

acronym stands for an entire phrase: “Not In My Back Yard!” As you can see, some acronyms stand for words or phrases that have to be in a certain order, and some do not.

An interesting twist on acronyms is one named for a real person, Dr. Virginia Apgar, the American anesthesiologist who designed the index for rating newborn babies. Healthcare professionals often remember the assessment for newborns this way:

Appearance (color)

Pulse

Grimace (response to stimuli)

Activity (muscle tone)

Respiration

Although acronyms can be very useful memory aids, they do have some disadvantages. First, they are useful for rote memory but do not aid comprehension. Be sure to differentiate between comprehension and memory, keeping in mind that understanding is often the best way to remember. Some people assume that if they can remember something, they must “know” it, but as we saw in Jack’s case, memorization does not necessarily lead to understanding.

A second problem with acronyms is that they can be difficult to form; not all lists of words will lend themselves equally well to this technique. Finally, acronyms, like everything else, can be forgotten if not committed to memory.

Creating Acronyms

Since you can create an acronym for just about anything you want to remember, you can use acronyms to help you recall the material you are studying for just about any quiz or test. Even though it will take you a few minutes to create an acronym, the extra effort pays off during exam time when you are able to retrieve crucial information.

Follow these steps to create your own acronyms:

1. Choose a particular list of terms you want to memorize or a number of steps in a process you want to be able to recall.
2. Write down those terms or steps on a sheet of paper.

3. If the order of the terms or steps is not essential, consider rearranging the terms.
4. Be creative in finding one or more words that consist of the first letters of the terms or steps in your list.
5. Pick the acronym from your brainstorming that you are most likely to remember based on your own experience, memory, and knowledge. CLUE: *Link what you know to what you need to remember.*
6. Arrange the terms you want to recall in the order of your chosen acronym. Highlight or underscore the first letter of each term so when you review, it will be easier to see the acronym.

Once you invest the time in creating acronyms, review them often. You can rewrite them or read them aloud. Study your acronyms over and over until they become familiar friends. The same may be said for *acrostics*.

ACROSTICS

Another type of mnemonic is a silly sentence or phrase, known as an **acrostic**, which is made of words that each begin with the letter or letters that start each item in a series you want to remember. For example, “Please Excuse My Dear Aunt Sally” is a nonsensical acrostic that math students use to remember the order of operations:

Please **E**xcuse **M**y **D**ear **A**unt **S**ally =
Parentheses, **E**xponents, **M**ultiply, **D**ivide, **A**dd, **S**ubtract

Here’s another example of an acrostic. To remember the letters of the notes on the lines of the treble clef (E, G, B, D, and F), music students often recite this acrostic: **E**very **G**ood **B**oy **D**oes **F**ine. (The notes on the spaces between the lines form the acronym **FACE** for the musical notes F, A, C, and E.) Can you think of other examples?

Like acronyms, acrostics can be very simple to remember and are particularly helpful when you need to remember a list in a specific order. One advantage of acrostics over acronyms is that they are less limiting; if your words don’t form easy-to-remember acronyms, using acrostics may be preferable. On the other hand, they can take more thought to create and require remembering a whole new sentence rather than just one word. Otherwise, they present the same problem as acronyms in that they aid memorization but not comprehension.

Elaborate Acrostics

Some word-loving people make up very elaborate acrostics, even using more letters than the first letter of each word. Lyla invented this amazing acrostic to recall the five phases of mitosis in biology (metaphase, prophase, prometaphase, anaphase, telophase):

METAman **PRO**posed **PRO**fusely to **ANA** on the **TELO**phone!

METAphase

PROphase

PROmetaphase

ANAphase

TELOphase

Can you see that the following clever acrostic reminds us how to move up the scale of metric prefixes, from the basic unit to larger units?

Decadent Hector Killed Meg's Gigantic Terrier!

Decadent	Deca	10
Hector	Hecto	10 ²
Killed	Kilo	10 ³
Meg's	Mega	10 ⁶
Gigantic	Giga	10 ⁹
Terrier	Tera	10 ¹²

Remember that you will have an easier time memorizing an acronym or an acrostic that you can identify with, are interested in, or that you find humorous. So, take the time you need to come up with something memorable. Why don't you give it a whirl? Invent an acronym or an acrostic for these seven mnemonic devices: acronym, acrostic, rhyming, chunking, linking, place, peg.

RHYMES AND SONGS

Janine writes in her lecture notes "A pint's a pound the world around," a rhyme that will remind her that a pint of water weighs one pound when test time comes around! **Rhythm**, **repetition**, **melody**, and **rhyme** can all aid memory. Do you remember these favorite learning rhymes? Did you learn any others?

- In 1492, Columbus sailed the ocean blue.
- Thirty days hath September, April, June, and November.

Are you familiar with Homer's *Odyssey*? If so, you know that the epic is very long. That is why it is so remarkable that the *Odyssey*, along with many ancient stories, was related by storytellers who relied solely on their memories. Even in modern Africa, family historians called *griots* recite hundreds of years of ancestors' names from memory! The use of rhyme, rhythm, and repetition are essential to these ancient and modern storytellers.

As a child, you probably learned your ABCs to the tune of "Twinkle, Twinkle, Little Star." We have even heard of one algebra student who demonstrated how she memorized the quadratic formula (notorious for being long and difficult to remember) by singing it to a familiar tune!

Using these techniques can be fun, particularly for people who like to create. Rhymes and songs draw upon your auditory memory and may be particularly useful for those who can learn tunes, songs, or poems easily.

CHUNKING

Chunking is a technique used to group or "chunk" items—generally numbers—together for better recall, although the process can be used for recalling other things too. It is based on the concept, mentioned earlier, that the average person can store about seven items (plus or minus two) in his or her short-term memory. Have you noticed how many digits local phone numbers have these days?

When you use chunking, you decrease the number of items you are holding in your memory by increasing the size of each item. For example, to recall the number string 10301988, you could try to remember each number individually, or you could try thinking about the string as 10 30 19 88 (four chunks of numbers). Instead of remembering eight individual numbers, you are remembering four larger numbers, right?

As with acronyms and acrostics, chunking is particularly meaningful when chunking has a personal connection. In our number string, Karl might make two chunks, 1030 and 1988, because he sees that the first chunk is the last four digits of his zip code and the second is his sister's birth year.

MINDBENDER

Go Ahead—Play with Your Words!

Word games—such as puns, spoonerisms, and quips—can help you remember facts, as well as “limber up” your brain. For instance, when you need to memorize vocabulary or names, you can make a play on words that will attach the word or name to your long-term memory. Some examples follow.

1. To remember the word *pessimist*, make a pun: *A pessimist's blood type is always B negative.*
2. To recall what *egotist* means, put it in a playful context: *When two egotists meet, it's an I for an I.*
3. To remember what the scientist Pavlov did, make a quip: *Does the name Pavlov ring a bell?*

THE POWER OF VISUALIZATION

One powerful way to make a strong connection between facts and long-term memory is to visualize, or create pictures of, what you want to learn. Remember, *you will understand and retain new information more readily if you creatively connect new, unfamiliar material to something that is already familiar to you.* Think of these connections as individual strings tying each new fact or idea down in your brain. When you make several connections to a fact or idea, you create several strings to tie it down in your mind. Since one string can be easily broken, the more connections you make, the better. You want to create enough strings to firmly anchor information in your memory. (By the way, you just used visualization to absorb a concept!)

The key to making strong connections is to create vivid mental pictures of each specific incident that relates to each term (or fact or formula) you want to recall. Here's what to do:

1. Spend a few minutes with your eyes closed, thinking about each term, to create a strong mental image.
2. Fill in the details in your mind's eye.
3. Involve as many senses as possible to create truly memorable connections.

You may find that this strategy works better when you use it to study and recall main ideas, rather than smaller details about a topic. That's because the more detailed the information you want to recall, the less likely you are to know of a specific case you can connect it to in your own experience. Using the steps listed earlier, you could create mental images of past events to remember the four ways that poisons enter the body.

However, to recall more detailed information about poisons, you may want to employ another study strategy. For instance, you could use flashcards to learn how a first aid worker can reduce absorption of a poison (induce vomiting using syrup of ipecac, pump the stomach, or administer activated charcoal). In other words, you can mix strategies—whatever works for you.

Harnessing the power of visualization helps you be creative when thinking about your study material. Now, let's examine three additional memory techniques where visualization plays a vital role: the place and peg methods and linking.

THE PLACE METHOD

One of the oldest mnemonics that is still in use today is called the *method of loci*, which was first recorded over 2,500 years ago. This technique was used by ancient orators to remember speeches, and it combines the use of organization, visual memory, and association. Today it is often called the **place method**. The first step in using the place method is to think about a place you know very well, perhaps your living room or bedroom. Think of a location that has several pieces of furniture or other large items that always remain in the same place. These items become your *landmarks* or *anchors* in the place method mnemonic. The number of landmarks you choose will depend on the number of things you want to remember.

You need to know where each landmark is in the room, and when you visualize walking around this room, you must always walk in the same direction (an easy way to be consistent is to always move around the room in a clockwise direction or from the door to the opposite wall). What is essential is that you have a vivid visual memory of the path and objects along it.

The next step is to assign an item that you want to memorize to each landmark in your room. An effective technique is to visualize each word literally attached to each landmark. Here's an example of

how one physical education student used the place method to remember the nine positions in baseball. This example uses landmarks in the student's bedroom.

Place Method Sample

Landmark Position

- | | | |
|----------------------|---|-------------------|
| 1. doorway | → | 1. pitcher |
| 2. chair | → | 2. catcher |
| 3. TV stand | → | 3. first baseman |
| 4. vase with flowers | → | 4. second baseman |
| 5. nightstand | → | 5. third baseman |
| 6. bed | → | 6. shortstop |
| 7. closet | → | 7. left fielder |
| 8. bookcase | → | 8. center fielder |
| 9. table with skirt | → | 9. right fielder |

Our student might imagine each baseball position written on or attached to each landmark. Or imagine each player connected to each landmark in some way: The pitcher is blocking the doorway, chewing gum and tossing the ball into his glove, and the second baseman is holding the flower vase with a number 2 on it.

To make the place method work, you must first study and understand each item you want to remember, so you can visualize it and directly link it to the right anchor in your chosen place. The more vivid—even bizarre—your visualization is, the stronger the connection will be between the material and the landmarks that are already entrenched in your memory.

If you have never heard of the place method before, you may want to start asking servers who don't write down their customers' orders how they remember who gets what. You may find that they rely on the place method to keep track of people's orders because it works so well!

STUDY AEROBICS

1. **Repeat after me: “Repetition! Repetition!”** Mnemonic devices require active participation and constant repetition of the material to be memorized. This repetition is not passive; it is meaningful practice. Look at the list, learn the terms, attach

a mnemonic device to them, memorize, duplicate, and check your work. This process acts as a holding pattern while memory links are formed in your brain.

2. **Practice NOT cramming.** Trying frantically to learn all the material you need to know the night before your big exam can frazzle your nerves and leave you too exhausted to do your best. Besides, studies show that cramming does not lead to long-term retention of knowledge.
3. **Review over the long stretch.** Your success depends on reviewing materials often and over long stretches of time. Information memorized quickly, during a single block of time, does not stick in your mind.

THE PEG METHOD

The **peg method** is similar to the place method, but it uses numbers and a poem instead of landmarks to set vital information into long-term memory. An advantage of the peg method over the place method is that you can recall items in any order instead of having to go through the entire sequence to get to one of the items in the middle of the list.

The first step in using the peg method is to memorize this simple poem. You have to know this poem by heart so that you can use the numbers in it to anchor the new information.

One is a bun
Two is a shoe
Three is a tree
Four is a door
Five is a hive
Six is sticks
Seven is heaven
Eight is a gate
Nine is wine
Ten is a hen

The second step is to compile the list of items to remember. Then simply picture the first new term with the first word in the poem

(*bun*). Then picture the second word you want to learn with the second word in the poem (*shoe*). For example, you might use the peg method for the names of the nine planets. This table shows how you might attach the first three planets, Mercury, Venus, and Earth, to their peg words from the poem.

Peg Word Planet

1. bun → Mercury—Mercury is the hottest planet, so you imagine a baker taking a bun with “Mercury” burned onto it from an oven.
2. shoe → Venus—Venus is the goddess of love, so you envision her dressed up, in beautiful golden shoes.
3. tree → Earth—You see our planet, the only one covered in trees.

And so on, through all nine planets, visualizing something you already know about each planet and “hanging” it on the peg. Once again, the more vivid your visualization, the stronger the connection will be.

LINKING

A similar memory trick is **linking**, in which you link each item to the preceding one using flamboyant images. With practice, you should be able to link and recall many items. Let’s demonstrate with a short shopping list, noting that the principal works for a long shopping list as well.

1. ketchup
2. ice cream
3. newspaper
4. eggs
5. pork chops

Begin by associating or linking the first item, ketchup, with the store where you shop. Go ahead and do that.

Visualize your market in as much detail as you can. See the front of the building. Are there rows of shopping carts outside? How many doors does the building have? Focus on one doorway.

You must associate a bottle of ketchup with this image. You might see an ordinary bottle of ketchup on the ground outside the doorway, but this is not an image that your memory is likely to latch onto. Try this:

Visualize yourself trying to enter the building but unable to get around whatever is blocking the doorway. What is it? A gigantic bottle of ketchup. How are you going to get in to do your shopping? You'll just have to smash the bottle. See yourself getting a shopping cart and ramming it into the bottle.

Note: It is important to use as many senses as you can. Approximately 65% of us are stimulated visually, 30% audibly, and 5% kinesthetically (by touch). So you must not only see this bottle of ketchup smashing, but also hear the sound of the breaking bottle and smell the ketchup.

Now see all that ketchup oozing out of the bottle, slowly moving toward you like lava, until it finally knocks you over, covering you from head to toe. Feel the ketchup as it slowly engulfs you. Use all your senses. Do you have that image? It is an image that your memory will surely latch onto.

Next, we go to item two on our shopping list, ice cream. We must link this item to the first one, ketchup, in just as silly a way. A normal, logical association may be a bottle of ketchup on a table beside a bowl of ice cream. But that's too normal, too logical.

The ketchup has almost engulfed you, and you take a whiff as it reaches your nose. Hey, this doesn't smell like ketchup, it smells like strawberry ice cream. In fact, it is strawberry ice cream! As you lay on your back, you pluck two ice cream cones from the air, take a scoop with each, and enjoy the ice cream.

Remember, there are no rules—you can imagine and do as you please when linking, just as long as it is ridiculous. Once you have each image firmly in mind, you can let it go. You don't have to consciously associate ketchup with the store's doorway. You don't have to worry about linking ketchup to ice cream. The images will all come to you when you need them. Now, linking *ice cream* to *newspaper*:

You stand up with a cone in each hand. Next to the doorway is a newspaper box. You walk over to it and instead of inserting quarters, you shove one ice cream cone into the slot. The door doesn't open, so you squish the other cone into the slot and the door opens.

Next, we link *newspaper* to *eggs*:

The second you open the newspaper door, hundreds of eggs come flying out like in a cartoon. They hit you in the head, chest, and arms; you duck and they hit people walking behind you. You are covered in yolk and eggshells.

Now, go from *eggs* to *pork chops*:

Just as the last egg has shot out of the box, you tentatively look inside. Suddenly, the huge head of a pig pops out from the newspaper door opening.

He slowly and noisily squeezes himself out and lands on the ground in front of you. This is one big, smelly pig!

That's a sample of five items. Now, forget about these associations and count to 60. The counting forces you to take your mind off of the items on the list. But if you successfully formed the images of the shopping list as described, you will still be able to recall them. Let's prove it.

Now, fill in the five-item shopping list:

1. _____
2. _____
3. _____
4. _____
5. _____

Did one image spark off the next? If you can recall 5 items with this method, you can just as easily recall 15 or 25. The length of the list isn't important. What matters is the strength of each link in the chain. As soon as you form a link between two items that isn't nonsensical, the list may break down.

These sample images are intended to show you just how silly they must be. Your own link between, say, newspaper and eggs will be different. In fact, these links will *always* be stronger if they are your own. Note that linking can be used for memorizing not only lists, but also speeches, instructions, and complex formulas and equations. With practice, linking may become your favorite mnemonic trick.

SOURCES IN CYBERSPACE

Memory Tricks

Check out these URLs for articles on pumping your memory to the max.

- www.dso.iastate.edu/dept/asc/all/study_skills.htm#Memory—Multiple Study Skills links, including note-taking, time-management and stress-management techniques.

- www.kporterfield.com/ld/ld_memory.html—Amazing Memory Tricks for People with Learning Disabilities (applies to every learner).
- www.berkeley.edu/news/media/releases/97legacy/10_17_97a.html—A fascinating page on how squirrels and birds remember where they hide food.

J u s t t h e F a c t s

- Identify what is important for you to know.
- Pick the best memory device for the materials and for your learning style: rhyme and song, acronyms, acrostics, chunking, visualization, place method, peg method, or linking.
- Make your mnemonic devices as personal and vivid as possible.
- Apply multiple senses when you can.

Secret 10

PREVENTING TEST STRESS

Tan always creates rules for himself, and nowhere is this more obvious than in how he prepares for tests. His sister Phuong teases him about his many rules, but she is secretly adopting some of his techniques.

Phuong used to stay up late studying and then cram until her teacher passed out the test. Now, she follows Tan's rule of studying no later than midnight the night before a test. Phuong routinely skipped breakfast on test days so she could spend more time studying. Now, she makes a point of sitting down and eating a nutritious, unrushed breakfast, as her brother does.

But it is this simple rule that most increases Phuong's peace of mind on test days: *Check that your materials are ready.* Just before she leaves the house, she checks that her backpack has pencils, her notes and textbook, and a sweater (in case the test room gets chilly). Phuong feels calmer knowing that she is prepared.

Phuong's secret was safe until one evening when she was studying for a biology test. She was checking off a to-do list, just like Tan did before a big exam. When she looked up, she saw her brother grinning at her. Phuong expected to be teased; after all, she had done the same to him. But Tan only grinned. "Just keep your hands off my lucky test-taking socks," he said.

If your study techniques leave you anxious on test day, follow Phuong's lead by testing and then adopting the study techniques of other good students. Most of us have at least one friend who always seems to be organized and prepared. Don't be embarrassed to ask

such friends for study tips and advice. He or she will probably be flattered and more than willing to help. The proper study and test preparation routine is essential to preventing test stress and anxiety. In this chapter, you will learn how to recognize the symptoms of test stress as well as how to effectively relieve them.

SYMPTOMS OF TEST STRESS

Although you may know the materials, and even though you have read all hints and tips in this book, one factor may still interfere with your ability to successfully function on test day: test stress.

The best way to alleviate test stress is to first recognize your symptoms and gain an understanding that the possible reason for subpar test performance is not lack of intelligence or knowledge, but is directly related to the stress you feel before and during the test.

You may recognize test stress by the jittery feeling you get in the pit of your stomach. Although it may sound like a cliché, your palms may begin to sweat or your mouth may suddenly become dry. The worse symptom of all could be the sudden blank you draw when trying to answer questions that you were able to answer almost automatically when studying with your study buddy. Many times after leaving a test and relaxing a bit, you remember the answers to the question or questions that stumped you the most.

Some symptoms of stress include:

- an increased heart rate
- rapid breathing
- stammering
- headaches and stomachaches
- chest pains
- diarrhea
- sweating
- sleeplessness
- alcohol and drug abuse

Do any of these symptoms sound familiar? If you experience these symptoms on test day, then you may be suffering from test stress.

Are You Stressed?

Now that you have had test stress explained to you, and the symptoms have been pointed out, you can make a determination about the level of test stress you may be experiencing. It is common for all test takers to feel a little nervous on test day, but suffering from test stress is a more severe form of the normal jitters. If you are feeling test stress, you will find that you have already taken one of the first steps to alleviating that stress simply by reading this book and practicing some of the tips found within. You can also unburden yourself of some of this stress by ensuring that you are healthy both mentally and physically.

MINDBENDER

Test-Stress Test

You only need to worry about test anxiety if it is extreme enough to impair your performance. The following questionnaire will provide a diagnosis of your level of test anxiety. In the blank before each statement, write the number that most accurately describes your experience.

0 = Never 1 = Once or twice 2 = Sometimes 3 = Often

_____ I have gotten so nervous before an exam that I put down the books and didn't study for it.

_____ I have experienced disabling physical symptoms such as vomiting and severe headaches because I was nervous about an exam.

_____ I have not shown up for an exam because I was scared to take it.

_____ I have experienced dizziness and disorientation while taking an exam.

_____ I have had trouble filling in the little circles because my hands were shaking too hard.

_____ I have failed an exam because I was too nervous to finish it.

_____ Total: Add up the numbers in the blanks above.

Your Test-Stress Score

Here are the steps you should take, depending on your score. If you scored:

- **Less than 3**, your level of test anxiety is nothing to worry about; it's probably just enough to give you that little extra edge.
- **Between 3 and 6**, your test anxiety may be enough to impair your performance, and you should practice the stress management techniques listed in this section to try to bring your test anxiety down to manageable levels.
- **More than 6**, your level of test anxiety is a serious concern. In addition to practicing the stress management techniques listed in this section, you may want to seek additional personal help. Call your local high school or community college and ask for the academic counselor. Tell the counselor that you have a level of test anxiety that sometimes keeps you from being able to take the exam. The counselor may be willing to help you or may suggest someone else you should talk to.

HEALTHY IN MIND

Being mentally healthy, in this case, does not refer to your growing intellect, but more about your emotional health. Surrounding yourself with positive influences will undoubtedly create a mentally healthy you and that will lead to a healthier and more positive outlook on your everyday life, including that dreaded chemistry exam! Some of the factors that directly affect your mental health include the following.

Your Peer Group

It may be a difficult fact to admit to yourself, but your peer group may be holding you back from performing your best academically. Think of your core group of friends and classmates. Do they share your yearning to do their best in school? Are they supportive of your efforts to study and do well on tests? Unfortunately, some high school students become disengaged from the whole learning experience and actually belittle those around them who strive to do well. On the other hand, surrounding yourself with positive peer influences will

provide you with the support necessary to make you feel good about your study efforts.

Personal Environment

Unfortunately, this is something that you may have little control over. It has been found that students who are going through major life situations are more likely to experience stress in their everyday lives. Some of these major life events include:

- the death of a loved one
- divorce
- moving to a new town
- major health issues in the family
- living in a dysfunctional family

It is unfortunate that many high school students must live through these problems, and they do indeed take a toll on their mental health. If you are now experiencing or recently have experienced one of these events, take an honest look at how it is affecting you. If necessary, seek the guidance of a counselor, friend, or role model to help you cope with the many unique issues surrounding your situation.

STUDY AEROBICS

Creating your own anti-anxiety routine: Pay careful attention to your anxiety level throughout the school week and on the weekends. What activities tend to relax you? If, for example, you find that playing basketball or practicing yoga helps you de-stress, be sure to schedule a practice session the morning or night before a major test. By the same token, take note of the activities that tend to make you anxious, and avoid them when you have an impending exam.

What to Do

If you recognize that your mental well-being is not as healthy as it could be, be encouraged to seek the help of a counselor, family physician, friend, or role model.

HEALTHY IN BODY

You may think of test taking as an exercise of the brain, but, in reality, your physical health may also play a role in your ability to perform well academically. There are many factors that can affect your health, and, therefore, your academic success.

During the high school years, teens become ever more conscious of their bodies and physiques. This is perfectly natural because their bodies are undergoing substantial changes as a result of puberty. Unfortunately, this attention to looks and build sometimes leads to unhealthy eating habits if teens become obsessed with maintaining a look that they consider to be most desirable. These unhealthy habits deprive the body of the nutrients necessary to grow, heal, and yes, think.

These years are also the prime years for social outings with friends and classmates. Wherever there are social events, there seems to be food, and often this food is not the most nutritious. Try to be careful with your diet, and maintain a healthy balance between junk food and the healthy food that contains the nutrients your maturing body needs.

WORK

You may be one of the more than 5 million teens who hold jobs while attending high school. You may work out of necessity, but be aware that your part-time job may be taking a toll on your academic success. If you see that your work schedule is keeping you from your studies, it may be time to reassess the value of your job. Sure, the extra spending money may be nice when you go the mall, or you may be saving for a large purchase such as a stereo or a new car, but be sure that you are not carrying the extra cash around at the expense of your education.

If your job is getting in the way of your academics there are many things you can do:

- **Evaluate the pros and cons of keeping the job.**

Make a list of all the good things that the job provides you, and then make a list of the areas of your life that are detrimentally affected by your job. Which list wins?

- **Discuss your work schedule with your supervisor.**

Your supervisor may be willing to adjust your work schedule to better fit your academic needs. If you have an important test, such as a

mid-term or a final exam, coming up, be sure to discuss this with your supervisor so that you can have the necessary time off to study and prepare for the exam. Many supervisors will recognize your candor and desire to perform well in school as an admirable trait and will work with you to meet that goal.

- **Discuss work options with your school counselor.**

If you come to the realization that your current work situation is not the best for you or your academic success, speak with your school counselor. Many schools offer work opportunities that also count toward graduation. Students participating in these programs participate in regular classes during part of the day, and then leave for their jobs at offices, banks, and other places of business for the rest of the day. These jobs often offer real life applications to the things you are learning in school.

EXTRACURRICULAR ACTIVITIES

After school and civic activities provide wonderful learning and social opportunities for teens. It is important that you do not overwhelm yourself with these activities to the point that you are unable to keep up with your studies. Many school systems have checks in place so that students with failing grades are barred from participating in certain activities until they raise their grades to passing levels. Avoid this potentially embarrassing situation by monitoring your participation in extracurriculars yourself. If you see that they are getting in the way of your academic success, you should consider eliminating one or more from your schedule.

SOURCES IN CYBERSPACE

Stress Relief

- www.wisepirit.com/stress.htm—Strategies and exercises for relieving stress.
- www.personalpowercoach.com/dealstressanxiety.htm—Top 10 ways to deal with stress and anxiety.
- www.factsontap.org/commuter/stress.html—Drug- and alcohol-free ways to deal with school stress.

SLEEP

Get your rest! You may start yawning when you realize that research has shown that the average teen needs more than nine hours of sleep per night. Unfortunately, recent studies have shown that teens' sleep needs do not often correlate with their schedules. Chemical changes in the body during the teen years cause most teens to stay up later than they did during childhood. Even a teenager who goes to bed at 9 P.M. is unlikely to settle into sleep at that time. Thus, teens typically want to stay up later simply because their bodies are telling them to stay awake. This would not be a problem if schools did not start until 10 A.M., but most high school students must be at school much earlier than that.

The combination of the physiological changes in teenagers' bodies and the schedules enforced by society mean that most teens are not meeting this nine-hour mark for the sleep their bodies require. This is why many are tired and sometimes lethargic by the time the weekend comes around. You may find that your body wants to sleep late on weekend mornings, but that you are not tired at night and want to spend the late hours of the night socializing with friends, enjoying time with your family, or just spending time with a video game or a good book.

To help your body get the rest it needs, try to set your body's internal clock to its optimum schedule. Make every attempt to establish and keep a regular sleep schedule. If you must, supplement your overnight sleep with short naps after school. Getting the proper amount of sleep not only leaves you feeling refreshed and ready for the day, but it gives your body the downtime it needs to function at its best during your waking hours.

TIPS FOR BEING STRESS-FREE

If you are suffering from test stress, you may want to try some of these stress-relieving tips:

- **Do not create unrealistic or unattainable goals** by telling yourself what you “should” do.
Just do the best that you can, knowing that you are well prepared for the exam.
- **Get plenty of sleep.**
Exhaustion decreases ability to cope with stress.

- **Eat balanced meals.**
Diet and exercise are important for your complete health. Be sure to enjoy nutritious meals on a regular basis.
- **Don't take stimulants.**
Although sodas are a staple of teen life, and it may be tempting to use chocolate and soda to give yourself that extra boost of energy, these stimulants are only short-lived and do not contribute positively to your overall health.
- **Don't psyche yourself up to fail.**
Be mentally tough, be confident in your study habits, and enjoy the fruits of your hard work. Do not tell yourself things like "I know I am not going to do well on this test!" These statements often become self-fulfilling prophecies. Instead, be positive in your thoughts, and surround yourself with peers who are equally positive.
- **Study!**
Nothing will make you feel more stressed than walking into the classroom knowing that you did not review the materials that you are going to be tested on. Whatever it takes, be sure that you review the materials before the test.
- **Reward yourself.**
Be sure that you reward yourself throughout the entire process. Reward yourself for good study habits, and eventually reward yourself for scoring well on your exams. Setting up a realistic reward system will help you meet your goals and make the study and test cycle seem less burdensome.
- **Practice taking tests.**
If you have taken practice tests, either those that you have created on your own or those that your study buddy has created for you, you will have gotten over the test jitters prior to actually taking the real test. This preparedness can do nothing but boost your self-confidence on test day.
- **Think positively!**
This is probably the most important of all the tips. It cannot be repeated enough that you should surround yourself with positive influences and positive thoughts. Challenge yourself to do the best that you can, and do not be afraid to pat yourself on the back for a well-earned score!

- **Do not dwell on the past.**

Even if you bombed your last biology test, do not walk into the classroom expecting to do the same on this one! Remember that this test is different, and approach it with a fresh outlook.

J u s t t h e F a c t s

- Alleviate test stress by first recognizing the symptoms.
- Be mindful of your emotional as well as physical health.
- Surround yourself with positive influences.
- Maintain a healthy and balanced diet.
- Don't let a part-time job or too many extracurricular activities get in the way of your academic success.
- Get plenty of sleep.

EPILOGUE: TAKE ADVANTAGE OF THE SECRETS!

In your hands, you have the guide to the ten secrets that will help you unlock your potential. Do not hesitate to use them! By exploring, learning, and then utilizing these secrets, you will become a better and more confident test taker, therefore, eliminating your test stress! The ten secrets we uncovered are

- Managing Time and Being Prepared
- Getting a Handle on Objective Testing
- Getting a Handle on Subjective Testing
- Mastering Your Study Environment
- Discovering Your Learning Style
- Creating and Implementing a Study Plan
- Getting the Most out of Class
- Mastering the Materials
- Tackling Memory Tricks
- Preventing Test Stress

Your Guide to State Board of Education Websites

Listed below are the websites for each of the fifty state education departments. When you enter each state website, you will be on the homepage. Follow the links to each website's high school exit exam page.

As you scan your state website, you should also go into any links labeled *Assessment*. Many states display past examinations on their sites for the express purpose of having classroom teachers and students understand exactly what will be tested and how. Look for *Sample Responses*, which often provide a detailed explanation of how each paper was scored. These sample items can be used for test practice, whether at home or in the classroom.

Other important information included on your state website will be the *Report Card* for the state. How did your district do in comparison to other districts in the state? Some states let you access your individual school from the main website. In that case, you can check your school's progress. If the state website does not give your school's information, you can obtain this information from your school district office or the building principal. These documents can be confusing to read at first, so do not hesitate to ask for help. You should know just where your school falls in its yearly testing program.

State Departments of Education

Alabama Teacher Education and Certification Office

State Department of Education
50 North Ripley Street
P.O. Box 302101
Montgomery, AL 36104
334-242-9935
www.alsde.edu

Alaska Department of Education

801 W. 10th Street, Suite 200
Juneau, AK 99801-1894
907-465-2800
www.educ.state.ak.us

Arizona Department of Education

1535 West Jefferson Street
Phoenix, AZ 85007
602-542-4361
800-352-4558
www.ade.state.az.us

Arkansas Department of Education

Four Capitol Mall
Little Rock, AR 72201
501-682-4475
arkedu.state.ar.us

California Department of Education

1430 North Street, Room 5111
Sacramento, CA 95814
916-319-0827
www.cde.ca.gov

Colorado Department of Education

201 E. Colfax Avenue
Denver, CO 80203-1799
303-866-6600
www.cde.state.co.us

Connecticut State Department of Education

165 Capitol Avenue
Hartford, CT 06145
860-713-6548
www.state.ct.us/sde

Delaware Department of Education

John G. Townsend Building
401 Federal Street
P.O. Box 1402
Dover, DE 19903-1402
302-739-4601
www.doe.state.de.us

District of Columbia Teacher Education and Licensure Branch

441 4th Street, NW, Suite 920 North
Washington, DC 20001
202-727-6436
www.washingtondc.gov/citizen/education.htm

Florida Department of Education

Turlington Building
325 West Gaines Street
Tallahassee, FL 32399-0400
850-487-1785
www.firn.edu/doe

Georgia Department of Education

205 Jesse Hill Jr. Drive, SE
Atlanta, GA 30334
404-656-2800
www.doe.k12.ga.us

Hawaii Department of Education

P.O. Box 2360
Honolulu, HI 96804
808-586-3230
doe.k12.hi.us

Idaho Department of Education

650 West State Street
PO Box 83720
Boise, ID 83720-0027
208-332-6800
www.sde.state.id.us/Dept

Illinois Department of Education

100 W. Randolph, Suite 14-300
Chicago, IL 60601
312-814-2220
www.isbe.state.il.us

Indiana Department of Education

State House, Room 229
Indianapolis, IN 46204-2795
317-232-0808
www.ideanet.doe.state.il.us

Iowa Department of Education

Grimes State Office Building
Des Moines, IA 50319-0416
515-281-5294
www.state.ia.us/educate

Kansas Department of Education

120 SE 10th Avenue
Topeka, KS 66612-1182
785-296-3201
www.ksbe.state.ks.us

Kentucky Department of Education

500 Mero Street
Frankfort, KY 40601
502-564-4770
800-533-5372
www.kde.state.ky.us

Louisiana Higher Education and Teaching

626 N. 4th Street
P.O. Box 94064
Baton Rouge, LA 70804-9064
225-342-4411
877-453-2721
www.doe.state.la.us

Maine Division of Certification and Placement

Department of Education
23 State House Station
Augusta, ME 04333
207-624-6618
www.state.me.us/education/homepage.htm

Maryland State Department of Education

200 W. Baltimore Street
Baltimore, MD 21201
410-767-0100
www.msde.state.md.us

Massachusetts Department of Education

350 Main Street
Malden, MA 02148-5023
781-338-3000
www.doe.mass.edu

Michigan Department of Education

608 W. Allegan Street
Hannah Building
Lansing, MI 43933
517-373-3324
www.mde.state.mi.us

Minnesota Department of Children, Families, and Learning

1500 Highway 36 West
Roseville, MN 55113
651-582-8200
www.educ.state.mn.us

Mississippi Department of Education

Central High School
P.O. Box 771
359 North West Street
Jackson, MS 39205
601-359-3513
www.mde.k12.ms.us

**Missouri Department of
Elementary and Secondary
Education**

P.O. Box 480
Jefferson City, MO 65102
573-751-4212
www.mde.k12.ms.us

**Montana Office of Public
Instruction**

P.O. Box 202501
Helena, MT 59620-2501
406-444-3150
www.opi.state.mt.us

**Nebraska Department of
Education**

301 Centennial Mall South
Lincoln, NE 68509
402-471-2295
www.nde.state.ne.us

Nevada Department of Education

700 East Fifth Street
Carson City, NV 89701-5096
775-687-9200
www.nde.state.nv.us

**New Hampshire Department of
Education**

101 Pleasant Street
Concord, NH 03301-3860
603-271-3494
www.ed.state.nh.us

**New Jersey Department of
Education**

P.O. Box 500
100 Riverview Place
Trenton, NJ 08625-0500
609-292-4469
www.state.nj.us/education

**New Mexico Department of
Education**

Licensure Unit
Education Building
300 Don Gaspar
Santa Fe, NM 87501-2786
505-827-6516
sde.state.nm.us

**New York State Education
Department**

Education Building
89 Washington Avenue
Albany, NY 12234
518-474-5844
www.nysed.gov

**North Carolina State Department
of Public Instruction**

301 N. Wilmington Street
Raleigh, NC 27601-2825
919-807-3300
www.dpi.state.nc.us

**North Dakota Education
Standards and Practices Board**

600 E. Boulevard Avenue, Dept. 201
Floors 9, 10, & 11
Bismark, ND 58505-0440
701-328-2260
www.dpi.state.nd.us

Ohio Department of Education

Teacher Education and Certification
and Professional Development
25 South Front Street
Columbus, OH 43215-4183
877-772-7771
www.ode.state.oh.us

**Oklahoma State Department of
Education**

2500 N. Lincoln Boulevard
Oklahoma City, OK 73105-4599
405-521-3301
sde.state.ok.us/home

Oregon Department of Education

255 Capitol Street NE
Salem, OR 97310-0203
503-378-3569
www.ode.state.or.us

Pennsylvania Department of Education

333 Market Street
Harrisburg, PA 17126-0333
717-783-6788
www.pde.psu.edu

Rhode Island Department of Education

255 Westminster Street
Providence, RI 02903
401-222-4600
www.ridoe.net

South Carolina Department of Education

Rutledge Building
1429 Senate Street
Columbia, SC 29201
803-734-8815
www.sde.state.sc.us

South Dakota Department of Education

Kneip Building, 3rd Floor
700 Governors Drive
Pierre, SD 57501-2291
605-773-3134
www.state.sd.us/deca

Tennessee State Department of Education

Andrew Johnson Tower, 6th Floor
710 James Robertson Parkway
Nashville, TN 37243-0375
617-741-2731
www.state.tn.us/education

Texas Education Agency

William B. Travis Building
1701 N. Congress Avenue
Austin, TX 78701-1494
512-463-9734
www.tea.state.tx.us

Utah State Office of Education

250 East 500 South
Salt Lake City, UT 84111
801-538-7500
www.usoe.k12.ut.us

Vermont Department of Education

120 State Street
Montpelier, VT 05620-2501
802-828-3135
www.state.vt.us/educ

Virginia Department of Education

P.O. Box 2120
Richmond, VA 23218
800-292-3820
www.pen.k12.va.us

Washington Department of Education

Old Capitol Building
P.O. Box 47200
Olympia, WA 98504-7200
360-725-6000
www.k12.wa.us

West Virginia Department of Education

1900 Kanawha Boulevard East
Charleston, WV 25305
304-558-2681
wvde.state.wv.us

**Wisconsin Department of Public
Instruction**

P.O. Box 7841
125 S. Webster Street
Madison, WI 53707
800-441-4563
www.dpi.state.wi.us

**Wyoming Department of
Education**

2300 Capitol Avenue
Hathaway Building, 2nd Floor
Cheyenne, WY 82002-0050
307-777-7675
www.k12.wy.us

Print Resources

ACT EXAM GUIDES

- ACT Assessment Success 2003*. (New York: Petersons, 2002).
- Bobrow, Jerry, et. al. *Cliffs Test Prep ACT Preparation Guide*. (Hoboken: Wiley, 2000).
- Chesla, Elizabeth, Matic, Jelena, Grove, Melinda, and Hirsch, Nancy. *LearningExpress's ACT Assessment Success*. (New York: LearningExpress, 2003).
- Domzalski, Shawn Michael. *Crash Course for the ACT: The Last-Minute Guide to Scoring High*. (New York: Princeton Review, 2000).
- Ehrenhaft, George, et. al. *How to Prepare for the ACT*. (Hauppauge, NY: Barron's, 2001).
- Getting into the ACT: Official Guide to the ACT Assessment*. (New York: HBJ, 1997).
- Kaplan ACT 2000 with CD-ROM*. (New York: Kaplan, 2002).
- Magliore, Kim, and Silver, Theodore. *Cracking the ACT*. (New York: Princeton Review, 2002).
- Panic Plan for the ACT*. (New York: Petersons, 2000).

AP EXAM GUIDES

- Fogolino, Paul. *Cracking the AP Chemistry Exam 2002–2003*. (New York: Princeton Review, 2002).
- Kahn, David S. *Cracking the AP Calculus AC & BC Exams: 2002–2003*. (New York: Princeton Review, 2002).
- Leduc, Steven A. *Cracking the AP Physics B & C Exams, 2002–2003*. (New York: Princeton Review, 2002).

- McDuffie, Jerome. *REA's AP US History Test Prep with TESTware Software*. (Piscataway, NJ: Research and Education Association, 2001).
- McEntarffer, Robert, and Weseley, Allyson. *How to Prepare for the AP Psychology: Advanced Placement Examination*. (Hauppauge, NY: Barron's, 2000).
- Meltzer, Tom, and Hofheimer Bennett, Jean. *Cracking the AP U.S. History Exam, 2002–2003*. (New York: Princeton Review, 2002).
- Pack, Philip E. *Cliffs AP Biology*. (Hoboken: Wiley, 2001).
- Springer, Alice Gericke. *How to Prepare for the AP Spanish*. (Hauppauge, NY: Barron's, 2001).
- Swovelin, Barbara V. *Cliffs AP English Language and Composition*. (Hoboken: Wiley, 2000).

ASVAB EXAM GUIDES

- ASVAB, 2nd edition*. (New York: LearningExpress, 2000).
- ASVAB Core Review: Just What You Need to Get into the Military*. (New York: LearningExpress, 1998).
- Fogiel, M. *The Best Test Preparation for the ASVAB: Armed Services Vocational Aptitude Battery*. (Piscataway, NJ: Research and Education Association, 1998).
- Green, Sharon Weiner, and Wolf, Ira K. *Pass Key to the ASVAB: Armed Services Vocational Aptitude Battery: With Intensive Review of: Arithmetic Reasoning, Math Knowledge, Word Knowledge*. (Hauppauge, NY: Barron's, 2000).
- How to Prepare for the Armed Forces Test ASVAB: Armed Services Vocational Aptitude Battery*. (Hauppauge, NY: Barron's, 2000).
- Kiehl, Andy, Moss, Nicole, and Winn, David. *Cracking the ASVAB*. (New York: Princeton Review, 2002).
- Ostrow, Scott A. *ASVAB: Armed Services Vocational Aptitude Battery: Everything You Need to Score High on the ASVAB*. (New York: Arco, 2001).
- Vincent, Lynn. *ASVAB Success*. (New York: LearningExpress, 2001).

PSAT EXAM GUIDES

- Green, Sharon Weiner, Wolf, Ira K., and Weiner, Mitchel. *How to Prepare for the PSAT/NMSQT: PSAT/National Merit Scholarship Qualifying Test*. (Hauppauge, NY: Barron's, 1999).

Kaplan Fast Track SAT & PSAT. (New York: Kaplan, 2001).
Robinson, Adam, and Rubenstein, Jeff. *Cracking the PSAT/NMSQT, 2003*. (New York: Princeton Review, 2002).
SAT & PSAT 2002. (New York: Kaplan, 2001).

SAT EXAM GUIDES

10 Real SATs. (College Entrance Examination Board, 2000).
Reed, C. Roebuck, and Antor, Maxwell. *LearningExpress's SAT Exam Success*. (New York: LearningExpress, 2003)
ARCO: Master the SAT 2003. (New York: Arco, 2002).
Bell, Robert A. *Quick Review for the SAT*. (Piscataway, NJ: Research and Education Association, 1994).
Berger, Larry, et. al. *Up Your Score: The Underground Guide to the SAT 2003–2004 Edition*. (New York: Workman, 2002).
Carris, Joan Davenport. *Panic Plan for the SAT*. (New York: Petersons, 2001).
Elliott, Joseph, and Elster, Charles Harrington. *Tooth and Nail: A Novel Approach to the New SAT*. (Orlando: Harcourt, 1994).
Green, Sharon Weiner, and Wolf, Ira K. *How to Prepare for the SAT I*. (Hauppauge, NY: Barron's, 2001).
Karelitz, Raymond. *The New SAT in 10 Easy Steps*. (Avon, MA: Adams Media Corporation, 1994).
Katzman, John, and Robinson, Adam. *Cracking the SAT with CD-Rom, 2003 Edition*. (New York: Random House, 2002).
Kleinman, Liza, and Steddin, Maureen. *SAT Success: The Only Test-Prep Guide with Bonus Software*. (New York: Petersons, 2002).
Martin, Sandra. *SAT Savvy: Last Minutes Tips and Strategies*. (Alexandria, VA: Octameron Associates, 1999).
Orton, Peter Z., and Rimal, Rajiv N. *30 Days to the SAT*. (New York: Petersons, 2001).
SAT & PSAT 2002. (New York: Kaplan, 2001).
Weber, Karl. *The Insider's Guide to the SAT*. (New York: Petersons, 2001).
Weber, Karl. *The Pocket Guide to the SAT*. (Orlando: Harcourt, 1985).

GENERAL STUDY GUIDES

Fry, Ronald. *Ace Any Test*. (Franklin Lake, NJ: Career Press, 1996).

Huntley, Sara Beth, and Smethurst, Wood. *Study Power Workbook: Exercises in Study Skills to Improve Your Learning and Your Grades*. (Cambridge: Brookline Books, 1999).

Kornhauser, Arthur William. *How to Study: Suggestions for High School and College Students*. (Chicago: University of Chicago, 1993).

Luckie, William R., and Smethurst, Wood. *Study Power: Study Skills to Improve Your Learning and Your Grades*. (Cambridge: Brookline Books, 1997).

Meyers, Judith. *The Secrets of Taking Any Test, 2nd edition*. (New York: LearningExpress, 2000).

Semones, James. *Effective Study Skills: A Step-by-Step System for Achieving Student Success*. (Washington, DC: Thomson, 1991).

Wood, Gail. *How to Study, 2nd edition*. (New York: LearningExpress, 2000).

Online Resources

ACT EXAM WEBSITES

www.act.org—The official ACT exam website.

www.testprep.com/practicehdr.shtml—Provides practice tests for the ACT exam.

www.powerprep.com—Provides strategies, tutoring, software, diagnostic and online practice tests for the ACT exam.

www.review.com—Provides tutoring and test preparation for the ACT exam.

www.kaplan.com—Provides tutoring, test preparation, and general information for the ACT exam.

www.act-sat-prep.com—Provides practice exams and strategies for taking the ACT exam.

www.learnatest.com—Provides two complete practice tests for the ACT exam.

AP EXAM WEBSITES

www.collegeboard.com/ap/students—Provides AP exam information, answers for frequently asked questions, and an array of online practice exam materials.

www.learnatest.com—Provides online AP practice exams for biology, U.S. history, calculus, and English literature & Composition.

apcentral.collegeboard.com/homepage—The official AP exam site provides AP exam schedules, sample exam questions, and tips.

www.pahomeschoolers.com/courses/welcome.html—Provides online AP exam preparation specifically for homeschoolers.

ASVAB EXAM WEBSITES

- [www.dmde.osd.mil/asvab/CareerExploration Program/](http://www.dmde.osd.mil/asvab/CareerExploration%20Program/)—The official ASVAB exam site.
- www.todaymilitary.com/explore_asvab.shtml—Comprehensive guide to the ASVAB exam that provides a detailed description of the exam, registration information, and sample questions.
- www.4youonline.com/asvab—Provides online study guides and interactive online courses to help you prepare for the ASVAB exam.
- www.petersons.com/testprepchannel/asvab_index.asp—Provides practice exams as well as tips and strategies for taking the ASVAB exam.
- usmilitary.about.com/library/weekly/aa043001a.htm—Provides a detailed description of the ASVAB exam and its history, instructions for interpreting your score, and sample questions.
- www.learnatest.com/military/home.cfm—Provides interactive practice exams and guides to help you prepare for the ASVAB exam.

SAT AND PSAT EXAMS WEBSITES

- www.testprep.com/practicehdr.shtml—Provides practice tests for the SAT and PSAT exams.
- www.powerprep.com—Provides strategies, tutoring, software, diagnostic and online practice tests for the SAT exam.
- www.collegeboard.com—The official SAT exam site provides online test registration and test preparation for the SAT exam.
- www.review.com—Provides tutoring and test preparation for the SAT and PSAT exams.
- www.kaplan.com—Provides tutoring, test preparation, and general information for the SAT exam.
- www.act-sat-prep.com—Provides online test registration, practice exams, and strategies for taking the SAT exam.
- www.learnatest.com—Provides several online practice tests and an online course series to help you prepare for the SAT exam.

GENERAL WEBSITES

members.aol.com/TeacherNet/Study.html—Provides a comprehensive index of practice exams, study guides, and study aids for various college entrance exams, including the CLEP, AP, ACT, and SAT exams.

dmoz.org/Reference/Education/Products_and_Services/Test_Preparation—Provides test preparation materials, study guides, and study aids for various college entrance exams, including the ACT, PSAT, and SAT exams.

db.education-world.com/perl/browse?eat_id=978—Provides a comprehensive index of tutoring services, practice exams, study guides, and study aids for various college entrance exams, including the ACT, SAT, and AP exams.

www.teacheroz.com/college.htm—Provides study aids, strategies, and reference materials for the AP, SAT, and Regents exams.

www.attheu.com/admissions/test_prep/test_prep.asp—Provides tutoring, courses, test preparation software, practice exams, and test-taking tips and strategies for the PSAT, SAT, and AP exams.

www.learnatest.com—Provides practice exams for the ACT, ASVAB, AP, and SAT exams, and many more professional and academic tests.