

Don McNea Fire School
www.FirePrep.com

Below are studying/written examination preparation strategies that will increase your chances of being promoted. We strongly suggest you take the time to review these strategies before you take your examination. These strategies have been developed by experts in the field who have helped thousands of firefighters increase their score and gain their promotion!

At our website, www.FirePrep.com, under Fire Department Assessment Center Exam Preparation, we have in-depth Assessment Center Exam Prep and strategies to put you in the top percentile over your competition and get that coveted officer badge - good luck!

PROMOTIONAL GUIDE TO HIGHER SCORES AND TEST-TAKING STRATEGIES

Study Worksheet

Many of you at some time in your life have put together a workout schedule for athletic activities. Included in this schedule were times when you were going to work out, what you would be doing and what your goals were. You should put together a similar study worksheet to help you in attaining your goal. Listed below are study strategies that can be used for the examination.

1. Time Management

You should set aside a specific time and place to study each day. If your goal is to study 8 to 10 hours a day, you should begin by studying 2 to 3 hours a day for a few days. It is just like an athletic workout, if your goal is to run 15 miles, you do not run 15 miles the first day. You gradually build up to it. It takes a lot of mental preparation and discipline to be able to sit in one place over an 8 to 10 hour period. Gradually, as you build up your study time, your retention of the material will also increase.

2. Eliminate Distractions

You should try to eliminate, as completely as possible, distractions from your study environment. These distractions compete for your attention and effect your attitude and memory of the material that you are trying to emphasize. You should also select an area with the least amount of distractions. Your study area could be a bedroom with a desk, the basement of your home, the attic, or anywhere else where you can devote your absolute attention to the task at hand. Proper lighting is important along with a comfortable chair and desk. Be sure that when you are studying, everyone else in your family knows that you are not to be interrupted.

Everybody has a different time of the day when he or she has extremely good retention capabilities. This time could be from 6:00 A.M. to 12:00 noon, or from 1:00 P.M. until 6:00 P.M., or from 9:00 P.M. until 3:00 A.M. Only you know that. As you begin to study, find out which time of the day is best for you, where you have absolute retention of the material that you are studying. It is highly recommended that you take a break every hour, whether it be for 5 to 10 minutes just to get up, walk around, get a breath of fresh air, get something to drink, and then go back to studying. For some people, these breaks might only be needed after 2 to 3 hours of studying. Again, this is a situation where you are the best judge of when a break is needed. Many times, an individual becomes fatigued while studying. At this point, the material is not absorbed as easy as it is when you are well rested. Sometimes the best thing to do is to step away from the material,

get a good night's sleep, and start over the next day. Trying to force your mind to study will only hamper the progress you are trying to make.

Also, remember that a sound body equals a sound mind. You should try to maintain a regular exercise program in which you feel good about yourself. This will put you in a better frame of mind, which in turn will enhance your studying.

3. Pinpoint Resource Materials

It is extremely important that you have your own copies of the materials for the examination. We strongly suggest that you do not split the cost of the reference materials with another individual. This would mean that you will only have half of the reference materials at any given time. There will be a point at which you want to go on to study another reference material, and you will not have it close at hand. If you are serious about attaining your goal, you should have your own resource materials, used by you only.

Look over the resource materials for the examination to get a general idea of the content and organization of the materials before putting together your studying strategies. Begin by scanning the resource materials from beginning to end. By scanning over the chapters in the book, this will give you a general idea of what you will be studying. In most reference material, scanning is made much easier through the use of chapter headings.

Look over the major headings and also the smaller headings that describe important paragraphs in each chapter. Also take a look and see if the chapters contain summaries. By looking over these chapter summaries, you can get a quick overview of the important parts and reference points contained in the chapter.

After you are done scanning the resource materials, you will come away with an idea of how long it will take to go through the book from start to finish. You should set a goal to study between 60 and 100 pages per day. When looking over the reference material, identify chapters that are job related. Examiners in this day in age are required to do a job analysis for the position. This job analysis will give the tester an idea of the most important elements required for the job. When you look over the reference materials and you see areas that are covered in your day-to-day job duties, these areas should be emphasized in your studying.

4. Reading and Studying the Reference Material

After scanning the material contained in the reference book and getting an idea of what you will be expected to learn, you should now begin reading the material. The first time reading through the material it is suggested that you start with a pencil first and bracket information in paragraphs that you feel is important or star these areas. By doing this the first time through with pencil, when you reread the material the second time you can begin highlighting the material and can erase the pencil marks for areas that you now find are not as pertinent.

It is important that you have an understanding of the material that you are reading. If you come across new or unfamiliar terms within the material, you should look up the definition in the book, if it contains a glossary, or in the dictionary. When studying, concentrate on gaining an understanding of the material that you are reading; do not try to memorize. When you memorize a fact, you will only get a right answer if the question is about a fact.

One of the keys to successful test taking is understanding principles, not memorizing facts. If you understand all of the concepts and principles, you will get all of the questions right. Study as if you

had to give a presentation of the material to a class. By doing this, you will concentrate better and will gain a more complete understanding of what you are reading.

5. Highlighting and Marking

There are many different ways to highlight and mark material in your reference materials. One way is to underline material by using a pen or pencil, underlining specific sentences in a paragraph. Another way is to use a highlighter to emphasize sentences that you feel are important within the paragraph. Many times, we have seen individuals who take a highlighter and highlight 80 percent of the book. This completely defeats the purpose. In contrast, there are those who highlight only 10 or 12 points within the reference material. This also defeats the purpose. Try to find a middle ground where you are highlighting only the material that you feel will be asked by the examiner.

After highlighting the material, you will find that there are certain areas that are extremely important. In your final days of studying, this is where you should concentrate your studies. Another good idea is to make notes within the pages. These notes, whenever possible, should be in your own words.

6. Study Sheet

A study sheet is a notebook in which you take each reference material and note certain pages and paragraphs in each chapter that you feel you will need to review more thoroughly. By doing this, you target areas in the reference material in which you need a more complete understanding instead of just reading the book cover to cover. For example, the book you are studying might be IFSTA Company Officer. On a page in your notebook, you would annotate: Chapter 1, page 22, paragraph 3. You would then proceed to another area that you don't understand, which might be Chapter 4, page 29; another area Chapter 6, page 42, paragraph 2. By doing this, you will pinpoint areas in which you need to reread the material. As your studying increases, these areas should be down to zero by the time you are ready to take the examination.

7. Note-taking

There are many effective ways to take pertinent notes.

- A. Outlining chapters in the book in your own words or making notes from specific statements within the paragraphs. This might be just one statement from a single paragraph, or it could be 2 to 3 sentences in the paragraph. Whenever possible, you should try to summarize and detail your notes in your own words. By doing this, you will gain a better understanding of the material.
- B. Use index cards for note taking. For example, you might write out a sentence that states, "What is the gallons per minute for an 1 ½" line at 40 psi?" You can write the question on the front of the card and the answer on the back. You may also make index cards from specific sentences contained within paragraphs of chapters that you have highlighted and you feel are important. When you make 100-200 index cards on a specific book, it gives you a quick way to review. Be sure to mark the chapter and page number on the back of your card for an easy reference. For example, you have now made up 300 index cards on IFSTA Company Officer and have gone through these cards 2 or 3 times. You should then start taking out the cards that you feel you have a complete understanding of and only concentrate your studies on the cards in which you are still having difficulties. By doing this, you are making most of your time

management. There is no need to go over index cards or notes on material in which you have already gained an understanding.

8. Study Groups

Study groups can be a way of increasing your learning ability by studying with others. If you are in a study group, be sure to pick only partners who are serious about obtaining their promotion. Do not pick individuals who are barely studying and will use your group as a way to increase their knowledge. Study groups should be used to increase your knowledge of a reference material that you find difficult but one that someone else in the group has a better understanding.

There are many ways to conduct a study group. For example, you can emphasize one particular book at each study session or two to three. You may want to have an individual put together a 100-question test on the material that everyone in the group can take home after the session and complete. If you pick one reference material, you can go through the book chapter by chapter. If there are 3 to 4 people in the study group, each person can take one or two chapters and target questions to the group about the material contained within those chapters.

By participating in a study group, you will prepare yourself more intensely and more thoroughly. Nobody likes looking like the “dunce” of the study group, and this will help you focus your attention better. If you find that individuals within the study group are holding back other individuals, it may be a good idea to ask these individuals to leave the study group. You do not want to be held back by individuals who are not serious.

9. Study Guides

Study guides are important aspects of the studying process. These guides will pinpoint areas in which you are weak and will show you where you need to increase your studies in order to gain a better understanding of the material. Do not use these study guides as a single way of studying and forget about reviewing the reference material.

10. Cross-reference Study Book

Many examinations will include 6 to 8 reference materials. Due to the nature of firefighting, many of the same topics will be covered in different books. If you find conflicting statements in different reference books, write down the conflicting information and from which book it is contained. For example, if one book states that 1 ½” hose at 40 psi will deliver 150 gpm and another book states that 1 ½” hose at 40 psi will deliver 175 gpm. Make a notebook containing these conflicting statements. Many times an examination will specifically quote one reference material. Even though another reference material may contain the same information with a slight variance, during your protest the only answer that will be correct will be the one from the specifically stated from that reference book.

Focus Your Attention on Attaining Your Promotion

Everybody in his or her life, whether it is personal or athletic, has always wanted something extremely bad. You know the desire, the want, and the focus that you had when you wanted to attain this goal. You must have that same attitude when preparing for the promotional examination. You have to devote your time and your effort and it will require much personal sacrifice to attain this goal. During this time, many personal sacrifices will have to be made. These sacrifices include your social and family life. Remember that not only will you receive an immediate raise in salary, which will last the rest of your career, but it will also determine the pension that you retire with.

Examination Test-Taking Strategies

1. Make sure that you understand the testing format. If the exam is being proctored, make sure you listen to all of the instructions. Carefully read all the directions that are given.
2. Make sure that you are making your answers in the correct section of the answer key. Look at the answer sheet to determine if the items are arranged vertically or horizontally.
3. During the examination, check your watch periodically so that you can keep track of the time remaining.
4. When you receive the examination, scan over the entire test and determine the number of questions contained. This will give you an idea of how long you will have for each question.
5. Read each question carefully. Try to answer the question before you look at the choices. If you know the answer, compare it to the available choices and choose the most correct choice.
6. Find and underline words that harden or soften statements. Words such as “all”, “never”, “none” and “every” harden a sentence by indicating there are no exceptions. As a rule, alternatives with these words have a lesser chance of being correct. Words such as “sometimes”, “may”, “generally”, and “possibly” soften a statement and leave more room for the alternative to be correct. “And” means that one element of the alternative must be present or true in addition to the other for the alternative to be correct. “Or” means that there is a choice of situations. Only one element of the alternative must be present or true in order to be correct.
7. When you go through each of the questions on the examination, answer the easy questions first and leave the more difficult ones until you have answered all the questions that you are sure of. This will prevent you from spending too much time on any one question and will ensure that you will have time to respond to and receive credit for every question that you answer correctly. Whenever you do skip a question, be sure to identify it as skipped in your test booklet, and do not forget to come back to it. For example, you may want to put a small slash on the left of the number on your answer key. Do not put the slash to the right of the number since these exams are graded by computer scanners and this slash could be interpreted as an answer. Sometimes after going through the questions in the examination, another question will bring to mind the answer to a previously skipped question.
8. Test-taking surveys have shown repeatedly that the first answer that comes to your mind is usually the correct one. When you change it later, you will often change it to an incorrect answer. If you are looking over a question and you are not sure what the answer is, put a slash next to the alternative that first came to your mind. When you go back over this question and still are not sure which choice is correct, you will remember which one came to your mind first.

If you finish the examination before your allotted time, go back and review the examination. Do not go back to change answers unless you are absolutely sure that the answer is incorrect. For example, if you meant to be “B” down and instead marked “C”, change it. When reviewing, ensure that you have answered the question that corresponds to the number on your answer sheet.

9. When marking your answers on the answer sheet, be sure to erase any errors completely. Again, computer scanning is used to determine correct answers on your answer sheet. If you leave any type of mark or shadow in an answer that you erased, the computer may interpret it as having two answers for one question and you will receive no credit.
10. If you come to the end of the examination and find that there are 10 minutes left and you have 20 questions to answer, quickly speed-read all the questions and put an alternative down. On the vast majority of promotional examinations, they are graded on the number of correct answers compared to the total number of questions. You are not penalized for guessing. Be sure to fill in an answer for every question.

Test Anxiety

Anxiety is the strongest deterrent to successful test taking. It interferes with your ability to effectively use your cognitive processes. Anxiety blocks the search and retrieval process, so that knowledge held in your memory bank is inaccessible. We have seen cases where an individual has a thorough knowledge of the material but gets into the examination and freezes or their mind goes blank.

At the start of the examination, the best way to relax yourself is to take 4 to 5 deep breaths, inhaling and exhaling slowly. This will relax your entire body. If during the examination you feel that you are experiencing anxiety, stop and take 30 seconds to repeat these deep-breathing exercises. This will calm you down and allow your mind to think more clearly. A mind under high anxiety is one that is not thinking rationally, and you will not make correct choices. Knowing what to expect and being prepared for the examination is the best defense against test anxiety, that worrisome feeling that keeps you from doing your best.

General Pre-Test Tips

1. Be sure you know the location of the examination. It is a good idea to make a test run and determine the amount of time it will take you to reach your destination. Find out where you can park. Remember that if the exam date is on a weekday at 9:00 a.m., you must factor in rush-hour traffic. It never fails that someone will get into an accident the day that you are taking the most important exam of your life. Allow yourself an additional 45-50 minutes if you will be driving during a busy time period. Plan to arrive at the examination sight at least 30 minutes ahead of time.
2. Relax the night before the examination. Allow both your mind and body to rest. Don't study at all that night. You will be nervous the day before and the day of the examination. Much of this nervousness and high anxiety will cause you to use your stored energy. The night before the exam, it is recommended that you have a pasta dinner to load up on carbohydrates to give you that extra energy you will need for the test.
3. Be sure to get a good night's sleep. It is also recommended that you have a friend or fellow firefighter call you to make sure that you don't oversleep.
4. On the day of the examination, be sure to eat a good breakfast. However, do not eat in such quantities that you feel bloated or stuffed

5. Get up early enough to allow for a leisurely trip to the examination sight. It is also suggested that you meet someone at a set location where you can then follow each other in your own cars. This way, in the event that one of your cars breaks down, you can ride in the other car and make it to the examination on time.
6. Dress comfortably. Unless you have to go directly to the examination from an on-duty status or have to report for duty immediately after the test, dress in a relaxed, but not sloppy, style. Remember that the written examination is not a style show.
7. Avoid the use of stimulants or depressants, either of which may affect your ability to think clearly during the test.
8. Approach the test with confidence and the determination to do your best.
9. Think positively. Concentrate on what you know rather than on what you think you do not know.

ASSESSMENT CENTER EXAM SCORING PROCESS

Knowing how the process is scored is not going to provide direct knowledge that will help a candidate maximize his or her score on an assessment center. However, having some understanding of the process is a concern to some candidates and, to that extent, it is worthwhile to briefly describe some of the scoring procedures that are used in performance-based assessment programs.

The scoring process of an assessment center consists of observing and evaluating candidates' behaviors in order to come up with a score for each candidate. Because some assessment center exercises differ in how they are administered and responded to, the scoring of exercises may vary. There is no best way to score an assessment center. This chapter will take a look at one type of the scoring process of assessment centers.

Assessors, as a group or council, will observe a candidate's performance. Observing is done live or by recording the individual's presentation for later viewing. A live scoring consists of a panel of assessors sitting in a room with each candidate, evaluating the presentation simultaneously as he or she speaks. Regarding video-based scoring, the candidates give their presentation to a video camera, which can sometimes play the role of the candidate's supervisor. Video-taped assessment centers are favored by experienced assessors. Due to the increased accuracy of video recorded presentations and the lack of assessor/candidate interaction as an influencing factor, assessors are able to watch an individual several times if necessary, leading to a more accurate evaluation of the candidate's presentation.

No matter what method is used, one of several systematic procedures for recording behavior observations will be followed by the assessors. The assessor will usually be trained to first observe the candidate, whether live or video recorded, as a team. This team is the assessor council. They will then note relevant behaviors for each of the dimensions, most often using a scoring guide that shows examples of positive and negative behaviors. Assessors will both individually and as a group classify and evaluate the behaviors linked to the dimensions. On an individual basis, the council discusses the candidate's behaviors linked to the dimensions and then scores the candidate on each of the dimensions using either a consensus method or a mathematical method formulated to integrate the observations of the assessors.

The assessors will often use an odd-based scale, called a Likert scale, with 3, 5, 7 or 9 points on the scale. The scale may be a five point scale, but more often is likely to be a seven point scale. The value of using an odd-based scale, like 3, 5, or 7, is that there is always a center point on the scale, i.e., 2 for a 3-point scale, 3 for a 5-point scale, and 4 for a 7-point scale.

7 – 6.1	Superior
6 – 5.1	Very Good
5 – 4.1	Good
4 – 3.1	Clearly Competent
3 – 2.1	Competent but Needs Improvement
2 – 1.1	Clearly Needs Improvement
1 – 0.1	Poor

The assessors will use a scale similar to this one, and through either the consensus method or by plugging the individual assessor judgments into a mathematical formula, they will integrate the judgments of all the assessors into one score on the scale for each dimension. The mathematical formula is quicker, but unless restrictions are put on the assessors, averaging the different scores for the assessors can oftentimes miss the candidate's true score (i.e., Assessor A says "1," Assessor B says "3," and Assessor C says "5," which when averaged together gives the candidate a "3").

Consensus, although it takes longer, forces each of the assessors to support his/her judgment with actual behaviors given by the candidate. The consensus method is sometimes called the judgment method. Both the consensus method and the mathematical formula method are professionally accepted. The overall score for the exercise can be derived by either summing the dimension scores or using a consensus after scoring each of the dimensions to give him or her an overall score for the exercise. Either way is acceptable.

The consensus of the assessors on the score for each dimension means that each assessor feels that the final rating is an adequate and fair representation of how the candidate performed on that dimension. The advantage of this system is represented by all of the strengths of small group decision making. If anyone has ever participated in the ubiquitous exercise "Lost at Sea" used by professional training programs for decision making, you will readily see that the values of the teams that are required to use the consensus method always exceed the performance of the teams that use the statistical method. Benjamin Franklin referred to this method as the "Genius of the People." It is sometimes referred to as the modified Delphi model.

Many professionals in the field believe that three assessors are the best; that two assessors tend to increase the subjectivity of the process; and using only one assessor, of course, leaves even more room for the subjective biases of that assessor.

Of course, if one wants to consistently have three assessors scoring the exercise, the consultant should actually recruit four assessors so if an emergency, illness or Act of God requires one assessor to leave, there will still be a full panel of three assessors scoring the candidates. Also, by rotating an assessor off from time to time, fatigue is mitigated. If the number of candidates is no more than 60, then one panel of assessors can rate all candidates on an exercise. This means that the department can allot two days of training and five days of assessing (if videos were used, all candidates were recorded on the same day, and the security of the exercise could be maintained). It is very difficult to get assessors to volunteer for more than seven days away from their departments. Therefore, if the number of candidates exceeds 60, there will need to be more than one panel per exercise. It is difficult for a panel of assessors to score more than twelve oral exercises in a day and three or four traditional written in-baskets.

STUDYING FOR PROMOTIONAL EXAMS – PART I

The firefighter who wishes to rise through the ranks and be part of the managing team must acquire special knowledge and certain skills and abilities over the years. This will eventually separate the outstanding firefighter from the average firefighter.

However, knowledge and skills are not the only criteria. Many firefighters throughout the country, especially those in metropolitan areas, will have to achieve a relatively high score on an extremely competitive examination in order to be promoted to a higher rank.

Although most promotional exams are carefully designed to select “the best candidate” for the job, this is not always the case. Unfortunately, the firefighters with the best skills and/or experience are not necessarily the ones who do well on exams. Everyone probably knows a story about a fellow firefighter who has the qualifications to be an excellent officer, but does not get the promotion because he consistently scores low grades on promotional exams.

Most testing experts would probably agree that even sophisticated testing techniques do not always select the “best candidate” for the job. As a result, it is often the “good student” and not the “good firefighter” who gets the higher score and is subsequently promoted.

Still, the paper and pencil test is the most practical and objective method. It is also the most frequently used tool to promote firefighters to officer ranks.

An effective way to prepare for these exams is to become familiar with the types of questions that may appear on them. Unfortunately, depending on the municipality, sample exams are not always released to the public. In addition, the exam format may change from one test to the next or from one promotional rank to the next. The popular multiple-choice method is quickly being replaced by a combination of other types of tests such as essay, oral, in-basket multiple choice, assessment centers, etc. Because of these changes, studying from previous exams may not be an effective form of preparation. Nevertheless, knowing how exams are prepared can be useful information for the test taker.

When it comes to studying for an upcoming exam, there are many strategies you can use. Some people set aside a number of hours per week or per day to study, and they will religiously adhere to this schedule no matter what is happening around them. Many “self-help” books on memory discuss the importance of these and other study habits, such as your posture while reading.

However, what truly matters in this game is that you must provide the correct answers to most of the questions on whatever exam you are taking. The best way to do this is to learn the material and be able to retrieve it efficiently on the day of the exam. This article will give you an overview of the way information is learned, stored, and retrieved from memory, based on the latest findings in the field of cognitive psychology. (This is the branch of psychology that studies the various aspects of the processing of information.)

Some Common Misconceptions about Memory

Recognition vs recall

Because of the many misconceptions about the nature of learning and memory, “good preparation” for an upcoming examination can mean different things to different people. Indeed, our everyday language shows that most of us have a rather poor understanding of our memory processes and how we remember past experiences.

For example, we have often heard people say upon meeting a familiar person, “I know you; I never forget a face.” However, when it comes time to remembering someone’s name, perhaps under the same circumstances, we may say, “I can never remember people’s names.” These two statements reflect two distinct memory processes.

Most of the time, the first statement refers to the mechanism of recognition – matching information from the environment with information that had been previously stored in our memory. The second statement refers to the mechanism of recall – retrieving information from our memories.

For our purposes, the distinction between these two mechanisms is important. In multiple choice questions we may be able to use recognition, whereas in essay-type exams we primarily rely on recall. As you probably have noticed, we recognize much more material than we can recall.

The brain’s capacity for storing information

One of the most common misconceptions about memory or the brain in general is that “we use only 10% or 15% of our brains in thinking, remembering, and processing information.” In fact, there is no scientific evidence for this statement because it is not known what limits a human brain has for storing and processing large quantities of information over long periods of time.

Unlikely as it may sound to you, it is possible that the human brain may very well have an infinite capacity for storing information. A good example to illustrate this is people who learn three or more languages. Think of the huge amount of storage necessary to file all of those words!

Spaced vs distributed practice

Most of us spend many hours studying departmental regulations and procedures, instruction manuals, etc. One common misconception is that the more time you spend studying, the more you are going to learn. This is not necessarily true all the time. Effective learning depends on how much attention you pay to the information you are studying and the rehearsing strategies you use to memorize the information.

Investigators of human learning and memory have found that the more intense your rehearsing strategies are, the easier it will be for you to recall previously learned information. For example, “cramming” – studying large amounts of information just before the exam – is known to be a poor strategy for learning. A more effective method is to study for the same amount of time, but distribute the study time at equal intervals over a few weeks before the exam.

When you cram, there is not much time left to rehearse the material that you are studying between the beginning and the end of the cramming session. However, if you distribute the study sessions over a number of intervals, you have more time to rehearse the information and a greater chance of retaining the material.

The Current Memory Model

The latest models on how we process information have been borrowed primarily from the fields of computer science and artificial intelligence.

One of the most popular conceptual models of memory is the Atkinson-Shiffrin Model. This model uses three container-like structures that are involved in receiving, encoding, storing, and retrieving information.

The first container is called the sensory information storage (SIS). This is the first place to receive all incoming information that is picked up by the senses. In essence, this structure receives every bit of raw (unprocessed) data from the environment and retains it for a fraction of a second, for purposes of encoding. As the SIS processes the array of data, the important information is selected and sent to short-term memory (STM), while the rest is discarded.

Again, important information is maintained in STM while unwanted material is discarded. The remaining important information is then sent to long-term memory (LTM) where it is stored indefinitely, depending on the quantity and quality of rehearsal. In LTM, the information may be retrieved back to STM for a brief examination and stored again in LTM.

Information may be kept in STM for as long as we rehearse it. In other words, STM is our present conscious experience. When new material enters STM, the information that was there is automatically discarded or sent back to LTM.

Short- and long-term memory at work

We can illustrate how the system works by examining what may be occurring in your own memory system as you read this article. As you read, all of the information that is impinging on your five sense organs is initially processed by the SIS – every sound, every (tactual) sensation, every color contrast between the letters and the whiteness of the page, etc. Yet, only a small fraction of these elements with which you are bombarded reach your conscious awareness. In this case, it will be mostly the printed words on the page.

If you are truly concentrating on the writing itself, your primary awareness is that of the meaning of what you are reading. This information is what is presently being processed in STM. Whatever other stimulation you are receiving goes through the SIS, but most of it is probably discarded. Only “important” information is sent over to STM, and everything there represents your present conscious experience. Once the information is in STM, it can either receive further processing – as when you are reading a sensational headline, an absorbing book, or, hopefully, this article – or the information can be discarded – as when you are skimming through the articles in a newspaper or the advertisements in a magazine.

The levels of processing information

The levels of processing, or the quantity and quality of rehearsal of information, can range from shallow to deep. The information that is further processed in STM is then sent to LTM where it can either stay indefinitely or be brought back to STM when it is recalled.

Your ability to recall information from LTM depends on the level or depth of processing that occurs in STM. That is the quality of the rehearsal. The deeper one processes the information, the longer it will last in LTM and the easier it will be to retrieve. Theoretically, the more times you rehearse the information, the stronger that memory trace will be and the easier it will be to retrieve.

How do the levels of processing information work? An example of shallow level processing is to mechanically repeat a list of words without thinking about their meaning. An example of deep level processing is to intentionally produce an associate image or other more complicated strategy to remember information. Some artificial strategies that can enhance deep level processing will be discussed in Part II of this article.

How deeply you process certain information may depend on how motivated you are to learn it. Say you are studying certain sections of the federal or local building codes because you will be inspecting a home that you are considering purchasing. Your motivation in learning the material and in later recall will be greater under these circumstances than if you were studying the same information for an exam. If, like most students, you are not very excited about studying for an exam, but are very excited about buying a home, you will have better recall in the second case than in the first case. The “intensity” of each reading is different

The levels of processing at work

Let’s consider how you may process the information in this article. The depth of processing of this material will, of course, depend on how interesting you find this article. If you are about to take a promotional exam, chances are you will be more motivated to read it than if you are not planning to take such an exam in the near future.

If you will be taking an exam, as you read this article the information should find its way to LTM where it may stay for some time until the proper occasion arises for its recall. One such occasion may be a conversation with a fellow firefighter about the usefulness of this article. An even more appropriate situation would be just before you begin a study session for an upcoming exam. Hopefully, that’s when some of the information on memory strategies from this article will be recalled from your LTM.

When you read interesting material, several mental processes usually are activated that allow you to process the information at a deep level. Again, in the case of this article, you may find that as you read it you are producing images or verbal associations that are related to the information. These images and associations are mentally encoded with the information read. At the time of recall, the images and associations are then used to retrieve the information.

Interestingly enough, if later on you refer back to the information in the article or comment about it with a fellow firefighter, the actual recall of the information constitutes additional rehearsal of the material in STM. The information is further reinforced by additional deep-level processing, which strengthens the memory traces representing this material. Depending on the nature of rehearsal, each time you rehearse information it goes to a “deeper” level.

On the other hand, if you find the article boring and you catch yourself daydreaming or thinking about something other than what you are reading, these intervening thoughts will be processed in your

STM. Shallow-level processing of your reading material is occurring because of the competition with other thoughts. This will lead to very weak memory traces, and the information will be difficult to retrieve or perhaps become irretrievable from LTM.

You can strengthen memory traces through deep-level processing with a variety of strategies. Researchers in the field have found that the more you are “personally involved” in learning a particular piece of information, the easier it will be for you to recall that material.

The example of studying the building code for the purposes of buying one’s own house represents one instance of “personal involvement.” A more dramatic example involves learning about the proper operation of a hydraulic rescue tool. Actually operating the tool under close supervision is much more effective than merely reading the operating manual. Working with the tool further strengthens the memory traces by adding a new dimension of sensory stimulation, including auditory and tactual sensations.

Unfortunately, it is not always practical or possible to have access to this kind of “hands-on” experience to enhance the learning process. That is why you must rely primarily on written material to study for exams. In addition, and more importantly, it is likely that most fire departments give promotional exams that are based on written sources: local fire department regulations and procedures; magazine articles; or texts on different aspects of firefighting, building construction, arson investigation, etc. In Part II of this article, the various memory enhancing strategies that you can use to study for these exams will be discussed.

STUDYING FOR PROMOTIONAL EXAMS – PART II

In Part I of this article, we discussed how to prepare for an examination, some common misconceptions about memory, and the current memory model. In this article, we will describe the various memory-enhancing strategies that you can use to study for your exams. Some are easier to use than others, but most will require hard work.

Memory Strategies

Two of the most commonly used strategies to remember information are: mental imagery and mnemonic devices. Mental imagery refers to the conscious representation of information that is not presently experienced in the senses. We are interested in the visual mental image. These pictorial representations of information can be helpful in memorizing events and information.

Mnemonic devices are useful for studying numerical or verbal information. Mnemonics help you to associate unfamiliar information with familiar information. Let’s discuss these strategies in some detail.

Mental Imagery

Mental imagery is one of the easiest memory strategies you can use. It involves the ability to generate a mental image that you can associate with other material that you are having difficulty remembering. Imagery can be helpful in encoding large chunks of verbal information. The strategy is to retrieve a single picture that can generate as much information as possible.

As most people learn information, they generate images that pertain to what they are learning. For example, consider the memory system discussed in Part I. If you had a diagram of that system, it

would make it easier for you to recall how the memory system works because you would be able to associate each square with its function.

Some firefighting literature is accompanied by diagrams that show the use of symbols in pre-fire plans, fire protection equipment, safety devices, color, texture, shape of flames, etc. Diagrams of special tools can help you identify important parts, proper procedures for operation, etc.

However, much firefighting literature does not come with pictures or diagrams. In these cases, you must construct your own diagram or mental picture of the situation. Interestingly enough, researchers have found that the more bizarre image you create to encode the information to be remembered, the easier it will be for you to retrieve the information when you need it.

You can hold a great deal of information in only a few mental images. When should you employ imagery? Think of the case of essay exams. For example, suppose you are asked to size up a particular type of fire in a given type of building. In this situation, if you study by generating the appropriate mental image for sizing up a fire for each type of building, you should be able to retrieve the image.

Once the image is in your mind's eye, it allows you to proceed through the image and scan the different problems associated with that particular fire. In this way, it becomes easier for you to evaluate that situation and hopefully provide the correct answers.

Mnemonics

One problem with mental images is that not everyone can generate them easily. In addition, some types of information cannot be represented by a picture or image. In these cases, you can use mnemonic devices to help encode the information.

You may still recall a simple mnemonic that you used in grammar school to remember the colors of the rainbow: ROY G BIV stands for red, orange, yellow, green, blue, indigo, and violet.

A well-known mnemonic that is commonly used in the fire service in order to remember those gases that are lighter than air is: HA HA MICE. Each letter represents one of the gases that rise into the atmosphere in their natural state – hydrogen, ammonia, helium, acetylene, methane, illuminating (natural gas), carbon monoxide, and ethane.

Constructing mnemonics to help you memorize related information is not only an asset for study material but may prove invaluable in fireground decisions.

You can use mnemonic devices to help you recall elaborate information, even mathematical formulas. For example, some of you may have used the mnemonic SOHCAHTOA. This one still is used today to remember simple trigonometric formulas. SOH stands for sine = opposite over hypotenuse. CAH stands for cosine = adjacent over hypotenuse. TOA stands for tangent = opposite over adjacent.

You can use similar strategies to remember which substances are good conductors of heat. Silver, copper, aluminum, brass, and zinc is a list of metals ranging from the best heat conductor (silver) to the poorest (zinc). Thus, SCABZ is an effective mnemonic for remembering these substances.

One disadvantage of mnemonics is that they can be very time-consuming to construct. They force you to associate the material you are studying with other, more familiar bits of information that will be easier for you to retrieve when you need them. This strategy is useful if you can get into the habit of constructing mnemonics spontaneously as you read.

The SQ3R method

The strategies involved with mental imagery and mnemonics require you to take an active part in reading. One popular technique designed in 1970 by psychologist FP Robinson uses a different active approach. The name of the procedure is SQ3R. It stands for survey, question, read, recite, and review.

- **Survey:** Before you study from a given source, survey the material. Read the chapter's summary and its headings. More importantly, ask yourself: What is this chapter or section about? If possible, write down this question. This initial step will allow your mental processes to create the appropriate structure for the incoming information.
- **Question:** Once you have surveyed the chapter's main points, go back to the first heading, read it again, and formulate a question. Suppose you are reading a chapter on arson fires and the first heading is concerned with common signs of arson. Ask yourself what these signs might be. How are these signs detected? The main purpose for this type of questioning is to stimulate your curiosity for the topic at hand.
- **Read:** After you have asked yourself questions about the content of the first section, read the section and try to find the answer to your questions. This method should be active enough to make you "dig in" for the information you want. It forces your attention to look for specific information.
- **Recite:** This is an important step because it will help you process the information at a deep level. Once you have finished reading the chapter, look away from the text and try to recite as much information as possible. Try to answer your initial question. Use your own words and come up with your own examples. If possible, you should recite out loud. This may be an advantage for those of you who study with fellow firefighters. If you have the opportunity, recite the information to your study partner.

After you recite the information, write it down. Be brief. Note that the recitation and writing parts in this step act as rehearsals of the information and will strengthen the memory traces for that material.

- **Review:** Immediately after you have written down the information, review your notes. Make sure you understand them. You may want to review these notes and ask the same question again. Recite the answer. Does it correspond to your notes? Again, remember that all of these "active" steps help to further process the information.

This SQ3R method will work most efficiently if you repeat the question, read, and recite steps for each section within a chapter.

If the chapters in your book or manual do not have headings, you may want to create your own questions based on what you think the material will cover. Then repeat the rest of the steps.

Study Habits – Some Suggestions

There are no specific guidelines on what constitutes good study habits. Each person is different and everyone has his own style of living, learning, and thinking. Some of us like to read while sitting upright, while others like to read lying down. Posture seems to be a matter of personal preference.

The presence of noise while studying also seems to be a subjective factor. Sometimes we can do the best reading while on a noisy bus or with a loud radio playing in the background. However, you can assume that you will process the material more effectively if there are few distractions present during your studying sessions.

But there are times when, even in the most comfortable situation in a totally silent room, we simply cannot concentrate on studying. Thoughts intrude into our consciousness and break our concentration. This may simply reflect anxiety over the upcoming examination or some other personal conflict.

There are some other common sense study recommendations that most of you probably know about but seldom follow. For example: You must devote the greatest part of your study time to the material that is most likely to appear on the exam. Also, you should make a commitment to put aside a regular time slot per day for the sole purpose of completing your study schedule.

Remember that committing large amounts of information to memory takes hard mental work. The best strategy you can use to pass an exam is to study adequately. So hit the books, and good luck!

SUCCESS RULES FOR TAKING THE WRITTEN EXAMINATION

Keep these valuable examination-taking rules in mind to help you do your best on the day of your promotional examination.

Rule 1: Make Sure You Understand the Directions

During the examination, pay close attention to the directions. Follow along as the directions are presented out loud. If you are unsure about anything at all, ask questions.

Rule 2: Read the Whole Question Carefully

Be sure you know what each question asks. Be careful not to jump to conclusions or read more into a question than is there. People often write or choose wrong answers because they don't focus directly on what the question is asking, or they don't pay attention to part of the question. Some candidates may even assume that tests are designed to be tricky and, therefore, look for hidden meanings or otherwise read more into the question than warranted. Keep in mind that the tests are designed to measure the knowledge, skills and abilities that are critical for effective performance of the job.

Rule 3: Consider Your Answers Carefully

For the multiple-choice questions, be sure that you understand and consider all of the possible answers presented to you. Even if you are positive that you have found the correct answer before reading all of the choices, you should still continue to read the options. Very often, although one answer might look correct, there is actually another one that is "more" correct.

Some questions may require you to choose more than one answer from a series of possible answers. For example, a question may present a situation and provide several possible ways that someone could respond. You might be asked to identify the three or four answers that would be most likely to bring the situation to a satisfactory conclusion.

Rule 4: Use Time Efficiently

The promotional examination is designed to give you enough time to pace yourself in such a way that you should not feel rushed. Spend the last 5-10 minutes of the examination checking over it to see that all answer spaces have been filled in and you have responded to all of the questions. If some questions remain unanswered, or if you are uncertain of some of your answers, carefully re-read and consider questions that you have marked as being very difficult to answer and make last minute “guesses” on questions you are having trouble answering. In general, don’t spend too much time early on in the examination on questions that you know the answer to or on questions that seem very difficult. Follow Rule 7 for some useful tips that will help you use your time more efficiently.

Rule 5: Do Not Look for Patterns

Examinations are not designed to have an equal number of As, Bs, Cs, etc., for the correct answer to multiple choice questions. If you find that you choose one letter for your answer more often than other letters, do not start thinking that some of your answers must be wrong.

Rule 6: Find Key Words in the Multiple Choice Questions

Circle any key words that give you clues to the correct answer, so that they stand out for you. Some examples of key words include:

- always
- never
- most likely
- least likely
- maximum
- minimum
- first
- last

The following sample question demonstrates how key words can help:

Which of these would a person most likely do in a car?

- A) Drive
- B) Sleep
- C) Walk
- D) Write a letter

Walk is obviously not correct because you cannot do it in a car, so you can cross it out. You know that you can sleep and write a letter in a car, but the question asked which is most likely, and a person is less likely to do either of those things in a car. Therefore, the best answer is Drive.

Rule 7: Change Your Answers Carefully

Once you have marked a choice on the Answer Sheet, do not change the answer unless you have a good reason. Studies have shown that people more often change from a right answer to a wrong one than from a wrong to a right one. This happens because we tend to change answers under pressure at the last minute, and we are not thinking as clearly as when the answer was first chosen.

Try not to over analyze the questions or second-guess yourself. There are no trick questions on the examination. If you have applied yourself in studying, your first answer is your best answer.

Rule 8: Take Action on Each Question

You will probably find yourself in one of the following five situations when looking at the multiple choice answers. When you do, follow these tips to take action and increase your chances of choosing the right answer:

- A) You know the answer – If you have little or no doubt about the answer, mark it on the Answer Sheet. Spend no more time on the question.
- B) You are fairly sure about the answer, but want to think some more about it later – Mark your answer on the Answer Sheet and make a note such as a big “?” in the examination booklet (not on the answer sheet) so it will be easier to find it later if you have time to review your answers. If you do this with any questions, make sure you have enough time to come back to review the answer later.
- C) You know that certain answers are definitely wrong – If you have decided that one or two answers are definitely not correct, eliminate those immediately by crossing them out in the examination booklet. Then direct your full attention to the choices that are left. Even if you then have to guess as to which one of the remaining options is correct, you will have a greater chance of being right if you have already eliminated those answer options you know to be definitely wrong.
- D) You think you can figure out the answer, but it will take you a lot of time – Don’t mark any answer; just make a visible mark in your examination booklet so you can find it when you are ready to come back to it. If you do this with any questions, make sure you have enough time to come back to review the question later.
- E) You have no idea about the answer, so all you can do is guess – Make a guess and mark it on the Answer Sheet. Do not waste any more time on that question. Focus instead on those that fell into Situation B or D above, since you have a better chance of getting these correct. And who knows – maybe you will have guessed correctly! It cannot hurt you to guess.

Rule 9: Be Clear, Neat and Accurate

The small “bubbles” on your Answer Sheet where you record your responses can be confusing to follow since they are close together. If you put just one answer on the wrong line, chances are you will continue on the same way and accidentally respond incorrectly to many questions.

To make sure you mark the answer sheet properly, you will need to carefully check that your mark on the answer sheet corresponds to the appropriate question. Simply look at the number of the question you are answering, and then at the number on the line of your answer sheet where you intend to

mark your response. If, for example, you are on question “30” and your answer is “B,” make sure you are filling in “B” for question “30” on the answer sheet.

Rule 10: Stay Calm and Do Not Give Up

Every examination will have some questions that you have no trouble with and others that are more difficult. Do not let one difficult question throw you off; just get through it so you can go on to the others.

If you read a question once and do not understand it at all, take a deep breath and slowly read it again. There is no reason to give up on trying to answer a question – a little bit of work can result in a correct answer! Read each word, one at a time, otherwise you may become more nervous and have a harder time figuring out the right answer.

If you still have time left when you have answered all the questions within a section, don’t stop. Review your work and make sure you have answered all the questions. Also, look in your examination book and go back to the questions you marked as being harder to answer.

PROMOTIONAL NOTE TAKING

Taking notes seems to be a simple enough task, but there are ways to go about it that are more effective than others. By effectively taking notes, you can avoid having to refer to and carry around all of the study materials on the topic list. You can also actually teach yourself the material while going through the note-taking process.

The tips in the left-hand column below will show you how to take effective notes. The information in the right-hand column will make you aware of methods you should avoid.

What is EFFECTIVE Note Taking?	What is INEFFECTIVE Note Taking?
<ul style="list-style-type: none"> • Developing a note format that lets you review information without having to re-read a long document. • For example, index cards – use as flash cards with questions or subjects you make up on one side and the answers/important points on the back. 	<ul style="list-style-type: none"> • Highlighting important points in a long document so that you have to review the entire document.
<ul style="list-style-type: none"> • Creating a format that gathers together all the information in one place and is easily taken with you for quick review during coffee breaks, train/bus commute to work, etc. • For example, index cards, spiral notebook, 3-ringed binder. 	<ul style="list-style-type: none"> • Taking notes on the document itself.
<ul style="list-style-type: none"> • Rephrasing the information in your own words which will help in the memorization process. You are more likely to remember something you said yourself than something that someone else said. 	<ul style="list-style-type: none"> • Re-writing word-for-word the important information in the material.

READING FOR MEANING IN STUDYING FOR YOUR PROMOTIONAL EXAM

As you go through the subjects you have chosen to study, try to find the main points of the documents that focus on that subject. Ask yourself the following questions:

- What are the main points of this document?
- Which details will I need to know to do the job of a fire lieutenant?
- Which details am I already familiar with from on-the-job experience?
- Is this new information that I have never seen before?
 - If so, why haven't I heard about this?
 - Is this a new procedure which I must learn or is it something that is outdated and no longer useful? (If you are unsure, ask someone who is familiar with the procedure.)

It is easy to be reading along without actually getting the gist of the information that you are reading. As a general rule, read the material, put it aside, then ask yourself what you just read. This will ensure that you are paying attention and reading for meaning.

HOW TO SET UP AND RUN AN EFFECTIVE STUDY GROUP

Discussion and Preparation are the Keys to Group Success

The quality of group thinking and results depends on participation and discussion from everyone in the group. To make progress in group study, everyone in the group must have the opportunity to openly exchange ideas and experiences. Research shows that you remember information better when you have had a good discussion about it.

To make sure that everyone can participate and benefits from their participation, each member of the group must prepare the materials on their own before attending the group study session.

Joining/Creating a Study Group

Your study group should contain no more than six (6) team members. This will help make sure that all members get time to add to the discussion. It will also make it easier to schedule time together.

Creating a study group is like putting together a football team. You are joining together a group of players to create a team that will work together against all odds to reach a common goal!

- The Leader. You will need a person who will keep the group on track when they are losing steam. Consider choosing a leader who is an officer and can really lead the group.
- The Team Members. You will need team members who are all willing and eager to pull their own weight and specialize in a particular "position."

And consider the make-up of the team – if you have a whole team of quarterbacks, there will be no one there to catch the ball. Consider each person's strengths and weaknesses. Try to form a team in which each member is known for being really good at something and can teach the rest of the group that information. For example, one member may know a lot about General Orders while another is more knowledgeable about Rules and Regulations.

Study Session Format

Your study sessions should run anywhere between 1.5 to 2 hours in length. This will make sure that you have enough time to cover the prepared material. After the session, you may want to take a short break and review the material on your own, to reinforce what you just learned.

Remember, while the study group helps explore and confirm information, you still need to study on your own.

During the first meeting, set up the study group process and decide on the schedule of the study sessions. For example, you might decide to schedule six (6) two-hour study sessions over a three-week period.

Session 1 – Identify members of the group (remember, no more than 6 members)

- Have the group select a team leader.
- Appoint a note taker, or rotate note taking on discussions and actions.
- Set up rules. For example:
 - Speak one at a time
 - Keep a positive atmosphere
 - Don't judge people
 - No negativity
 - Recognize that learning involves some pain
 - Everyone must come to the session prepared
- Conduct an organizational meeting to start. Use a flipchart to:
 - List the key points of the fire lieutenant job
 - Decide how to best approach learning the key points
 - Set up a study schedule
 - Divide up the subjects per session
 - Assign responsibilities for who will lead which subject
 - Discuss and decide who will do what (gathering the materials, taking notes, etc.)
- Summarize and repeat the plans to make sure that everyone is in agreement and is committed to:
 - Fully preparing for each subject ahead of the session;
 - Leading the group in discussion; and,
 - Preparing 3-5 sample questions on the assigned subject.
- Close the first meeting.

To make sure that you have time to accomplish all of your goals, you may want to divide up the time in the rest of your study sessions as follows:

# of Minutes	Activity
15	Review main points from the previous meeting.
20	Question and Answer and cross-testing about the previous materials covered in the group.
30	Review this week's learning points.
10	Break
20	Leader of that session will ask specific questions to "quiz" the group, and the group will openly respond.
10	Summary of session and preview of next session.

DETERMINING WHAT TYPE OF PROMOTIONAL STUDY STYLE
IS BEST FOR YOU

Personal Study Style Worksheet

Complete the questions below to determine your personal study style. This will help you decide whether an individual, one-on-one or group study approach is best for you. You may even find that a combination approach – studying on your own part of the time and working with one or more partners at other times – is best for you. Answer each question by checking either “True” or “False.”

	<u>True</u>	<u>False</u>
1. I enjoy figuring out problems by gathering and sorting the information.	<input type="checkbox"/>	<input type="checkbox"/>
2. I dislike working with others to get a job done.	<input type="checkbox"/>	<input type="checkbox"/>
3. It is hard for me to learn from the feedback others provide me.	<input type="checkbox"/>	<input type="checkbox"/>
4. Organizing and studying on my own is fairly easy.	<input type="checkbox"/>	<input type="checkbox"/>
5. When studying, I prefer to test myself on the facts rather than have someone else test me.	<input type="checkbox"/>	<input type="checkbox"/>
6. I dislike working with others to solve problems.	<input type="checkbox"/>	<input type="checkbox"/>
7. When faced with new and uncertain tasks, I prefer to do it myself rather than having someone give me pointers and tips.	<input type="checkbox"/>	<input type="checkbox"/>
8. Other people slow me down.	<input type="checkbox"/>	<input type="checkbox"/>
9. I almost never have trouble deciding what is needed to get a job done.	<input type="checkbox"/>	<input type="checkbox"/>
10. I feel that studying is a waste of time; you either know the materials or you don't.	<input type="checkbox"/>	<input type="checkbox"/>
11. I have a photographic memory.	<input type="checkbox"/>	<input type="checkbox"/>
12. I feel that I learn more from my successes than from my failures.	<input type="checkbox"/>	<input type="checkbox"/>

Scoring Directions:

To figure out your personal study style, count how many boxes you marked True. Then use the guide below to interpret the results.

- 8-10 True answers: You will probably have greater benefit from studying on your own.
- 5-7 True answers: You may want to consider studying some things on your own, some with a partner and others with a study group.
- Less than 5 True answers: You will probably do better by working with a partner or study group.

Advantages and Disadvantages of Each Study Style

With the results from the Personal Study Style Worksheet in mind, review the advantages and disadvantages of each study style in order to make a more informed decision about the one that best fits your personal style.

Style	Advantages	Disadvantages
<p style="text-align: center;">INDIVIDUAL: Study by yourself</p>	<ul style="list-style-type: none"> • work at your own pace and schedule • may focus/concentrate better without other people around you • lets you focus on strengthening personal weaknesses 	<ul style="list-style-type: none"> • no opportunity to ask others questions • must gather and organize study materials on your own • need to be very self-disciplined and self-motivated
<p style="text-align: center;">ONE-ON-ONE: Study with one partner</p>	<ul style="list-style-type: none"> • partner may be able to answer your questions • you can verbally “quiz” each other • share the responsibility of gathering study materials and taking notes • fewer issues of coordinating schedules that with a study group • scheduled meetings will motivate you to study 	<ul style="list-style-type: none"> • only get the benefit of one other person’s knowledge • need to coordinate schedules • partner might learn/study at a different pace and show you down or speed ahead without you • you may be tempted to talk about other things and put off studying
<p style="text-align: center;">STUDY GROUP: Study in a group of 3 or more people</p>	<ul style="list-style-type: none"> • more people there for you to learn from • group members can quiz each other • many people to share the responsibility of gathering study materials, organizing and taking notes • scheduled meetings will motivate you to study • current fire lieutenants report preparation by group study as a key to success on the examination 	<ul style="list-style-type: none"> • slower learners may slow down the group • faster learners may speed ahead without you • “social issues” such as the temptation to talk about other things can take away from study time • more difficult to coordinate schedules of others • greater chance of conflict in bigger groups