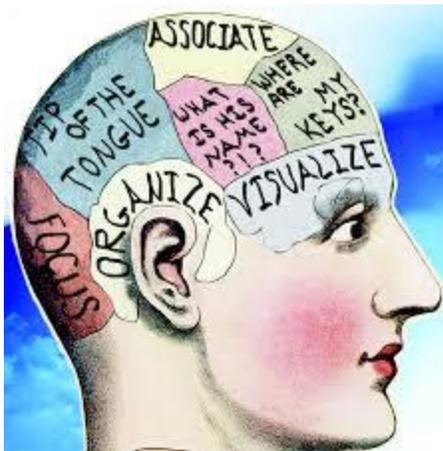


Study Skills Workshop: Memory and Exam/Test-taking Strategies



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Career Services/Academic Advising, Student Life

For more information/questions

Place in Email Subject Line: 'Study Smart'

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THE UNIVERSITY OF WINNIPEG

MEMORY

Often, a good memory is seen as something that comes naturally and a bad memory as something that cannot be changed. Actually, much of the ability to remember comes down to skill. By learning techniques that help you concentrate and organize information, you can improve your ability to remember. Improving memory, however, means taking responsibility. It will take time and effort on your part to learn and master these skills.

There are three parts to this section: the first is an examination of theories and processes, the second presents strategies for improving memory, and the third details various mnemonic techniques.

THEORIES AND PROCESSES

Underlying memory improvement are a few basic concepts. Although we will not go into extensive detail about theories of memory, we will present some of the basic ideas to help you understand why certain techniques work.

ATTENTION AND SELECTION

The first process of memory is attention. There is much more information in your environment than you can process at any one time. Thus, you must make choices (conscious and unconscious) regarding the stimuli to which you will attend. Imagine two students who are driving to Padre Island, TX for spring break. Both have different plans for how they want to spend their vacation: one listening to local bands, the other surfing and swimming. They stop to eat at a sidewalk cafe, where they are approached by a stranger who asks if they know of a surf shop nearby. Assuming they passed one on the way to the cafe, the chances are that the surfer, but not the friend, would have remembered seeing it. Had the stranger asked about music clubs, you might find the opposite scenario. Each one is likely attended to what was of interest. We will have more to say about attention later, but we present the idea here to emphasize the roles attention and selection play in our memory.

ENCODING

Once something is attended to, it must be encoded to be remembered. Basically, encoding refers to translating incoming information into a mental representation that can be stored in memory. You can encode the same information in a number of different ways. For example, you can encode information according to its sound (acoustic code), what it looks like (visual code), or what it means (semantic code). Suppose, for example, that you are trying to remember these three types of encoding from your notes. You might say each of the terms aloud and encode the sounds of the words (acoustic), you might see the three types of encoding on your page and visualize the way the words look (visual), or you might think about the meanings of each of the terms (semantic).

How does encoding apply to memory? Well, the way you encode information may affect what you remember and how you recall it later. If you encoded the three things visually or acoustically, but not semantically, you may be able to list them during a test, but you may have difficulty recalling what each term means. If you encoded them only semantically, you might be able to explain what they mean but have difficulty remembering the order in which they were listed on the page.

You may be able to remember information best if you use techniques (while retrieving the information) that are related to the way you encoded it. For example, if you encoded something visually, you will be able to recall it most easily by drawing on visual cues. You will find that many of the memory techniques discussed in this section are designed to help you encode the information in different ways.

STORAGE

Storage is the process of holding information in your memory. A distinction is often made between short-term and long-term memory. Short-term memory is just that, brief and transient. Think about looking up a new phone number in the phone book and making a call. You may remember it long enough to make the call, but do not recall it later. This is your short-term memory, which can hold a small amount of information for a short period of time. Once you stop attending to the number, perhaps after you make the call and move on to another task, you are likely to forget it. In order to remember the number for a longer period of time (and after attending to other things), you would need to store it in your long-term memory.

The transfer of information from short- to long-term memory can be achieved in many ways. Simply repeating the information can help if it's repeated enough times. For example, frequently called phone numbers are remembered because you have used (repeated) the number many times. Although simply repeating, or practicing, something can help move it into long-term memory, another strategy for transferring information is to think about it deeply. That is, **elaborate** on the information, drawing connections between what you are trying to remember and the other things with which you are already familiar. You might learn that telephone number quicker, for example, if you notice that it includes the dates of your friend's birthday, the numbers on your license plate, or some other familiar number pattern.

RETRIEVAL

Retrieval is the process of actually remembering something when you want to. If you think about tip-of-the-tongue experiences, when you know a word or name but just can't seem to recall it, you will understand how retrieval is different from storage. In terms of memory improvement, it can help to understand how the retrieval process relates to encoding and storage. Consider the relationship between retrieval and encoding. If you encoded something visually, but are trying to retrieve it acoustically, you will have difficulty remembering. Like encoding, information can be retrieved through visualizing it, thinking about the meaning, or imagining the sound, etc. The more ways information has been encoded, the more ways there are for retrieving it. Imagine that you are taking a test in which you are given a definition and asked to recall the word it describes. You may recall the page of your notes that the word was on and visualize the word, or you might say the definition to yourself and remember yourself repeating the word. Thus, memory is aided by encoding and retrieving information in multiple ways.

Retrieval relates to storage as well. Obviously the memory has to be stored in order for you to retrieve it, but knowing *how* it was stored can help. This is where elaboration and processing come in. When attempting to retrieve information, it helps to think about related ideas. For example, you are trying to remember a chemistry formula during an exam. Although you are able to visualize the page of your chemistry notes, you cannot recall the exact formula. You do remember, however, that this same formula was used in the biology class you took last semester. As you think about that class, you are able to recall the formula. This is one reason why intentionally organizing information in your memory when you are learning it helps you recall it later.

SUMMARY

Attention ----> Encoding ----> Storage ----> Retrieval

Here are the steps of memory discussed thus far. First, you select the information to which you will attend. You then code the information for storage (where it can be practiced and processed more deeply). Later, when needed, information is retrieved by using a search strategy that parallels how the information was coded and stored.

FORGETTING

Although information can be stored in long-term memory for extended periods of time, "memory decay" does take place. In other words, we can forget what we learn. In fact, we forget things quickest shortly after we learn them. This has two implications in terms of improving our memory. First, as disheartening as it is, you will often learn a great deal more than you can retain in the long run. But, before you lose heart entirely, keep in mind that the memories can be retained with a little effort. So, the second implication for improving memory involves maintaining memories with the least amount of effort. In order to retain information in memory, you must practice, think about, and sometimes relearn things. Every time you practice and relearn the information, you are reinforcing it in your memory. Taking a few moments to do frequent, but brief, reviews will save you time by helping you retain what you have learned. For example, it's a good idea to make rehearsal part of your reading and note-taking regimen. When you complete a reading assignment or a note-taking session, take a few minutes to rehearse the material as a way of moving the information from short-term to long-term memory. Not that this practice alone is sufficient to prepare for most tests, but it will enhance your understanding and recall of the material, facilitating serious study.

IMPROVING MEMORY

In the previous section, we have discussed memory processes and introduced you to some basic concepts of memory. What we have presented, however, is just the tip of the iceberg. If you review research on memory and learning, you will find that there exists a vast amount of information on the subject. But in learning to become more personally and academically effective, you are probably most interested in seeing how this knowledge can be put into practice. In other words, how can it help you improve your memory? Thus, we focus on memory techniques and strategies.

PULLING IT ALL TOGETHER. Organizing and ordering information can significantly improve memory. Imagine, for example, how difficult it would be to remember a random list of 61 letters. On the other hand, it would not be difficult to memorize the first sentence in this paragraph (consisting of 61 letters). Similarly, learning a large amount of unconnected and unorganized information from various classes can be very challenging. By organizing and adding meaning to the material prior to learning it, you can facilitate both storage and retrieval. In other words, you can learn it better and recall it easier. The following concepts can help you pull various information together in order to increase understanding and organization. This can mean organizing material on paper, such as when you make an outline or idea web, or simply organizing material in your memory, such as learning it in a particular order or making intentional associations between ideas.

ACTIVE LEARNING. You will notice that the term "active learning" comes up frequently. Active learning facilitates your memory by helping you attend to and process information. All of the memory techniques we have discussed require active learning. Even if you attend every lecture and read every assignment, there is no guarantee that you will learn and remember the information. Although you may passively absorb some material, to ensure that you remember important information requires being active and involved, that is attending to and thinking about what you are learning. Here are some techniques:

1. **THE FUNNEL APPROACH.** This means learning general concepts before moving on to specific details. When you study in this manner, you focus on getting a general framework, or overview, before filling in the details. When you understand the general concepts first, the details make more sense. Rather than disconnected bits of information to memorize, such as history dates, the material fits together within the overall framework. Seeing how the smaller details relate to one another, you process the information more deeply (which helps you store, and later retrieve, it from memory). This idea is probably familiar--there are many learning strategies based on the funnel approach. For example, the approach is used in previewing a chapter for the major ideas as a way to enhance your comprehension of details contained in the chapter. You may also notice that many textbook chapters are organized in a "general to specific" format. Finally, you probably use this type of approach when studying from an outline, matrix, or concept map. Because of their organization, these tools are particularly well-suited for learning general to specific.

2. **ORGANIZING THROUGH MEANING AND ASSOCIATION.** Earlier, we discussed the concept of making intentional associations in order to improve learning retention. What do we mean by "intentional associations"? When learning, a person continually makes associations. We make associations between what we are learning and

the environment we are in, between the information and our mental states, and between the information and our stream of thoughts. When things are associated in memory, thinking of one helps bring the other to mind. Have you ever actually retraced your path when you have forgotten where you put an object such as your keys? Often, as you approach the place where you put them, you are suddenly able to remember the act of laying them down on the table or putting them in your gym bag. This is association. The memory of putting the keys down was associated with your memory of things in the environment. You can make associations work for you by making them intentional. When you are having difficulty recalling new material, you can help bring it to mind by thinking about what you have associated it with. In other words--retrace your mental path. We will return to this idea later when we discuss specific strategies.

a) **Deep processing--relating the material to yourself.** One way to process information more deeply, and also to create meaningful associations, is to think about how the information can be personally meaningful. You might think about how the new material relates to your life, your experience, or your goals. If you can link new information to memories already stored ("mental hooks"), you'll have more cues to recall the new material.

b) **Grouping.** This idea is probably best explained with an example. Before reading ahead, take a moment to complete the following exercise.

EXERCISE: GROUPING

Read the following list of sports one time. When you are done, write down as many of the sports as you can without looking back at the list.

Snow Skiing Basketball Tennis Long Jump Bobsledding 100-Meter Dash

Hockey Baseball Ice Skate Discus Golf High Jump Volleyball Javelin

Soccer Luge Curling Cricket Decathlon Hurdles

Note the number of sports you remembered correctly. We will return to this exercise later.

You can organize material by grouping similar concepts, or related ideas, together. Arranging the material into related groups helps your memory by organizing the information. For example, in the exercise you just completed, you could have grouped all of the sports into one of the following categories: a) Winter sports, b) Track and Field sports, and c) Sports using a ball. Keeping these categories in mind, try the exercise again. If you are like most people, you will be able to remember more of the sports.

Of course, in this instance, we created a list with the intention of demonstrating grouping; thus, there were 6 or 7 sports in each category. Still, with a little thought, this strategy can be used in a variety of ways. For example, can you think of other ways that these sports could be grouped? There are individual sports, team sports, sports you may enjoy, and sports you may dislike. There are sports requiring a great deal of equipment, and sports requiring little or none. When you are trying to remember lists for a test, the concepts and words may or may not have a natural organization. Therefore, you may need to be creative when making associations. Finally, the process of organizing a list into groups can often help you to understand the relationship between the concepts better.

3. VIVID ASSOCIATIONS. We have already discussed the idea of associations: aiding storage and retrieval of new information by intentionally pairing it with something familiar. When learning something new and unfamiliar, try pairing it with something you know very well, such as images, puns, and music, whatever. The association does not have to make logical sense. Often times it is associations that are particularly vivid, humorous, or silly that stay in your mind. Some people remember names this way. For example, they may remember the name "Robert Green" by picturing Robert playing golf (on the green), wearing green clothes, or covered in green paint.

4. VISUAL MEMORY. Some people remember information best when it is encoded visually; if that is the case for you, then code information in this manner. But even if you do not consider yourself specifically "a visual learner," you may find that including visual memory can still help. After all, it is one more way of encoding and storing information--and one more way of retrieving it for a test.

There are many ways of visually encoding and retrieving information. We have already mentioned the strategy of associating concepts with visual images. But other aids to visual memory include diagrams, tables, outlines, etc. Often these are provided in texts, so take advantage of pictures, cartoons, charts, graphs, or any other visual material. You can also draw many of these things yourself. For example, try to visualize how the ideas relate to each other and draw a graph, chart, picture, or some other representation of the material. You may even want to make it a habit to convert difficult material into actual pictures or diagrams in your notes, or to convert words into mental images on the blackboard of your mind.

Finally, using your visual memory can be as simple as writing out vocabulary words, theories, or algebraic formulas. This allows you to not only practice (repeat) the information but also to see the way it looks on the page (developing a visual memory that you may be able to retrieve later). Another advantage is that it helps you take an active role in learning the material. When you draw your ideas on paper or write down things you are trying to remember, you have the opportunity to think about the information more deeply.

5. TALK IT OUT. When trying to memorize something, it can help to actually recite the information aloud. You might repeat ideas verbatim (when you need to do rote memorization), or you can repeat ideas in your own words (and thus ensure that you have a true understanding of the information). Repeating information aloud can help you encode the information (auditory encoding) and identify how well you have learned it. Some students have told us that they know the test information and are surprised when they "freeze" and cannot give adequate responses. For some students, this "freezing" may be a result of test anxiety. For others, however, it may be a result of overestimating how well they know the material. If you recite the information aloud from memory (answering questions, defining words, or using flash cards), it is often quite clear how well you know it. If you stumble in your responses, have to look up answers, or can only give a vague response, then you know that you need to study more.

Although reciting aloud can be a helpful memory technique, some people avoid it out of fear of appearing foolish ("what if someone sees me talking to myself?"). If this applies to you, work with a friend or study group. Another advantage of working with someone else is that they can inform you when you are missing important concepts or misunderstanding an idea. Keep in mind, however, that studying with others does not work for everyone. For example, some students may become anxious or intimidated in study groups and would be more comfortable studying alone.

6. VISUALIZE YOURSELF TEACHING THE MATERIAL. An effective way to enhance recall and understanding of dense material is to teach it to an imaginary audience. By doing so, you are forced to organize the material in a way that makes sense to you and to anticipate potential questions that may be asked by your students. Moreover, by articulating your lecture aloud, you will uncover gaps in your comprehension (and recall) of the material. (Far better to discover those "weak" areas before a test than during it.) After you have mastered a particular section from your textbook, try delivering an organized lecture on any topic from that section. Then check for accuracy. Don't forget to anticipate questions that students might ask about the material as a way of anticipating potential test questions.

MNEMONIC TECHNIQUES AND SPECIFIC MEMORY "TRICKS"

Mnemonic techniques are more specific memory aids. Many are based on the general memory strategies that were presented earlier. Although it can be easiest to remember those things that you understand well, sometimes you must rely on rote memory. The following techniques can be used to facilitate such memorization.

1. **ACRONYMS.** You form acronyms by using each first letter from a group of words to form a new word. This is particularly useful when remembering words in a specified order. Acronyms are very common in ordinary language and in many fields. Some examples of common acronyms include NBA (National Basketball Associations), SCUBA (Self Contained Underwater Breathing Apparatus), BTUs (British Thermal Units), and LASER (Light Amplification by Stimulated Emission of Radiation). What other common acronyms can you think of? The memory techniques in this section, for example, can be rearranged to form the acronym "SCRAM" (Sentences/acrostics, Chunking, Rhymes & songs, Acronyms, and Method of loci).

Let us suppose that you have to memorize the names of four kinds of fossils for your geology class: 1) actual remains, 2) Petrified, 3) Imprint, and 4) Molds or casts. Take the first letter of each item you are trying to remember: APIM. Then, arrange the letters so that the acronym resembles a word you are familiar with: PAIM or IMAP.

Although acronyms can be very useful memory aids, they do have some disadvantages. First, they are useful for rote memory, but do not aid comprehension. Be sure to differentiate between comprehension and memory, keeping in mind that understanding is often the best way to remember. Some people assume that if they can remember something that they must "know" it; but memorization does not necessarily imply understanding. A second problem with acronyms is that they can be difficult to form; not all lists of words will lend themselves equally well to this technique. Finally, acronyms, like everything else, can be forgotten if not committed to memory.

2. **SENTENCES/ACROSTICS.** Like acronyms, you use the first letter of each word you are trying to remember. Instead of making a new word, though, you use the letters to make a sentence. Here are some examples:

- My Dear Aunt Sally (mathematical order of operations: Multiply and Divide before you Add and Subtract)
- Kings Phil Came Over for the Genes Special (Kingdom, Phylum, Class, Order, Genus, Species)

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

EXERCISE: PRACTICE USING ACROSTICS

1. Try making up a sentence (acrostic) to remember the five mnemonic techniques discussed in this section.
2. Now come up with acrostics for several of the main sections of a chapter from one or your textbooks.

3. **RHYMES & SONGS.** Rhythm, repetition, melody, and rhyme can all aid memory. Are you familiar with Homer's Odyssey? If you are familiar with the book, then you know that it is quite long. That is why it is so remarkable to realize that this, along with many ancient Greek stories, was told by storytellers who would rely solely on their memories. The use of rhyme, rhythm, and repetition helped the storytellers remember them.

You can use the same techniques to better remember information from courses. For example, even the simple addition of familiar rhythm and melody can help. Do you remember learning the alphabet? Many children learn the letters of the alphabet to the tune of "Twinkle, Twinkle, Little Star." In fact, a student demonstrated how she

memorized the quadratic formula (notorious among algebra students for being long and difficult to remember) by singing it to a familiar tune!

Using these techniques can be fun, particularly for people who like to create. Rhymes and songs draw on your auditory memory and may be particularly useful for those who can learn tunes, songs, or poems easily. Like the other techniques in this section, however, they emphasize rote memory, not understanding. Also, when devising rhymes and songs, don't spend too much time creating them. Use these techniques judiciously and don't let them interfere with your studying.

4. **METHOD OF LOCI.** This technique was used by ancient orators to remember speeches, and it combines the use of organization, visual memory, and association. Before using the technique, you must identify a common path that you walk. This can be the walk from your dorm to class, a walk around your house, whatever is familiar. What is essential is that you have a vivid visual memory of the path and objects along it. Once you have determined your path, imagine yourself walking along it, and identify specific landmarks that you will pass. For example, the first landmark on your walk to campus could be your dorm room, next may be the front of the residence hall, next a familiar statue you pass, etc. The number of landmarks you choose will depend on the number of things you want to remember.

Once you have determined your path and visualized the landmarks, you are ready to use the path to remember your material. This is done by mentally associating each piece of information that you need to remember with one of these landmarks. For example, if you are trying to remember a list of mnemonics, you might remember the first--acronyms--by picturing SCUBA gear in your dorm room (SCUBA is an acronym).

You do not have to limit this to a path. You can use the same type of technique with just about any visual image that you can divide into specific sections. The most important thing is that you use something with which you are very familiar.

EXERCISE: METHOD OF LOCI

1. If someone reads a list of unrelated words to you, just once, how many do you think you could remember? Give it a try. Have someone read a list of 10 words to you at a slow but steady pace (about 1 word per second). Rather than using any of the memory techniques presented here, simply try to concentrate on the words and remember them. How many words did you remember?
2. Now take a few minutes to identify a path or object that you can use in the method of loci. Familiarize yourself with each of the sections of your path or object. Mentally go through each of the loci (locations) and visualize them as best you can. Remember, it is important to be able to visualize and recall each location readily. Once you have done this, have your friend read you a different list of words. This time, try to create visual images of the words associated with one of the locations. This may not come easy at first, but with practice you should be able to create these visual images more readily. If you find that you are having difficulty coming up with the images quickly, practice on some more lists until you have improved. Chances are, when you become familiar with using this technique, you will be able to remember many more words (maybe all 10 items).
3. Practice the technique to sharpen your skills.

5. **CHUNKING.** This is a technique generally used when remembering numbers, although the idea can be used for remembering other things as well. It is based on the idea that short-term memory is limited in the number of things that can be contained. A common rule is that a person can remember 7 (plus or minus 2) "items" in short-term memory. In other words, people can remember between 5 and 9 things at one time. You may notice that local telephone numbers have 7 digits. This is convenient because it is the average amount of numbers that a person can keep in his or her mind at one time.

When you use "chunking" to remember, you decrease the number of items you are holding in memory by increasing the size of each item. In remembering the number string 64831996, you could try to remember each number individually, or you could try thinking about the string as 64 83 19 96 (creating "chunks" of numbers). This breaks the group into a smaller number of "chunks." Instead of remembering 8 individual numbers, you are remembering four larger numbers. This is particularly helpful when you form "chunks" that are meaningful or familiar to you (in this case, the last four numbers in the series are "1996," which can easily be remembered as one chunk of information).

PRACTICE MAKES PERFECT (or closer to it anyway): Okay, it may not be a mnemonic, but repeating is still a great memory aid. Remember the children's game "I'm going on a picnic and I'm bringing...." As each new object is added, the old objects are repeated. People can often remember a large number of objects this way. When remembering a list of things, you might try a similar concept. Once you are able to remember 5 items on your list without looking, add a 6th, repeat the whole list from the start, add a 7th, and so on. It can be quite intimidating to see long lists, passages, or equations that you are expected to commit to memory. Break up the information into small bits that you can learn, one step at a time, and you may be surprised at how easy it can be. You might even utilize grouping techniques, like those discussed earlier, to form meaningful groups that you can learn one at a time.

USING FLASH CARDS

- Focus in on main ideas, definition, and theories
- Test of comprehension
- Useful for both encoding and retrieval
- Can be used for essay questions

PREPARATION

- Write main idea on the front, and the answer on the back.
- Keep the cards simple. Complex ideas or concepts should be broken up over several cards.
- Don't make the question on the front too specific – keep it general.

| | |
|--|---|
| <p>(front side)</p> <p>What are the SIX stages of Bloom's Taxonomy?</p> | <p>(back side)</p> <ol style="list-style-type: none"> 1. Knowledge 2. Comprehension 3. Application 4. Analysis 5. Synthesis 6. Evaluation |
| <p>(front side)</p> <p>What is the best way to learn from lectures? (possible essay question)</p> | <p>(back side)</p> <p>Identify ways to be a good listener</p> <p>Strategies to take notes</p> <ul style="list-style-type: none"> • Cornell • Mind maps <p>Monitor comprehension</p> <p>Strategies for review</p> <p>Lecture speed</p> <p>Problem Lectures</p> |

Source: University of Texas

Another Source: [UBC Learning and Memory](#)

Test and Exam Preparation

Keep Exams in Perspective

- They test how well you do on exams as much as they test your knowledge
- Don't exaggerate the pressure
- Attending class and listening actively is good preparation

Simple Stress Relievers

- Well organized preparation
- Know what time and where the test is
- Get to bed early the night before and come to class early, but not too early
- Relax and breathe
- Read the instructions first
- Keep your thoughts present
- Visualize the location of the answer
- Keep moving through the questions

Review

- Daily: pre and post-class reviews
- Weekly: note-cards, summaries or mindmaps

Research

- What is the test format?
- Determine what is important
- Review previous tests (if available)

PACER

- **P**review the whole test and note the instructions
- **A**rrange your time
- **C**lue words (highlight key words)
- **E**asy questions first
- **R**eview test before handing it in

Tips for Answering Multiple-Choice Questions

- 1. Make sure to answer all questions on a multiple-choice test even if you have to guess.**

You have a one in four or five chance of making a correct guess on a multiple-choice question. These are good odds.

You may remember writing tests in the past where you were penalized for guessing. It is rare for instructors to do this now.

- 2. Read all choices before answering the question.**

Multiple-choice questions often require that you choose the *best* possible answer out of four or five choices that all sound true in some way. If you stop reading after the first choice, you may miss the choice that is *most* correct.

- 3. Skip over difficult questions, and come back to them later.**

Skipping difficult questions ensures that you get time to answer all of those questions that you *do* know. By answering the question that you know, you will feel more confident for the rest of the test.

Before you skip over a question, cross out choices that are clearly incorrect to save time when you return to the question.

- 4. Try to figure out what the answer is *not*.**

You increase your chances of making a correct choice if you eliminate one or two of the choices.

For example,

Nutritionists agree that if one is hungry before bed, it is best to have a:

- peach
- apple
- glass of water
- full-course meal

Choice d) is clearly *not* the answer. Instructors will often include funny choices to break the tension. Choice b) is not the answer because it is grammatically incorrect. By eliminating two of the choices, you now have a 50% chance of getting the right answer.

5. Watch for tricky questions

One little word or suffix can change the entire meaning of a statement. Read very carefully and underline key words in the question and choices.

Especially watch out for the word *not* and the suffixes that mean not, for example *un* and *il*, as in *unimportant* and *illogical*. Remember that two negatives make a positive. So if something is said to be not unimportant, it is the same as saying it is important.

Do not choose answers that have unfamiliar words in them. The instructor could be trying to trick you into choosing it.

6. If you are at a *complete* loss about a question, consider the following:

- **The longest choice is often the correct one.**

Instructors will often include a lot of information to make the correct choice more clear. Also, it takes more words to make a true statement than a false one.

- **One of the middle choices b) or c) is more likely to be correct.**

There is a small bias that operates when instructors are making tests. They tend to think that an answer sticks out too much if it is first or last among choices.

- **Choices like, All of the Above, None of the Above, or Two of the Above, are more likely to be the correct ones.**

Instructors tend to put a lot of correct information into a test question because they have a bias in favour of you learning the material.

- **Choose the most general or inclusive answer.**

Answers that are highly specific are less likely to be correct.

- **When two choices are the opposite of each other, choose one of them.**

It is a fairly common pattern for instructors to include the direct opposite of the correct answer. For example,

In low temperatures, a platypus experiences

- a) decreased heart rate
- b) increased heart rate
- c) more hunger
- d) stress

By choosing a) or b) you have a good chance of getting the right answer.

Tips for Answering Essay Questions

It is easy to become overwhelmed by an essay question. You may feel you have little to say, or that what you do have to say is not important enough. On the other hand, you might feel that you have a lot to say on the topic, but you do not know where to start.

Both of these problems stem from not having a realistic understanding of instructors' expectations and not knowing how to organize your thoughts.

Instructors grade essay answers on two criteria:

What you say (content)

How you say it (organization, grammar, writing style, etc.)

Concentrate your efforts on presenting a few ideas well.

What to say

The instructor wants to see that you have a general understanding of the question. You are not expected to list every single detail. Nor are you expected to know more than what has been covered in class or in your textbook. Remember that all students are under the same time constraints. No one will be able to reproduce "textbook" answers.

Unfortunately, a poorly organized paper results in a low grade regardless of how insightful the argument or how relevant the examples.

How to Say It

Make sure to include three parts in your essay: an introduction, a body, and a summary/conclusion. Depending on the amount of time given, the body can be made up of three to five paragraphs. Each paragraph should begin with a topic sentence, followed by examples.

Essay Structure

I Introduction

1. One or two sentences about your topic
2. One or two thesis sentences that state the particular aspects your essay will focus on: "The purpose of this essay is to examine..." or "This essay looks at three central issues related to..."
3. One sentence that tells the reader how you will conclude your paper. This sentence can be about the exact nature of your conclusion.

II Body

1. First supporting paragraph contains topic sentence 1, followed by three or more examples that illustrate the topic sentence.
2. Second supporting paragraph contains topic sentence 2, followed by three or more examples that illustrate that topic sentence.
3. Second supporting paragraph contains topic sentence 3, followed by three or more examples that illustrate that topic sentence.

III Conclusion

1. Briefly summarize the key points of the essay.
2. Restate your conclusion.

Test-Taking Strategies

-  Get enough sleep, eat a nutritious breakfast, and stay hydrated.
-  Have materials ready and arrive early to prevent panic.
-  Think positively, relax, and focus on doing your best.
-  Read all directions carefully and ask for help if you're confused.
-  Preview the entire test and determine how to pace yourself.
-  Read each question carefully and answer the entire question.
-  Skip questions you can't answer; go back to them later.
-  Read all multiple-choice answers before choosing one.
-  Avoid answers with absolute words like "never" and "always."
-  Give an answer for all questions; you might earn partial credit.
-  Take your time and focus, even if other students finish early.
-  Review all answers, if time allows, to avoid careless errors.