another will reward you for following directions. However much at odds the learning goals and testing approaches are—whether an essay exam, multiple-choice quiz, mathematical equation, oral presentation, or case study—they all have something in common. Each of them requires knowledge, and your knowledge is dependent upon your memory.

To ensure that you possess the requisite knowledge for school success, whatever the learning task may be, we recommend that you utilize all of the memory tools at your disposal. Just as no single tool (like a saw) can be used to build a house, no single tool (like the linking method) can be used to meet all of your memory needs.

Does Learning Mnemonics Undermine an In-depth Education?

Learning a system of mnemonics by no means replaces learning itself. It is rather an adjunct to learning. Like a computer, mnemonics provides a vehicle for shortening the path to mastery. It is with the aid of our tools, not the tools themselves, that we become educationally competent. Once students become efficient in the use of mnemonic tools, they can maximize their learning time.

Competing agendas will become less of an issue as basic requirements are able to be met, with time to spare for the more personalized curriculum. A book published by the U.S. Department of Education, called *What Works* (1989), concludes that "Mnemonics help students remember more information faster and retain it longer."

New Jersey senator (1979-1997) Bill Bradley, known as one of the most intellectual and deep-thinking members of the United States Senate, would likely agree with the Department of Education's report. It is no coincidence that this Princeton graduate is also known as a memory expert. Bradley's memory skills enabled him to spend much less time doing schoolwork, leaving more time to reach his personal goals. This chapter prepares you, too, for the kind of school and professional success Bill Bradley has enjoyed.

What Memory Strategies Will Enhance My School Success?

Do you remember what three basic elements are involved in the memory process? Here's a quick review. For any new learning to stick, it must be:

- **Encoded (recorded)**
- **Maintained or strengthened (stored)**
- **Retrieved through association (recalled)**

The school success strategies that will enable you to master both your required and your desired learning in a time-efficient manner are encompassed in these three basic memory stages.

9 School Success Strategies for Optimal Memory Encoding

1. Keep Your Cool

Pump yourself up with positive self-talk! Believe in your ability to master new things. Remind yourself that you can do it. If you get overwhelmed, refrain from making any long-term decisions or rash judgments about yourself as a learner. Instead, do something physically active; change the pace momentarily. Also, give yourself positive affirmations like, Mastery is easy; or My success is absolutely assured; or I have a great memory.

2. Learning Takes Energy

Make sure that you're alert for class and study time. Get plenty of uninterrupted sleep (6-8 hours); eat a high-protein breakfast; and if you're a coffee, coke, or tea drinker, limit your caffeine consumption or stick with decaf. Too much caffeine

can reduce concentration and result in more mistakes. The ideal state for learning is alert—not hyper. A better alternative is physical exercise, which increases blood flow and oxygen delivery to your brain, thus increasing alertness.

3. Goal Seekers Are High Scorers
Make sure you know what you want to learn and why. Review the assignment and form a plan of attack. Write down your learning goals for the week, month, or term. Break them down into measurable steps, checkpoints, or objectives you can review often. Ideally, your goals will be balanced between what you are required to learn and what you wish to learn. The more these competing demands cross over, the better.

4. Get Proactive
Apply mnemonic principles as you study. Encoding a memory can be as simple as pausing and thinking about how the new material you're learning relates to what you already know. Or, it can be more complex, like associating the material you're learning with places or parts of your body (loci).

5. Feed Your Memory Well
Your memory relies on vital nutrients to function optimally. You can ensure your brain receives adequate nourishment by maintaining a healthful diet with plenty of fresh fruits, vegetables, and whole grains. You may also wish to consider how dietary supplements may improve your vitality and cognitive function.

6. Attend to the Middle
We know that the recall sequence for most material is beginning, end, middle—that is, material presented at the beginning and end of a learning session will be better remembered than that presented in the middle. Known as the BEM principle, you can offset this effect by consciously paying more attention to the middle of the information block. Since you'll naturally remember the first and last blocks, a little extra effort applied to the middle will shore up the weak link.

7. Get Engaged First
Active engagement with the material ensures deeper understanding. Thus, ask yourself questions to bring the big picture into clear focus: What does this have to do with what we learned yesterday? What's coming up next? Why this and not that? Or, What exactly does this mean? The inquiry process is vital to the encoding and strengthening of memory. Ask questions in class. Double check what you've learned with others. Seek feedback immediately, if possible, before any false impressions are formed.

8. Let's Party
Celebrate your learning. When strong emotions are present, the experience is more likely to get deeply imprinted in your memory. Excitement, humor, celebration, fear, pride, suspense, and other intense emotions stimulate the brain's production of noradrenaline, a potent memory-enhancing hormone, which mobilizes the mind and body for action. The release of this and other potent brain chemicals help serve as a biochemical marker, of sorts, making retrieval of the information more likely.

9. Picture Perfect
Visualize words into pictures. Making mind-maps, drawing pictures, making charts and graphs are some of methods you can use to ensure that you understand the material, especially when it is being presented verbally. These visual tools help you encode, strengthen, and later retrieve the information.

Case Study

Kindergarteners Learn Calculus

Japanese educator Masachika Nakane developed a curriculum that included mathematics, science, spelling, grammar, and English—all based on extensive use of mnemonics such as stories, rhymes, and songs. Results of his efforts suggest that children as young as kindergarten can learn to perform mathematical operations with fractions, solve algebraic problems (including the use of the quadratic formula), generate formulas for chemical compounds, do elementary calculus, diagram their molecular structure, and learn a foreign language. Some of Nakane's mnemonics for basic mathematical computations have been adapted for use in the United States. One study found that third-grade children using these mnemonic strategies learned all the mathematical operations done with fractions in three hours. Beyond that, their mastery level (achieved in three hours) was comparable to that of sixth-graders who had received three years of traditional instruction in the subject (Higbee 1996).

6 School Success Strategies for Strengthening Your Memory

1. Sweet Dreams
Studies have shown that students who get sufficient sleep, but are deprived of their usual dream time do worse on logic and problem-solving tests than when their dream state is not interrupted. This suggests that it is not just sleep that is important to the memory process; dreaming is, as well. In fact, the more you learn during the day, the more time at night you're likely to spend dreaming. The dream state or REM (rapid eye movement) time consumes as much as 25 percent

of our entire night's sleep and is critical to maintaining our memories (Hobson 1988). Earlier in the night, a smaller percentage of our sleep time is spent in REM. But as morning approaches, a large portion of our sleep time is spent dreaming. This suggests that the last few hours of sleep may be the most critical for the consolidation of learning. If you have a job or class that forces you to get up at 5 a.m. each day, it may be negatively impacting your memory.

2. Catch the Crest

The brain is not designed to learn non-stop; it demands rest. In fact, as a kind of built-in rest mechanism, the brain alternates energy consumption between the left and right hemispheres every ninety minutes or so. This body/mind rhythm is called an ultradian cycle. As a result of this alternating activity-rest cycle, tasks that are related more to the left side of the brain (sequential learning, understanding language, computing, and judgment) may be easier for you during a time when the left hemisphere is operating at peak efficiency. And tasks that are related more to the right-brain (imaginative learning, spatial memory, recognizing faces, visualizing images, and reconstructing songs) may be easier for you when your right hemisphere is operating at peak efficiency. Learning periods need to be interspersed with breaks for processing the material. It is during downtime that the brain synthesizes the learning and taps into the inner wiring necessary for memory connectivity and recall. Would you consider running a 10-K race without resting afterwards? Since learning is a biological process that literally changes the brain's configuration—making new synaptic connections and strengthening well-used ones—rest is also essential to optimal brain functioning. Thus, studying in forty-five- to ninety-minute segments with a fifteen-minute break in between increases learning efficiency since our daily highs and lows run about forty-five minutes apart. As you become familiar with your own ultradian rhythm, you can optimize your learning sessions by applying maximum energy during high-energy peaks and resting during low-energy dips. Figure 4.2 below illustrates how time of day affects our ultradian rhythms, depicted here by the varying levels of brain-wave activity, from beta to delta.

3. Repeat That Please

The connection that is made between brain cells upon learning something new is strengthened with repetition. To ensure a strong connection, new material should be repeated within ten minutes after learning it, again within forty-eight hours and, if possible, after seven days. If you don't review what you've learned, you may be surprised to find at an inopportune time that the material—even though you distinctly remember learning it—has suddenly "skipped your mind." To review new learning, organize a study session with another student or group of

students, reread your notes, and/or reread the first and last paragraphs of each page you're responsible for knowing. Creating a crossword puzzle is another enjoyable and creative review strategy. Others include watching a video on the subject, making a rap song utilizing the new concepts, or designing flashcards.

4. Where's Your Back Up?

As much as possible, back up your memory with "hard copies" or external memory aids—especially during high-stress periods when you may be juggling a lot of balls at one time. Get in the habit of carrying a calendar or personal notebook and be fanatic about writing in it. Use post-it notes, planning software (if you use a computer), an organized filing system, everyday objects, and even events to trigger your memory. No one's memory is perfect; and the more stress we're under, the more likely information floats by us without getting encoded. Backing up your personal memory system, like you back up your computer's memory system, just makes good sense.

5. An Hour-a-Day

Since humans are creatures of habit, the smartest thing we can do is take advantage of this tendency. Set aside time each day for practicing, reciting, and reviewing what you've learned. The evidence is very strong that learning in small daily chunks (interval learning) is far superior to "cramming" your head full of new information in one long sitting. Take a three-hour task and ask yourself, "How can I get the most out of my brain with the least effort?" Dividing the task down into forty-five-minute sessions over four days will give your brain the downtime it needs to consolidate the learning. Of course this method may take more discipline at first, but once you establish your hour-a-day routine, the learning advantage will become obvious and the process automatic.

6. Say What?

The more you manipulate new information and verbalize it (active learning), the deeper your understanding of it will be. Mind-map what you're learning in a notebook, debate the subject in small groups, experiment with it, write about it, perform a skit about it, or verbalize it with accompanying body movements or hand motions. Find a study buddy and have weekly reviews. Look up the subject at the library and discover how many books have been written about it. There are hundreds of ways to manipulate materials for learning. Just walk into a "toy" or knowledge store and see for yourself. Or better yet, observe a toddler with a bowl of cereal at breakfast time doing everything with it imaginable, but eating it. This is how we learn best. When cold milk drips down a baby's face after dumping the bowl over his head you can be certain he'll remember the properties of milk.

Mnemonic Tools for Memory Retrieval

A substantial amount of research published since the late 1970s has shown that mnemonics can help us with the kinds of learning tasks most often required in school (Higbee 1996). Since different mnemonic strategies work best for retrieving different types of material, we can't claim "one size fits all." Rather, you must decide which strategy works best for you and is most effective for the type of learning task you're attempting. On the following pages, we've provided a few examples of how various learning tasks can be aided by mnemonic tools. Included in each section is an opportunity for you to interact with the material and try out the techniques for yourself.

Spelling and Vocabulary

Sound-Alike Words, Rhymes, and Linking - Choose pictures or images that represent the particular word or letter combination that you want to remember. Link the images together to form a story. Examples include: Bad gram**mar** will **mar** a report; He screamed **"eee"** as he passed by the c**e**m**e**t**e**ry; The princi**pal** is my **pal**; A **prize** I will not win if I spell sur**prise** like prize; Before I can fill a **pre**scription, the doctor must **pre**-authorize it; and, Before giving **birth**, women are quite large in **girth**.

Your Turn - Can you devise a mnemonic to remember the correct spelling or definition of each of the following words? **Millennium, Exacerbated, Bustle, Jaundice, Jalapeno, Ascension, Sensible**

Public Speaking

Loci Method - To cue your memory for a series of key points, such as in an oral presentation, associate each point you want to make with a familiar set of loci (locations) occurring in a natural sequence (i.e., rooms in your house or body parts). For example, you might associate the introduction with the front door of your house (or top of your head); then, point 1 to your entryway (or neck), point 2 to your living room (or shoulders), and point 3 to your kitchen (or chest), etc.

Your Turn - Think of a joke you really want to remember. Now break it up into its key elements and associate each of these elements to a loci of your choice.

Classifying and Organizing Information

Peg-Words, Keywords, and Linking - These combined systems have helped students learn innumerable facts and figures, including, for example, the names (in order) of all the U.S. presidents. Here's how it works: (1) Use peg-words to

represent the numbers one to ten, which will be used to remember the succession of the presidents; (2) Substitute sound-alike words for the Presidents' names; and (3) Link the two with a visual association, i.e., Tyler (tie), 10 (hen) = a hen wearing a tie to cue the memory that John Tyler was the tenth president. As you get into the larger numbers, combine peg-words (i.e., 14 might be a hen on top of a door). To remember state capitals identify sound-alike words and link them with visual imagery, (i.e., Indianapolis = An Indian juggling apples; or Boise, Idaho = a group of boys hoeing a potato patch). Consider this example for recalling the key topics presented in your biology textbook: Chapter 1: Introduction to Biology (1 = peg-word sun) - See the sun with a hat introducing itself to a snail; Chapter 2: The Circulatory System (2 = peg-word legs) - See a pair of legs with a blood-red tattoo of a heart and lungs on them; Chapter 3: The Skeletal System (3 = peg-word bears) - See x-rays of The Three Little Bears; Chapter 4: The Nervous System (4 = peg- wheels) - See a huge nerve being wheeled into an operating room on a gurney; and so on.

Acronyms **-** CANU for example, can help learners remember which four Western states are the only ones in the country to meet at a single point: Colorado, Arizona, Nevada, Utah.

Rhymes and Jingles **-** Most of us have learned more than we realize with the aid of jingles and rhymes. For example, we may recall the number of days in each month through the ditty, "Thirty days hath September, April, June, and November; When short February is done, all the rest have thirty-one."

Your Turn **-** What techniques might you incorporate to remember the five largest seas in the world (in order of size in square miles): **C**oral **Sea** (1,850,200 sq. miles), **Arabian Sea** (1,492,000 sq. miles), **S. C**hina (Nan) **Sea** (1,423,000 sq. miles), **Caribbean Sea** (971,000 sq. miles), **Mediterranean Sea** (967,000 sq. miles)

Medical Terms and Facts

Acronyms and Acrostics **-** For decades medical students have used acronyms, for example, **NAVAL** to remember the physiology of the leg in a proper order: **N**erve, **A**rtery, **V**ein, **A**nd **L**ymphatic system; or acrostics like "**O**n **O**ld **O**lympus **T**owering **T**op **A F**inn **A**nd **G**erman **V**iewed **S**ome **H**ops" to remember the 12 cranial nerves: **O**lfactory, **O**ptic, **O**culomotor, **T**rochlear, **T**rigeminal, **A**bducens, **F**acial, **A**uditory, **G**lossopharyngeal, **V**agus, **S**pinal **A**ccessory, and **H**ypoglossal.

Your Turn - Can you devise an acronym or acrostic to remember the four lobes of the CEREBRAL CORTEX: **Frontal, Parietal, Occipital,** and **Temporal?**

Mathematical Concepts and Formulas

Acrostics - The acrostic "**B**less **M**y **D**ear **A**unt **S**ally" has helped some math students learn the priority order of operations in an algebraic equation: **B**rackets, **M**ultiplication, **D**ivision, **A**ddition, and **S**ubtraction.

Peg-Words and Linking - Times-tables are easier for some people to remember when aided by the combined mnemonic techniques of peg-words and linking. First, the learner must know a peg-word system (2 = shoe, 4 = door, 8 = gate, etc.) Then when two numbers are multiplied, the peg-words are visualized interacting together. For example, you might visualize the equation 2 x 4 = 8 as follows: To save a friend, you kick down the door with your shoe, but now a gate blocks your entry.

Rhymes and Jingles - Those who might not otherwise remember the value of pi to 21 places may find it easier to remember the following ditty, "How I wish I could recapture pi. Eureka! cried the great inventor. Christmas pudding, Christmas pie is at the problem's very center." Can you guess how this strategy works? Each word in the jingle corresponds (by number of letters in it) to the next number in the pi sequence: 3.141592653589793223846 (i.e., 3 = how; 1 = I; 4 = wish). A teacher I knew told me the only way she eventually learned her times tables (in Junior High School) was when her remedial math teacher attached a rhyme to each equation (i.e., 6x4 is 24, shut the door and say no more).

Your Turn - Can you develop a mnemonic device to remember the following metric equivalencies? 1 inch = 2.54 cm, 1 foot = 30.48 cm, 1 yard = 0.9144 m, and 1 mile = 1.6093 km

Foreign Language Vocabulary

Keywords - The Japanese word for "You're welcome," pronounced "do eTASHeMASHta" sounds like the English phrase, "Don't touch the mustache." Any vocabulary word can be remembered by using this technique. Break the word down into syllables, then create a word or phrase that either sounds like the word you want to remember or that can be imagined in visual terms. The Hebrew word for good-night is "lila tov." When reduced to its two syllables, the word can be cued into your memory as lullaby (lila) time (tov).

Acronym **-** The acronym "MRS. VANDERTAMP" has been used to help French students remember most of the verbs that are conjugated with the helping verb "to be": **M**onter, **R**ester, **S**ortir, **V**enir, **A**ller, **N**aitre, **D**esendre, **E**ntrer, **R**entrer, **T**omber, **A**rriver, **M**ourir, and **P**artir.

Your Turn **-** What strategy might you use to remember the following Spanish phrase: "Yo te quiero con todo mi corazon," which means I love you with all my heart.

Reading and Comprehension

Visual Imagery **-** When reading, visualize yourself saying what you are reading to an audience. This technique helps you to stay mentally focused. When you come to material that is difficult to understand, imagine yourself as a student asking for clarification or rephrasing the material to make sure you've understood it. Jot down notes in your mind's eye. Form mental pictures of key points and link them in ludicrous (memorable) images that form a story.

Your Turn **-** As you read the following Memory-Enhancing Study Tips, imagine you're a teacher reading the list to a classroom of students. Think about how you might help them to remember all thirteen tips.

Memory-Enhancing Study Tips

- Make a realistic commitment to studying; create a timetable for yourself and stick to it until it becomes a habit.

- Divide the learning into short chunks of time followed by some downtime after each study session; avoid all-night cramming. You'll learn more in fifteen minutes of concentrated study than in sixty minutes of distracted study.

- Recall is naturally highest at the beginning and end of a session, so pay particular attention to the middle of a lecture, chapter, or paragraph. Many textbooks are written with this principle in mind.

- Make sure that you're not hungry when you sit down to study; but also avoid a high-carbohydrate meal just beforehand. A good pre-study session meal is high in protein, but overall moderate calories.

- Since learning is enhanced when you're relaxed, take some time before you start studying to stretch, walk, or meditate—whatever relaxation techniques work best for you.

- Study in a comfortable space with good natural lighting (if possible).

- If you're studying a new subject, do a survey of the topic first so you can see how the parts relate to the whole before diving in. If the assignment requires reading a textbook, for example, review the introduction, table of contents and chapter previews and summaries.

- Active learning helps sustain your concentration, so take notes, self-test, ask questions, make a crossword puzzle, meet with a study group, and highlight key points. Write a brief outline in your own words or make a mind-map of the most pertinent points. Learning through passive absorption is much slower and less interesting.

- To strengthen your memory of the material, ask yourself how it relates to prior learning; seek associations with information you've already committed to memory.

- If you're writing notes about the material, be sure to write them in your own words; in this way, you are assessing your own understanding of the concepts.

- Slow down when you come across material that is difficult; resist the temptation to give up. Instead, reread it, move on, and return to it later to see if it makes more sense subsequently.

- Review main concepts every ten minutes; then again after one day, and again after one week. The review process is extremely important for encoding information in long-term memory. For a reading review, reread first and last sentences in each section, as well as the table of contents, chapter summaries, etc. As you come across keywords, see if you can reconstruct from memory what you learned about them.

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THE BRAIN STORE

The Engaging Classroom:
Discipline Made Easy

Nothing is more absurd than to suppose there is no middle ground between leaving a child to his own unguided fancies and likes, or controlling his activities by formal succession of dictated directions.

—John Dewey
The Child and the Curriculum

e-Booklet Preview:

Discipline Can Be Simple

For many teachers, discipline is their number-one classroom challenge. Perhaps that's why you're reading this booklet. An important understanding, however, is that student discipline and/or management problems are usually symptoms of mismanagement elsewhere. When other aspects of the teaching process are handled well, discipline is usually reduced to a minor concern. This doesn't mean you won't have a few exceptions, but for the most part, your students will be cooperative, polite, motivated, and responsible.

Problems Are Just Symptoms

Discipline issues are not the real problem. In fact, you could consider them a gift. If you went to a physician for an annual examination and your doctor said you have a calcium deficiency, would you be mad at the messenger? Of course not! When a student misbehaves, he or she is communicating with you that something is wrong. Perhaps the child is distressed over a matter outside of school, but often the problem is related to the school or classroom environment itself. And this you have substantial control over. Although, you might be thinking, "No, the student has a character defect." The reality is you can influence their character. In fact, that may be one of the important aspects of your role as a teacher.

The teacher who maintains the mentality of the "helpless victim" does nothing to resolve student discipline issues. Take a closer look at the environment you have established. Do learners feel safe, empowered, and engaged? Students who "act up" are not presenting a problem; they are simply providing you with feedback that may be essential to yours and their success. Have you ever watched a baby play? Learning and curiosity are natural human states. When curiosity is aroused, all of our senses become attentive to the task at hand. We get absorbed to the point where nothing else seems as important. When students are in this mind state, discipline takes on a whole different meaning—one of positive reinforcement—and learning happens naturally. In an ideal classroom, discipline problems virtually disappear.

No Such Student as a "Troublemaker"

Now you might be thinking, "All this sounds fine, but you haven't met so and so!" There's no doubt that some students may be acting out due to issues or influences beyond your control. The reality remains, however, that while the learner is in your classroom, you are their primary influence. Students don't get up in the morning thinking, "How can I be a real jerk to my teacher today?" All behaviors are state-related; and states can be managed and changed.

Using a label to describe behaviors represents an injustice to everyone involved. There are no unproductive people, only unproductive behavioral states. To change the behavior, change the learner's state. In other words, your students all have the capacity to act appropriately, but sometimes they access an unproductive state. Simply put, your job is to minimize the negative states, while maximizing the positive ones.

No Tips or Tools Will Replace Your Own Growth

Another assumption is that all a teacher needs is a few tips, tools, or techniques to manage the classroom effectively. All the tips and tools in the world won't work if you don't deal with your own biases and bad habits. Private victories always precede public victories. Learn to deal with your own "dark side" before you start telling others how to deal with theirs. Getting frustrated with life, a situation, or a student does not give you the right to be rude, disrespectful, or hurtful towards others. Find productive outlets for your stress, just as you would encourage your students to do. As you take steps towards mastering your own learning and behavior states, you automatically reduce your own classroom management problems.

When problems occur, it is most productive to do some soul searching. Think about how you might be co-creating the problem. If you operate from this framework, you won't be so tempted to dismiss problems as a result of "those trouble-makers." This is not to say that all students are perfect angels. Of course their not. But to discover what change might be useful and to mobilize resources, we need to accept some responsibility for the problems.

Teachers who have mastered the art and science of classroom management don't necessarily all do the exact same thing. There are many different ways to be successful. Some follow a system; others say "do whatever works." What is most important when dealing with these issues is that you maintain an atmosphere of love, consistency, and integrity. Students need to know that they are good despite their challenging behavior—that it is their behavior that is unacceptable. Ground rules and boundaries need to be very clear and consistent. A definite framework for acceptable behavior needs to be put in place early on. Finally, students need to know that you will keep your word and honor their perspective. This sets the example for them to do the same and will reduce resentment that leads to discipline problems.

Conventional methods of discipline will fail and fail consistently because they don't provide the student with additional resources or choices. In other words, telling a student to quit doing something does not empower him or her; it only limits, negates, and frustrates them. And it ignores the root of the problem.

Premises of a Positive Discipline Philosophy

Classroom discipline is only effective over the long term when it supports the dignity of the student. Build the learner's self-esteem, rather than suffocate it. Many students have been taught that getting mad is not an option; so instead, they get even. Your job is to expand students' choices, not shut them down. To accomplish this goal you must be flexible with learners and discover what needs of theirs are going unfulfilled. Dovetail your desired outcomes; find common ground; then design a management strategy based on these positives.

Disruptions Are to Be Expected

Disruptions are normal to the classroom and life; therefore, treat them as enjoyable challenges and sources of curiosity. When you role model this attitude, the message you send students is, school is real life! And, the reality is that it is easier to adapt to the world than to expect the world to adapt to us.

The Classroom Is a "Learning Environment"

The classroom is a learning environment that requires occasional discipline, not a disciplined unit where learning better occur or else! The least productive environment for learning is high fear, high stress. The optimal learning state is low stress, moderate challenge. The message this gives students is, school is about learning!

Students Are All Basically Good

Students are just trying to manage their daily lives the best they can. None of us live in a perfect world. The younger the child, the fewer the resources and effective coping strategies they'll have for dealing with problems. Like you, students have normal concerns and the need for some sense of control, attention, and love. The message this attitude sends is, you and I are both good people, and I respect and appreciate you.

The Best Discipline Is the Kind Nobody Notices

The less students are aware they are being disciplined, the better. Keep the focus on learning by managing states and providing plenty of novelty and diversity. The more outraged you become about discipline problems, the more they occur. If you're upset, who's in control? Remember this: "Where the attention goes, the energy flows!" Keep your attention focused on the joy and excitement of learning. The message this gives to students is, the teacher has things handled.

It's Not "Your Class"; It's the "Group's Group"
Each class has it's own culture and students act according to these spoken and unspoken rules. Formal rules are just one aspect of the classroom culture. Consider who the group leaders are and work to understand the culture they are helping to establish. If you over-exert or abuse your power, the dictates of psychology tell us that the group will eventually sabotage your efforts. Position gives you power, but it does not give you permission to ignore or disregard the needs and feelings of others.

Problems Are Usually Spontaneous Expressions
Problem behaviors originate in the brain (the midbrain, amygdala, and frontal lobes). Respond to problems from the vantage point of the student. Use lectures and left-brain discussions of rules only as a last resort. The message this gives to students is, I have compassion for your feelings, and I respect them.

Six Models of Discipline
There are many ways to approach the issue of discipline. The strategies that you use are an extension of your personal beliefs. The following models reflect an evolution of discipline approaches from least effective to most effective. The most effective model will be easy to use, will have long-term value to students, and will keep the emphasis on learning rather than intimidation or fear.

1. Behavior Modification
This is an orderly approach based on the sequence: identify, reward, and/or punish. This discipline method keeps track of student behaviors and attempts to control them.

2. Personal Influence
This approach is based on teacher-student relationships. The emphasis is on positive respectful interactions. When behaviors need to be modified, the teacher appeals to the student's natural tendency to want to maintain the positive relationship and on the mutual trust they've established.

3. Logical Consequences
In this approach the teacher helps students to understand the impact of their behavior on others. The student is encouraged to explore positive alternatives. The teacher maintains a high involvement role.

4. Self-Awareness Training
With this approach the teacher trains students to observe their own behaviors so that they begin to become aware of they're unproductive states and alter them as necessary. The teacher's role is active at first with a tapering off of help as students gain mastery.

5. Cooperative Discipline
This approach uses the combined influence of groups and teams and the student-teacher relationship. It emphasizes prevention and group norms.

6. Brain-Based Discipline
This approach emphasizes student choice in learning and managing states. It is an "Invisible discipline" technique where changing activities, and giving students appropriate emotional and linguistic expression are the norm. The following suggestions reflect a brain-based approach to discipline:

33 Brain-Based Ways to Prevent Discipline Problems

1. Limit the amount of focused, directed learning time; and switch activities frequently. To determine the suggested learning time per activity, use the relative age of the students in minutes to a maximum of 20. For example, with an eight-year-old student, teach in a directed, lecture-driven manner for a maximum of eight minutes. Then, move to a more diffused activity like group work.

2. Use low-level baroque music in the background to soothe and inspire. Good choices include Handel's "Water Music," Vivaldi's "Four Seasons" and Bach's "Brandenburg Concertos."

3. Create more "W-I-I-F-M" for the students: (What's in it for me?). Have them generate reasons to do things. Ask them what they want to get out of the learning.

4. Make sure your rules are fair, purposeful, and enforceable—the fewer, the better. Explain to students the reason behind each of them.

5. Put students in cooperative groups or teams (with accountability!). Use groups as a source of fun, socialization and positive peer pressure.

6. Make positive contact with each of your students within the first five minutes of each class. Also, connect with parents regularly, if possible. Don't only talk to parents when you have a problem.

7. Boost the ways students can have more input in the classroom. Provide designated question time, seek their input, and install a suggestion box. Respond to suggestions in a timely manner.

8. Provide more outlets for auditory expression: affirmations, group or team time, discussion, cheers, sharing.

9. Let students play the "what if" game to make rules concrete, to find exceptions, role-play or brainstorm.

10. Make the classroom more interesting. Change the bulletin boards and peripherals frequently. The room ought to look busy, colorful, fresh, challenging, and relevant.

11. Anticipate and respond swiftly to student states. Know that frustration often leads to states of apathy, anger or revenge. Make state management a number one priority to prevent problems.

12. Build rapport with students—both verbally and non-verbally. Start with those you relate to least. Know the tendencies of auditory learners who tend to talk a lot and mis-matchers who accidentally disrupt class in an attempt to learn. They're often pointing out what's "off, different, missing or wrong." Use non-verbal signals with them to prevent the disruption of the class.

13. Incorporate movement and physical activity into every hour of class time (i.e., Simon Says, hands-on, stretching) or switch activities.

14. Reduce your own stress level. Incorporate regular activity that energizes you and balances out the workload.

15. Work towards progress in areas related to your personal goals (i.e., parent communications, improving administrative policies, or staff communications).

16. Give clear mobilizing directions to students. Make them consistent; re-check for understanding; then use a congruent call to action.

17. Give students more control over their learning through choice (i.e., ways to do things, topics, rules, time, partners, scoring, music, etc.).

18. Get parents involved in your discipline program from the very start of the year. Send the plan home and seek agreement.

19. Have lunch with a student to build or maintain a relationship with them.

20. Incorporate "multiple intelligences" in your lesson planning. Make sure that when you plan out your week, you have covered all of the seven intelligences.

21. Provide outlets for students to talk about the things that are important to them. Use discussion time, sharing circles, partner or buddy time.

22. Encourage students to write a monthly letter to you; and write them a response.

23. Role-play out discipline problems; discuss positive reactions and responses versus negative ones.

24. Set up student teams or sets of partners to help learners monitor each other and learn from one another.

25. Be consistent and fair so students know it's worth following the rules.

26. Know when it's time for a whole class break (to go outside or change plans).

27. Let students know you care by attending some kind of outside of class activity that they're in, like a sporting event, a play, a civic event, etc.

28. Manage the group's leaders so they'll set the cultural standards for the group.

29. Develop Sensory Acuity. The periphery of your eye is physiologically built to detect movement far better than the fovea centralis or center of your eye. The way the eye is constructed, you can gather most of the data you need between a forty-five and a ninety-degree angle. Surprising? You can detect movement, facial responses, and changes in breathing on a subconscious level when you learn to trust this ability. Here are a few other ways to "keep an eye out":

• Regularly, but politely, break eye contact when talking to an individual so that you can scan the room. Listen for unusual sounds and notice sudden movements. Present what you see (i.e., “Johnny, I see that you’re tipping back in your chair, a dangerous activity.) This keeps students accountable.
• Learn to make productive use of “dead time” or transition times. For example, collect or pass out papers while students are engaged in a learning activity. Otherwise, dead time is an opportunity for learners to act out and fall off task. You can always provide a stretch break or team discussions while conducting “house cleaning” activities.
• When you sense restlessness, give the group a short break. Have them stand up, inhale, hold their breath for a few seconds, and exhale. Then do some stretching or just a few quick movement exercises to get the circulation going again. Use that time to figure out how you can make the adjustments in your lesson to make learning more valuable, useful, fun or relevant.

30. Include Everyone. Most teachers teach to a minority of the students. Give your presentation three or four very different ways so that it reaches more types of learners. Provide an auditory explanation; demonstrate in a visual way; then offer a kinesthetic opportunity for learners. This means that you will be giving directions several different times, different ways, even with a higher or lower voice to ensure everyone gets it.

31. Increase Predictability. Erratic behavior can be caused by anxiety, confusion, and lack of clarity. Structure, ritual, and predictability are extremely important. Students like to know what to expect.

• Build in your own ritual. For example, when you are giving directions, always use the same explanatory pattern. It might be that you first provide a verbal explanation, then show visually, then demonstrate, then repeat the instructions, and, finally, post them. This way students learn quickly to pay extra attention during the part of your presentation that matches their dominant learning modality.
• Post schedules. This reduces classroom confusion. A surprising amount of noise and upsets occur over students not knowing what to do.
• Provide a variety of options within a predictable structure.
• Learn to systematically use non-verbal communication to support your verbal messages. The systematic use of non-verbals is an important element that reduces discipline problems and a minority of teachers use it well.

32. Create Rapport.. Webster's defines rapport as "a relation marked by harmony, conformity, accord, or affinity." Do you have this kind of relationship with your students? There are many ways to develop rapport as reflected below:

- Match language-style with learners. For example, if they use a visual predicate (i.e., an eyeful), you use a visual predicate in response (i.e., looks like).
- Match the superlatives that they use. For example, words such as "good, great, excellent, super, or fabulous," are all words that form parts of people's language patterns. Use the same words your students use. Particularly, build relationship with the class leaders. Once you have a relationship with them, the rest of the class often follows.
- Match body movements. Adjust your body to match stance, posture, and gestures of your students. Match their expressions—eyebrows, mouth, nose, smile, or their angle of leaning. Match the tone, tempo, intensity and/or volume of their voice.
- You may also increase rapport by discussing, referring to or simply mentioning things that are a large part of your student's world. It may be an upcoming exposition, a rock concert, a holiday, a symphony, a movie, the weather, clothing styles, movie or TV stars.
- You may also do cross-over mirroring. This is when you use one activity to match a different activity with another. For example, pace a student's eye blinks with your finger tapping or foot tapping or pace the tempo of their voice by scratching or nodding.

Once you've established a good rapport with learners, you'll find them more willing to follow you. You'll have more influence with them, and discipline problems will naturally decline. Of all the tools that help to reduce discipline problems, establishing rapport is certainly one of the most important.

33. Warm the Classroom Climate. Another way to reduce discipline problems is to change the way that you allow yourself to experience others. Avoid seeing students as a problem and start seeing your students as grand possibilities. Refuse to call anyone in your class a "trouble-maker" or "bad kid." Rather, refer to your students as "pending miracles" (ones you haven't reached yet, but will).

Think about it. Anytime you've been in a position in an organization where you felt powerless, didn't you withhold information that could have been useful to the hierarchy? Of course! It was the only way you could feel a sense of power. Discipline problems are reduced when we understand this essential "power game" and learn how to meet the needs of our students. The way to "win" the

power game is to give away enough power so that others don't resent you or want to take it from you. Quite simply, when we empower individuals they don't have to compete with us for their share of power.

In Another World

Before you discipline students, remember they live virtually in another world. They are separate from you by age, income, biology, social status, experience, and possibly, culture and gender. Their time-reference may be different, too. We are all referenced to a primary time-status: past, present or future. Students that you label "negative," "undisciplined," or "lazy" may, in fact, be operating under a different biological clock or circadian rhythm. For example, if your so-called "problem student" is constantly late, it may be because they are present referenced. This means that decisions are made which indicate a primary concern for "How am I feeling right now?" A present-referenced student might be out in the hallways or lockers talking to friends all the way up until the bell rings, then arrive to class late. While being focused "in the moment" of the present, they forgot to focus on where they were supposed to be in the very near future (like in class).

This student is not motivated by future rewards (or punishments). They will do their homework if (at the moment they get around to it) they feel like it. Hence, this student is more fun, enjoys spontaneity, lives in the moment and is unpredictable. It would be a mistake to call them "unmotivated or "apathetic." They simply don't relate to the future like some others do.

Using Rules, Guidelines, and Agreements

Setting limits and consistently enforcing them gives students a sense of stability, structure and self-esteem. Students with clear guidelines seem to behave better. Make a clear distinction, however, between rules, guidelines, and agreements.

Rules

According to Webster's dictionary, a rule is the exercise of authority or control; prescribed guides for conduct or action. Notice that this definition says nothing about mutually agreed upon standards. Instead, it is the imposition of authority or control. In practice, this definition works best for rules that ensure the safety of others or of property. Examples include laws, truancy, profanity, dress codes and health standards. Students don't get to have a lot of input in these areas. The rules are the rules.

Guidelines
A guideline is an indication of policy or conduct. Notice that a guideline itself is not a rule, it merely indicates a rule. This gives a lot of leeway in the interpretation and how it's treated in various situations. Examples might include politeness, noise levels, or ways to get the teacher's attention.

Agreements
An agreements is a harmonious accord on a course of action. Notice that the key word in this definition is harmonious. It implies that both parties, of their own free will, agree upon a common code or plan of behavior. With agreements, you and students decide on a behavior code, seating plan, homework policy, evaluation standards, or class procedures.

Make sure that you make these distinctions for students and provide time to discuss the definitions and their implications. Once you have explained the rationale for them, most students will stop testing the boundaries, provided you enforce them consistently.

Getting Classroom Agreement
Your students may be ready to help you with the rules. You might say, "Since we want to have our class work well, where everyone is safe and respected, and where we can do our best learning, let's all agree on some guidelines. Any suggestions?" Hold a discussion; make it democratic to the degree that it is appropriate. Break down guidelines in the following way:

- The agreement
- The reason for the agreement
- Any exceptions to the agreement
- The consequences for breaking the agreement

Once you have had a thorough discussion on the agreements, seek consensus. An easy way to do this is to ask for a show of hands if in favor of the agreement, and then if not in favor of it. Process any disagreements. Once arguments and concerns are heard and agreements are established, post them on the classroom wall for everyone to see.

Suggested Agreements

Time

Each student agrees to be seated on time (as determined by the classroom clock) for the start of class or the resumption of class after a break. In other words, each student agrees to arrange their circumstances so that they can be on time.

Safety and Respect

Students agree to listen to the person who has the floor. Each student agrees to treat others and all school property safely and respectfully.

Support Learning

Every student will have the opportunity to learn; and will allow others to learn without disruption.

Classroom Care

Students agree to maintain a neat classroom, to pick up after themselves, and to keep their own desk area organized.

Speak from Your Own Experience

Students agree to use "I" messages and withhold blaming tactics. Rather than a student saying, "That guy's a real jerk," teach learners how to own the statement. For example, "I don't like him," or "I can't get along with him."

What to Do When Agreements Are Broken

The following suggestions reflect a four-level framework for dealing with problems in the classroom. Hopefully, through prevention, you won't have to resort to using them. However, if problems do occur, handle them immediately. Do not compromise or make liberal concessions. The suggestions below are categorized from level one—how to deal with minor infractions, to level four—how to deal with severe infractions.

Level One: Invisible Action

In dealing with a minor infraction, take invisible action. Handle the behavior by affecting a change in the student without being explicit about it.

Examples of invisible action techniques:

- Create novelty; switch activities.
- Ask everyone to take in a slow deep breath.
- Shift the tonality of your voice.

• Change the music.
• Switch your location in the room.
• Do a stretching break or "Simon Says" game.
• Have the class give a "partner-to-partner" affirmation.
• Call on the person next to the student at issue. This usually brings their attention back to the room.

Level Two: Handling the Problem, Not the Person
In dealing with this level of infraction, the group will probably realize that you're doing something to quiet them down, but no one feels singled out. Continue the class as usual. The following strategies get the job done and still avoid the "bad dog" or "shame" approach:

Examples of handling the problem, not the person:
• Name dropping; incorporate three or four student's names in a sentence to personalize the learning.
• Use variety of "shhh" like, You "ssssshhhould all be listening right now."
• Give a gentle touch on the shoulder.
• Proximity; stand near the student(s) who are at issue.
• Make your facial expression one of curiosity.
• Change the pace or activity in the room.
• Ask team/group leaders for help.
• Refer to team class charts.
• Send the student on an errand to another part of the school (make prior arrangements for this, if necessary).
• Give the student a special class job that encourages them to stay engaged, rather than distracting others.
• Admonish the object of distraction instead of the student. For example, say, "This is the noisiest pen I've ever heard. Can you keep it under control, otherwise, I'll have to put it in the bad pen box over there?" This way, the pen is the problem, not the student.
• Tell or read a story and fluctuate the volume of your voice to maintain student attention. Make eye contact with students, as you tell the story.
• Use a quote to release frustration or edginess. For example: "I ran into someone today who was so angry, you know what he said? He said, 'I'm furious! I'm madder than heck and I can't take the noise any more!" Boy, he must have been mad. Can you imagine someone being that mad?"
• If you cannot change the state of learners using the above suggestions, you can resort to using the "Hot Spot" approach. With this technique, you go to a particular corner of the room (a change from your normal position). When you

move to spot students will know you mean business. Be firm and to the point. Make eye contact; use predictable gestures and the same key phrase each time (i.e., “Boys and Girls!” or “Exxcuuuse me!”). Then walk back to front of room and continue teaching without sermonizing or lecturing. Do not overuse this approach or it will lose its effectiveness.

Level Three: Student Choice Point

In dealing with this level of infraction, the emphasis is put on individual responsibility, privilege, and consequences. Avoid useless threats you may not want to follow through on. Be straightforward, friendly and matter-of-fact. Use eye contact, ask student to simply choose a behavior and be prepared for the consequences. For example, “Kim, you’re a responsible person - hold it down for the next 10 minutes and we’ll both be happy.” Or, “Kenny, by keeping your hands to yourself, we can finish without interruptions and leave on time.” Or, “Can you keep it down for the next few minutes? Otherwise we need a serious talk.”

Level Four: Safety Jeopardized

At this level, the infraction is severe or consistent. Some learners are motivated more strongly by negatives. Uncover the underlying cause of the behavior and decide a long-term approach for dealing with the issue(s).

Examples of safety jeopardized responses:

• In a private discussion with the student, describe the behaviors and the impact of those behaviors on the class. Describe how you feel about it. Ask the student for possible solutions or input. Propose what you think might be some possible solutions. Offer counseling or a parent meeting. Create agreements that you can both live with; take action to initiate them.

• Meet with parents to determine if the student has been experiencing a major loss or change in his/her life. For example, parent’s divorce, loss of a friend, or excessive stress or pressure. Create agreements; take action to initiate them.

• Take strongest measures for repeated, dangerous, or special circumstances. Insuring a safe and productive learning environment for your class is of utmost priority. Seek help.

When a Problem Occurs

Get Centered

Pause, take a breath and relax. Anticipate a positive outcome and visualize a successful resolution for both parties.

Do Not Be Confrontational
Simply get the job done with minimal fanfare. The bigger the deal you make, the more you lose. This is not a time to win or "nail" someone. It's simply a way to get the class's energy off the distraction and focused back on learning.

State the Facts
Reserve judgment and simply express in a concise manner the specific concern you have regarding the learner's behavior. Avoid using your feelings to manipulate the student. Comments like, "you make me so mad" are damaging and inappropriate. Nobody else is responsible for your feelings but you. Students might trigger a stimulus-response mechanism in you that allows that emotion to occur, but your internal mechanisms are yours.

Your classroom may not be perfect. Optimal learning, joy and bliss may not be maintained 100 percent of the time, but then life isn't meant to be perfect. Remember that problems are opportunities for growth. Use your resources to create a well-balanced classroom where students feel safe and trust you. When you develop rapport with your students, they will be willing to abide by the agreements you make together. Having students manage themselves is certainly the ultimate sign of teaching success.

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