Remember

If you have knowledge, let others light their fire by it.

M. Fuller
Tyrone walked into Veterinary Tech class beaming. He was happy, joking, and smiling, and he spoke to everyone on the way to his seat. He was always a delightful student, but today he seemed even happier than usual. Several classmates asked how he could possibly be so up. They could not understand his great attitude because today was test day. How could he be happy today of all days? How could anyone be happy on test day?

Tyrone told his classmates that he was happy because he was prepared. “I’m ready for the world,” he said. “I studied all week and I know this stuff.” Most of his classmates ribbed him and laughed. In the final moments before the test began, all the other students were deeply involved in questioning each other and looking over their notes. Tyrone stood by the window finishing his soda until time was called.

After all was said and done, Tyrone scored the highest on the exam of all his peers—a 98. Several students asked him how he did so well. Intrigued by their curiosity, I asked Tyrone to share his secret to successful test taking.

I found his answer extremely useful, especially in light of his active life: Tyrone held a part-time job, cared for his elderly grandmother, dated, and worked at the convenience store.

“You have to do it in steps,” Tyrone said. “You can’t wait until the night before, even if you have all evening and night.” He explained that he incorporated study time into his schedule several weeks before the test.

If the test was to cover four chapters, he would review two chapters the first week and two chapters the second week. “I have a study room at the library because my house is so full of people. I make an outline of my notes, review my text, answer sample questions in the book, and many times I find someone to quiz me on the material.”

Live as if you were to die tomorrow. Learn as if you were to live forever. —M. K. GANDHI
**QUESTIONS FOR REFLECTION**

Consider responding to these questions online in the Questions for Reflection module of the Companion Website.

1. How do you usually feel on the day of a test? Why?
2. How can studying in chunks of time benefit you?
3. How can developing test questions as you read, then answering them and studying the answers help you learn the material?

“How could he be happy today of all days? How could anyone be happy on test day?”

“Hey, I even got into creating those mnemonics we learned about. It really helped me study the list of cats most commonly registered in the U.S.

“Get this,” he began. “**Pemba Boats!** Crazy, isn’t it? But it helps me remember this:

- Persian
- Exotic
- Maine Coon
- Birman
- Abyssinian
- Burmese
- Oriental
- American Shorthair
- Tonkinese
- Siamese

“See? Pemba Boats is much easier than a list of ten things. You just have to be creative and stay on top of the material every day.”

Tyrone’s advice to the class was certainly realistic and helpful.
Before reading this chapter, take a moment and respond to the following 10 questions. Consider each one carefully before answering, and then respond by circling the number in the appropriate box. When you have answered the questions, add your points and find your total score on the feedback chart below.

<table>
<thead>
<tr>
<th>STATEMENT</th>
<th>STRONGLY DISAGREE</th>
<th>DISAGREE</th>
<th>DON’T KNOW</th>
<th>AGREE</th>
<th>STRONGLY AGREE</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I know which environments are best for me when I’m studying.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>2. My mind often wanders when I’m trying to study.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3. I often try to visualize or picture what I’m trying to memorize.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4. When I study, I try to think of examples to illustrate the material.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>5. I rarely think about how what I’m studying relates to my world or other information that I know.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6. I tend to review information over and over in moderate doses over time rather than “cramming” all at once.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>7. I usually only go over my study materials once or twice at most.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>8. I try to approach my study times with a positive, upbeat attitude.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>9. Memorizing information and understanding it are practically the same thing.</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>10. I use mnemonics or memory tricks and techniques to help me remember information.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL VALUE**

**SUMMARY**

43–50 You are exceptional in your ability to store and retrieve information. You likely tend to review materials repeatedly, and know that remembering is easier when you can relate materials to things you already know. Your satisfaction at mastering materials further motivates you.

35–42 You are above average in being able to remember information you’ve studied. You probably tend to study materials several times and know that a key to remembering is understanding. You probably also have some memory tricks up your sleeve, but might benefit from learning a few more.

26–34 Your skills in being able to remember course information are average. You are somewhat aware of how to study materials so that you can later remember them. You may benefit from learning additional memorization strategies and connecting memorization and comprehension of information.

18–25 You have below average skills in knowing how to get information into your memory. You may be minimally aware of when and where to study and probably think that being able to recall information is all that is necessary. You will need to develop strategies to help you remember materials so that you can also understand them.

10–17 Your strategies for getting information into your memory are limited. You likely focus on cramming information into your memory at the last minute and haven’t thought much about the factors that help or hurt you in your efforts to memorize material. Significant improvements will need to be made to aid you in your college career.
Based on the summary above, what is one goal you would like to achieve related to studying and memory development?

Goal

List three actions you can take that might help you move closer to realizing this goal.

1. 
2. 
3. 

Questions FOR BUILDING ON YOUR BEST

As you read this chapter, consider the following questions. At the end of the chapter, you should be able to answer all of them. We encourage you to ask a few questions of your own. Consider turning to your classmates or instructors to assist you.

1. How can I study smarter instead of harder?
2. What difference can my study environment really make?
3. What techniques can I use to help my memory develop?
4. Why is it important to make a commitment to understanding the material instead of just memorizing it?
5. How can I transfer information to long-term memory?

What additional questions might you have about studying and memory development?

1. 
2. 
3. 
CHAPTER 7  REMEMBER

Why Study? I Can Fake It

Many students feel that there is no real reason to study. They believe that they can glance at their notes a few moments before a test and fake it. Quite truthfully, some students are able to do this. Some tests and instructors lend themselves to this type of studying technique. More than you may imagine, however, this is not the case. Instructors are usually better known for thorough exams, tricky true–false statements, and multiple choices that would confuse even Einstein. If you want to succeed in your classes here, you must make studying a way of life.

Effective studying requires a great deal of commitment, but learning how to get organized, taking effective notes, reading a textbook, listening in class, developing personalized study skills, and building memory techniques will serve you well in becoming a successful graduate. “Faking it” is now a thing of the past.

The Importance of Your Study Environment

You may wonder why your study place is important. The study environment can determine how well your study time passes. If the room is too hot, too noisy, too dark, or too crowded, your study time may not be productive. In a room that is too hot and dimly lit, you may have a tendency to fall asleep. In a room that is too cold, you may spend time trying to warm yourself. Choose a location that is comfortable for you.

Different students need different study environments. You may study better with a degree of noise in the background, or you may need complete quiet. You have to make this decision. If you always have music in the background while you are studying, try studying in a quiet place one time to see if there is a difference. If you always try to study where it is quiet, try putting soft music in the background to see if it helps you. You may have to try several environments before you find the one that is right for you.

I Forgot to Remember!

UNDERSTANDING MEMORY

There may be times when you feel that your mind is just full. “I can’t remember another thing,” you might say. That is a total myth. Many researchers and memory experts suggest that we do not come even close to using all of our memory’s
As an inner-city Chicago kid, I was always driven for success. I came from a family of five children and parents with limited education. Although we were far from wealthy, there was an expectation that the children would have two characteristics: integrity and striving to be our best.

Because of our financial situation, the opportunity for a college education was always a desire for me, but not a certainty. I was fortunate enough to receive an entry scholarship to Loyola University of Chicago. Frankly, I did not take very good advantage of this opportunity early on in my college career. My performance was not up to expectation. My professors were pretty candid about this, and I knew I needed to refocus. It was at this point that I determined the approach that has influenced the rest of my career:

**EDUCATION IS AN OPPORTUNITY AND A PRIVILEGE.**

From that time, I attacked every class with interest, curiosity, and a desire to maximize my learning. Upon graduation, this attitude and approach carried over into my work life—no job was too trivial, and every person was one from whom I could learn. As I reflect on those college years, I realize that they were among my most formative ones.

The importance of preparing and “doing one’s homework” became very clear to me. Without sounding too “preachy,” I would offer the following suggestions on preparation:

- **Be clear on what you want your outcome to be.** It may be getting an A on an exam, mastering a particular subject, or proving to the instructor that you could survive the semester!

- **Determine what you will need to prepare.** Do not wait until you are in the study mode to determine that one of the texts and the two pieces of research that you need are not available. Get the most out of your study time by anticipating what will be needed.

- **Plan your time.** Always begin with scheduling your time. The enemy of preparation is time. The word “cramping” was probably invented for or by students. You are always better served if you can prepare for an exam or write a research paper over time. This allows for review, improvement, and final preparation.

- **Work hard.** It is important to know that there are not any real shortcuts in life. Things earned do come from the sweat of our brow. When you receive those grade reports at the end of the semester, usually you will get what you deserve!

- **Celebrate.** When you have achieved what you set out to do, celebrate. If only for a short time, allow yourself the luxury of having succeeded at a goal.

**QUESTIONS FOR REFLECTION**

Consider responding to these questions online in the World of Work module of the Companion Website.

1. How have the expectations of others affected your decisions about your program?
2. Have you ever learned from those with whom you work like Mr. Peterson did? Who was the person and what did you learn?
3. Why is it important to celebrate your successes?
potential. One study in the 1970s concluded that if our brains were fed 10 new items of information every second for the rest of our lives, we would never fill even half of our memory’s capacity (Texas A&M University). Some researchers suggest that we never forget anything—that the material is simply “covered up” by other material, but it is still in our brain.

So, why is it so hard to remember the formula for drug conversions or the diagnostic chart for an engine or the finer points of a schematic or Ohm’s Law? The primary problem is that we never properly filed or stored this information.

What would happen if you typed a letter into the computer and did not give it a file name? When you needed to retrieve that letter, you would not know how to find it. You would have to search through every file until you came across the information you needed. Memory works in much the same way. We have to store it properly if we are to retrieve it easily at a later time. This section will detail how memory works and why it is important to your studying efforts. Next, you will find some basic facts about memory.

- Everyone remembers some information and forgets other information.
- Your senses help you take in information.
- With very little effort, you can remember some information.
- With rehearsal (study), you can remember a great deal of information.
- Without rehearsal or use, information is forgotten.
- Incoming information needs to be filed in the brain if you are to retain it.
- Information stored, or filed, in the brain must have a retrieval method.
- Mnemonic devices, repetition, association, and rehearsal can help you store and retrieve information.

Psychologists have determined that there are three types of memory: sensory memory; short-term, or working, memory; and long-term memory.

**Sensory memory.** Sensory memory stores information gathered from the five senses: taste, touch, smell, hearing, and sight. Sensory memory is usually temporary, lasting about one to three seconds, unless you decide that the information is of ultimate importance to you and make an effort to transfer it to long-term memory. Although your sensory memory bank is very large, sensory
information does not stay with you very long (Woolfolk, 2001). Sensory memory allows countless stimuli to come into your brain, which can be a problem when you are trying to concentrate on a lecture. You need to make a conscious effort to remain focused on the words being spoken and not on competing noise. When you make an effort to concentrate on the information, you are then committing this information to short-term memory.

**Short-term memory.** Short-term, or working, memory holds information for a short amount of time. Your working memory bank can hold a limited amount of information, usually about five to nine separate new facts or pieces of information at once (Woolfolk, 2001). Although it is sometimes frustrating to forget information, it is also useful and necessary to do so. If you never forgot anything, you would not be able to function. Educational psychologist Anita Woolfolk suggests that most of us can hear a new phone number, walk across the room, and dial it without much trouble, but if you heard two or three new numbers, we would not be able to dial them correctly. This is more information than our working memory can handle. If you were asked to give a person’s name immediately after being introduced, you would probably be able to do so. If you had met several other new people in the meantime, unless you used some device to transfer the name into long-term memory, you would probably not be able to recall it.

As a student, you would never be able to remember all that your instructor said during a lecture. You have to take steps to help you to remember information. Taking notes, making associations, drawing pictures, and visualizing information are all techniques that can help you to commit information to your long-term memory bank.

**Long-term memory.** Long-term memory stores a lot of information. It is almost like a computer disk. You have to make an effort to put something in your long-term memory, but with effort and memory techniques, such as rehearsal and practice, you can store anything you want to remember there. Long-term memory consists of information that you have heard often, information that you use often, information that you might see often, and information that you have determined necessary. Just as you name a file on a computer disk, you name the files in your long-term memory. Sometimes, you have to wait a moment for the information to come to you. While you are waiting, your brain disk is spinning; if the information you seek is in long-term memory, your brain will eventually find it. You may have to assist your brain in locating the information by using mnemonics and other memory devices.
This Isn’t Your Typical VCR

USING VCR3 TO INCREASE MEMORY POWER

Countless pieces of information are stored in your long-term memory. Some of it is triggered by necessity, some may be triggered by the five senses, and some may be triggered by experiences. The best way to commit information to long-term memory and retrieve it when needed can be expressed by:

- **V** Visualizing
- **C** Concentrating
- **R** Relating
- **R** Repeating
- **R** Reviewing

To **visualize** information, try to create word pictures in your mind as you hear the information. If you are being told about an interior design concept, try to see the design in your mind, or try to paint a mind picture that will help you to remember the information. You may also want to create visual aids as you read or study information.

**Concentrating** on the information given will help you commit it to long-term memory. Don’t let your mind wander. Stay focused. If you find yourself having trouble concentrating, take a small break (two to five minutes).

**Relating** the information to something that you already know or understand will assist you in filing or storing the information for easy retrieval. Relating the appearance of the African zebra to the American horse can help you remember what the zebra looks like.

**Repeating** the information out loud to yourself or to a study partner facilitates its transfer to long-term memory. Some people have to hear information many times before they can commit it to long-term memory.

**Reviewing** the information is another means of repetition. The more you see and use the information, the easier it will be to remember it when the time comes. As you review, try to remember the main points of the information. Walter Pauk, educator and inventor of the Cornell note-taking method, found in a study that people reading a textbook chapter forgot 81 percent of what they had read after 28 days (Pauk, 2001).

What Helps? What Hurts?

ATTENDING TO YOUR MEMORY

For any part of the body, there are things that help you and hurt you. Your memory is no different. Just as your body will begin to fail you without proper attention, exercise, and nutrition, if neglected or mistreated, your memory will do the same. Consider the following things that can help or hinder your memory.
MEMORY HELPERS
- Proper sleep
- Proper nutrition/diet
- Exercise
- Mental exercises such as crossword puzzles, brain teasers, name games
- A positive mind-set
- The proper environment
-Scheduled study breaks
- Repetition and visualization

MEMORY HINDRANCES
- Internal and external distractions
- Alcohol
- Drugs
- Stress
- Closed-mindedness (tuning out things you don’t like)
- Inability to distinguish important facts from unimportant facts

With these in mind, try to develop habits that incorporate the “memory helpers” into your life. Eat properly, get enough rest, take study breaks if you feel yourself drifting or getting tired, find the proper place to read and study, keep your mind sharp by reading for pleasure or doing crossword puzzles, and above all, approach your studying with a positive attitude.

KNOWING VERSUS MEMORIZING

Why don’t you forget your name? Why don’t you forget your address? The answer is that you KNOW that information. You OWN it. It belongs to you. You’ve used it often enough and repeated it often enough that it is highly unlikely that you will ever forget it. Conversely, why can’t you remember the details of Maslow’s Hierarchy of Basic Needs or Darwin’s Theory of Evolution? Most likely because you memorized it and never “owned” it.

If you think back to what you can and can’t remember, memorization plays a great role. Rote memory is when you literally memorize something and days later it is gone. You memorized it because you needed it for something like a test or a discussion, but it was not important enough to you to know it for life.

Knowing something means that you have made a personal commitment to make this information a part of your life. For example, if you needed to remember the name Stephen and his phone number of 925-6813, the likelihood of your remembering this depends on attitude. Do you need to recall this information because he is in your study group and you might need to call him, or because he is the caregiver for your infant daughter while you are in class? How badly you need that name and number will determine the commitment level that you make to just memorizing it (and maybe forgetting it) or knowing it (and making it a part of your life).
Think about your study habits for a moment. When you are reading your chapter, listening in class, or studying at home, what is your commitment level? How much energy, brain-power, zeal, and fervor do you put into it? Again, it will depend on how you perceive the value of that information.

The difference between rote memory and knowing (understanding) can make a dramatic and permanent change in every area of your life, certainly in your role as a college student. Rote memory is a task of repeating until you have memorized. Knowing is making a commitment to understanding relationships, making associations, comparing and contrasting, classifying, demonstrating, describing, and applying what you have learned. After you have read a chapter, visualized the information, related it to something you already know, and reviewed it for accuracy, ask yourself a few questions. These questions can help you KNOW the information, thus helping you transfer it to long-term memory and life-long ownership.

Questions such as these can help you move from simple memorization to ownership of the material:

- Can I relate \( x \) to \( y \)?
- Can I illustrate how \( x \) does \( y \)?
- Can I compare and contrast \( x \) to \( y \)?
- Can I apply \( x \) to \( y \) in the real world?

- Can I distinguish \( x \) from \( y \)?
- Can I define, identify, name, and describe \( x \)?
- Can I solve the problem of \( x \)?
- Can I modify or rearrange \( x \) to make it work with \( y \)?
- Can I support the theory of \( x \) and \( y \)?
- Can I defend my knowledge of \( x \) or \( y \)?

**Tim McGraw**

is a country music sensation. He has recorded almost a dozen albums, has 23 number one hits, and has sold 32 million albums. However, his first series of singles failed so badly that he was told to give up his dream of becoming a country-recording artist, and one producer told him, “You’ll never make it.”

**Ready, Set, Go!**

**MEMORY AND STUDYING**

So far in this chapter, you’ve found the appropriate study environment. Now it’s time to study. That’s exciting, isn’t it? No? Well, it can be. All it takes is a positive attitude and an open mind, like Tyrone in the opening story. Next, you’ll learn about three methods of studying that you can use to put yourself in charge of the material: the SQ3R, mnemonics, and cooperative learning methods. After you’ve reviewed these methods, you may want to use some combination of them, or you may prefer to use one method exclusively. The only rule for choosing a study plan is that the plan must work for you. You may have to spend a few weeks experimenting with several plans and methods to determine the one with which you are most comfortable. Don’t get discouraged if it takes you a while to find what is right for you.
S

ometimes success is due less to ability and more to zeal. The winner is the person who gives him or herself to his or her work, body and soul. —CHARLES BUXTON

THE SQ3R METHOD

You were introduced to this method in Chapter 4. This method can help you commit material to memory. As a quick review, to use SQ3R, you would:

- **Survey** the chapter: headings, photos, quotes, indentations, bolded words, etc.
- **Write** Questions from headings: use who, what, when, where, why, how.
- **Read** the chapter: look up unfamiliar words, highlight important sections, take notes while reading, paraphrase the information.
- **Recite** the information: close the text and determine if you can “tell the story” of the chapter.
- **Review** the chapter: return to the chapter often and look over the information.

MNEMONIC DEVICES

Mnemonic (pronounced ni-môn-ik) devices are memory tricks or techniques that assist you in putting information into your long-term memory and pulling it out when you need it. Tyrone used one about cats in the opening story. I recently gave a test on the basic principles of public speaking. A student asked if she had to know the parts of the communication process in order. When I replied that she should be able to recall them in order, she became nervous and said that she had not learned them in order. Another student overheard the conversation and said, “Some men can read backward fast.” The first student asked, “What do you mean by that?” I laughed and said that the mnemonic was great! The student had created a sentence to remember source, message, channel, receiver, barriers, and feedback. The relationship worked like this:

Some = Source
Men = Message
Can = Channel
Read = Receiver
Backward = Barriers
Fast = Feedback

The first student caught on fast; she could not believe how easy it was to remember the steps in order using this sentence. This is a perfect example of how using memory tricks can help you to retrieve information easily.

The following types of mnemonic devices may help you with your long-term memory.

**Jingles/rhymes.** You can make up rhymes, raps, songs, poems, or sayings to assist you in remembering information; for example, “Columbus sailed the ocean blue in fourteen hundred and ninety-two.”
As a child, you learned many things through jingles and rhymes. You probably learned your ABC’s through a song pattern, as well as your numbers. If you think about it, you can still sing your ABC’s, and maybe your numbers through the “Ten Little Indians” song. You could probably sing every word to the opening of The Brady Bunch or Gilligan’s Island because of the continual re-runs on TV. Jingles and rhymes have a strong and lasting impact on our memory—especially when repetition is involved.

**Sentences.** You can make up sentences such as “Some men can read backward fast,” to help you remember information. Another example is, “Please excuse my dear Aunt Sally,” which corresponds to the mathematical operations: parentheses, exponents, multiplication, division, addition, and subtraction.

Other sentences in academic areas include:

1. My Very Elderly Mother Just Saved Us Nine Pennies. This is a sentence mnemonic for the nine planets in order from the sun: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, Pluto.
2. Every Good Bird Does Fly is a sentence mnemonic for the line notes in the treble clef in music.

3. Some Men Help Each Other is a sentence mnemonic for the Great Lakes from west to east: Superior, Michigan, Huron, Erie, Ontario.

**Words.** You can create words. For example, Roy G. Biv may help you to remember the colors of the rainbow: red, orange, yellow, green, blue, indigo, and violet.

Other word mnemonics include:

1. HOMES is a word for the Great Lakes in no particular order: Huron, Ontario, Michigan, Erie, Superior.
2. FACE is a word mnemonic for the space notes in the treble clef.
**Story lines.** If you find it easier to remember stories than raw information, you may want to process the information into a story that you can easily tell. Weave the data and facts into a creative story that can be easily retrieved from your long-term memory.

**Acronyms.** An acronym is a word that is formed from the first letters of other words. You may see re-runs for the famed TV show *M*A*S*H*. This is an acronym for Mobile Army Surgical Hospital. If you scuba dive, you know that *SCUBA* is an acronym for Self-Contained Underwater Breathing Apparatus. Other common acronyms include:

- NASA (National Aeronautics and Space Administration)
- NASCAR (National Association of Stock Car Auto Racing)
- NASDAQ (National Association of Securities Dealers Automated Quotation)
- NATO (North Atlantic Treaty Organization)
- BART (Bay Area Rapid Transit)

**Pegging.** The peg system uses association, visualization, and attachment for remembering. With this system, you “attach” what you want to remember to something that is already familiar to you. This is a visual means to remember lists, sequences, and even categories of information. Most peg systems use numbers and rhyming words to correspond, such as:

1 = sun  
6 = sticks

2 = shoe  
7 = heaven

3 = bee  
8 = gate

4 = shore  
9 = fine

5 = alive  
10 = pen

To attach information to the number, you visually attach a word (such as *sun, shoe, bee, shore*) to the word you want to remember. For example, if you wanted to remember a shopping list that included ice cream, rice, Ajax, milk, water, and cookies, this might be your plan:

- You see **ice cream** melting in the **sun**.
- You see **rice** filling a **shoe**.
- You see **Ajax** sprinkled on a **bee**.
- You see **milk** rushing to the **shore**.
- You see **water** keeping you **alive** on a deserted island.
- You see **cookies** being offered to you on a **stick** (like a s’more).

You can also “attach” information to a thing or a place. For example, you might place information in the following places: kitchen, hall, bedroom, living room, bathroom, or dining room.

Again, you visually “attach” the information you want to remember to a part of the house (and you should use *your* house, beginning with the door in which you enter). For example, if you were giving a speech on the death penalty, you
might put the introduction in the kitchen, the transition statement in the hallway, the first point in the bedroom, and the second point in the living room. This helps you keep your information organized.

You could “attach” information to parts of a car, such as the steering wheel, the tires, the trunk, the roof, the backseat, the driver’s seat, the passenger seat. For example, if you wanted to remember the planets, you could put Mercury as the steering wheel, Venus as the tire, Earth in the trunk, Mars on the roof, Jupiter in the backseat, and so forth.

Now that you have your peg system, you can begin to “attach” information to those places and use your visual skills for recall.

**COOPERATIVE LEARNING**

There is strength in numbers. Many times, groups of people can accomplish what a single individual cannot. This is the idea behind cooperative learning. We form and use groups in our daily lives in situations like work, worship, and hobbies, and we even group our friends together. We develop groups for inspiration, excitement, and reflection, to advance social causes and to grow. Studying in groups can have the same effect. Cooperative learning can benefit you because you have pulled together a group of people who have the same interests and goals as you: to pass the course. Studying and working in groups can help you in ways such as drilling exercises, brainstorming, group sharing, and mapping.

Before we talk about those specific details, we should discuss how to form a study group. The most effective study group will include people with different strengths and weaknesses. It would do little good to involve yourself in an accounting study group with people who are all failing accounting. Here are some tips for forming a cooperative study group:

- Limit the group size to five to seven people.
- Search for students who participate in class.
- Include people who take notes in class.
- Include people who ask questions in class.
- Include people who will work diligently.
- Include people who do their share for the group.
- Invite people who are doing well in a specific area; they may not attend every meeting, but they may be of assistance periodically.

Appoint members of your team to be responsible for the following jobs:

- **Timekeeper.** This person will let the group know when it is time to move on to another topic.
Empowering Your Memory

- **Note taker.** This person will keep the notes for the team and will usually assist in getting them copied for everyone in the group.
- **Facilitator.** This person will lead the group and keep the group on task during the meeting.

When the group is formed, you can engage in several different activities to learn, share, and reinforce information.

- **Questioning.** With this technique, group members bring several questions to the session. These may be predicted exam questions, questions about methods or formulas, or questions that the member was not able to answer individually.
- **Comparing.** The study group is a good place to compare notes taken in class or from the text. If you are having problems understanding a concept in your notes, maybe someone in the group can assist you. It is also a good time to compare your notes for accuracy and missing lecture information.
- **Drilling.** This technique assists you with long-term memory development. Repetition is an important step in transferring information to long-term memory. Have a group member drill the other members on facts, details, solutions, and dates. A verbal review of the information will help you and other members retain the information.
- **Brainstorming.** During each session, members can use this technique to predict exam questions, review information, and develop topic ideas for research, projects, future study sessions, and papers.
- **Sharing.** The study group is a time when you can give and receive. At the beginning or end of each session, students in the group can share the most important aspect of the lecture or readings. This will assist other members in identifying main points and issues pertaining to the lecture.
- **Mapping.** This technique can be used in a variety of ways. It is similar to the mapping system discussed in the note-taking chapter. On a board or large sheet of paper, let one member write a word, an idea, or a concept in the center. The next student will add information, thus creating a map or diagram of information and related facts. This can help the group make connections and associations and assist members in identifying where gaps in knowledge exist.

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**Studying with Small Children in the House**

For many college students, finding a place or time to study is the hardest part of studying. Some students live at home with younger siblings; some students have children of their own. If you have young children in the home, you may find the following hints helpful when it comes time to study.
Study at school. Your schedule may have you running from work to school directly to home. Try to squeeze in even as little as half an hour at school for studying, perhaps immediately before or after class. A half hour of pure study time can prove more valuable than five hours at home with constant interruptions.

Create crafts and hobbies. Your children need to be occupied while you study. It may help if you have crafts and hobbies available that they can do while you are involved with studying. Choose projects your children can do by themselves, without your help. Depending on their ages, children could make masks from paper plates, color, do pipe cleaner art or papier-mâché, use modeling clay or dough, or build a block city. Explain to your children that you are studying and that they can use this time to be creative; when everyone is finished, you’ll share what you’ve done with each other.

Study with your children. One of the best ways to instill the value of education in your children is to let them see you participating in your own education. Set aside one or two hours per night when you and your children study. You may be able to study in one place, or you may have separate study areas. If your children know that you are studying and you have explained to them how you value your education, you are killing two birds with one stone: you are able to study, and you are providing a positive role model as your children study with you and watch you.

Rent movies or let your children watch TV. Research has shown that viewing a limited amount of educational television, such as Sesame Street, Reading Rainbow, or Barney and Friends, can be beneficial for children. If you do not like what is on television, you might consider renting or purchasing age-appropriate educational videos for your children. This could keep them busy while you study, and it could help them learn as well.

Invite your children’s friends over. What?! That’s right. A child who has a friend to play or study with may create less of a distraction for you. Chances are your children would rather be occupied with someone their own age, and you will gain valuable study time.

Hire a sitter or exchange sitting services with another student. Arrange to have a sitter come to your house a couple of times a week. If you have a classmate who also has children at home, you might take turns watching the children for each other. You could each take the children for one day a week, or devise any schedule that suits you both best. Or you could study together, and let your children play together while you study, alternating homes.

Talk to the financial aid office. In some instances, there will be grants or aid to assist you in finding affordable day care for your child. Studying at any time is hard work. It is even harder when you have to attend to a partner, children, family responsibilities, work, and a social life as well. You will have to be creative in order to complete your degree. You are going to have to do things and make sacrifices that you never thought possible. But if you explore the options, plan ahead, and ask questions of other students with children and with responsibilities outside the classroom, you can and will succeed.
What Do You Mean the Test Is Tomorrow?

STUDYING IN A CRUNCH

Let’s be straight up front. No study skills textbook will ever advise you to cram. It is simply a dangerous and often futile exercise in desperation. You’ll never read the words, “Don’t waste your time studying. CRAM the night before.”

Cramming is just the opposite of what this whole chapter is about—knowing versus memorizing. Cramming will never help you know; it can only help you memorize a few things for storage in short-term memory. You may spend several hours cramming, and shortly after the test, the information is gone, evaporated, vanished!

There may be times when time runs out and the only option is to cram. If you find yourself in this spot, consider the following tips and suggestions for cramming. These probably won’t get you an A, but they may help you with a few questions.

Depressurize. Just tell yourself up front what you are doing. Don’t pretend that cramming is going to save you. Let yourself realize that you are memorizing material for short-term gain and that you won’t be able to keep it all. With this admission, your stress will diminish.

Ditch the blame game. You know you’re at fault, so accept that and move on. Sitting around bemoaning your fate will not help. Just tell yourself, “I messed up this time; I won’t let it happen again.”

Know what. When cramming, it is important to know what you’re cramming for. If you’re cramming for a multiple-choice test, you’ll need different types of information than for an essay test. Know what type of test it is for which you are studying.

Read it quick. Think about H2 FLIB. This is a mnemonic for: read the headings, highlight the important words, read the first sentence of every paragraph, read the last sentence of every paragraph, read the indented and boxed material. This can help you get through the chapter when pinched for time.

Make connections. As you are reading, quickly determine if any of the information has a connection with something else you know. Is there a comparison or contrast? Is there a relationship of any kind? Is there a cause and effect in motion? Can you pinpoint an example to clarify the information? These questions can help you with retention.

Use your syllabus or study guide. If your instructor lists questions that you should know (mastery questions) in the syllabus, or if he or she gave you a study sheet, this is the place to start. Answer those questions. If you don’t have either, look to see if the text gives study questions at the end of the chapter. Try to answer the questions using the text and your lecture notes.
See it. Visualizing the information through mapping, diagrams, photos, drawings, and outlines can help you commit this information to short-term memory.

Repeat! repeat! repeat! Repetition is the key to committing information to memory. After you read information from the text or lecture notes, repeat it time and time again. When you think you’ve got it, write it down, then repeat it again.

Choose wisely. If you’re cramming, you can’t do it all. Make wise choices about which material you plan to study. This can be driven by your study sheet, your lecture notes, or questions in your syllabus (if they are listed). One of the most important things about cramming is that this information is going to leave you. Don’t rely on it for the next test or the final. You will need to go back and re-learn (truly understand) this information to commit it to long-term memory. Good luck!
NAME: Damion Saunders
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MAJOR: Veterinary Technician AGE: 29

Below is a real-life situation faced by Damion. Read the brief case and respond to the questions.

After completing high school, I worked a few jobs and tried out a few schools, but ultimately, I began working full-time to support my family. Over the years, the cost of living grew higher and higher in California and I realized that I could not support my family on the wages I was earning. I was very interested in veterinary work and decided to pursue a career as a veterinary technician. Today, I have completed my entire course of study and now I am beginning my 200-hour externship.

It may sound like it was all easy and that I just slid through the program. Nothing could be further from the truth. Having been out of school for 10 years, it was a major adjustment to be in class four or five hours a day and then have to come home and study for another three or four hours every night. I found that my old study techniques were not working well, and I had to find a new way to study and learn.

The wake-up call that I got was on a Critical Care exam. This should have been easy for me since I was already working in a vet’s office. I thought I knew the material and did not study as much as I should have. I failed the test, and most of my classmates did, too. It was at that point that I realized this was serious business and that the only way to truly learn the material was to get involved with it, read it, study it, and basically live it.

A lot of my classmates thought they studied enough, too. I heard many excuses, but it all came down to the fact that we were not prepared. I began re-reading and highlighting important phrases and topics. I made flash cards and bookmarks to help me. I got together with classmates and formed a study group, but most importantly, I ASKED FOR HELP. The doctors in the office where I worked helped me with the things I did not understand, and so did my instructors. Basically, I built a great supporting cast to help me.

When you’re paying thousands of dollars for a degree or certificate, you need to ask for help instead of making excuses.

Today, I serve as a mentor for incoming students and I help them understand the importance of studying and asking for help before the material becomes overwhelming.

Who is your “supporting cast”? (In other words, who are the people you can turn to when you need academic help?)

How would you go about forming your own study group if one did not exist?

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What study techniques do you think you need to improve and how are you going to improve them?

_________________________________________________________________________________________________________________________________________

What changes will you have to make to your study environment to make sure you are successful?

_________________________________________________________________________________________________________________________________________

There are several memory techniques mentioned in the chapter; which one do you think will help you most? Why?

_________________________________________________________________________________________________________________________________________

What role does time management play in effective studying?

_________________________________________________________________________________________________________________________________________
Review your classroom and textbook notes.

Use the SQ3R method when studying texts.

Study your hardest material first.

Take breaks every half hour.

Study in a brightly lit area.

Have a healthy snack.

Use mnemonic devices.

Overlearn the material.

Set rules for studying.

Turn the heat down.