# Student Success Guide

# Study Skills

**Robert Todd Carroll**

**Student Success Guide – Study Skills**

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Other books by Robert T. Carroll

- *The Common-Sense Philosophy of Religion of Bishop Edward Stillingfleet, 1635-1699*. (1975). (International Archives of the History of Ideas / archives internationales d'histoire des idées). Martinus Nijhoff, The Hague

- *Student Success Guide: Writing Skills* (1990). *http://www.skepdic.com/refuge/writingskills.pdf*

- *The Skeptic's Dictionary: A Collection of Strange Beliefs, Amusing Deceptions, and Dangerous Delusions*. (2003). Wiley and Sons.

- *Becoming a Critical Thinker – A Guide for the New Millennium*. (2005). 2nd edition. Pearson Custom Publishing.
  Chapter One available online at
  http://www.skepdic.com/refuge/ctlessons/ch1.pdf

# Preface

The purpose of the ***Student Success Guide: Study Skills*** book is to provide a systematic approach to learning the skills needed by every successful student: skills such as vocabulary building, time management, listening and concentration, reading and studying textbooks, taking notes, reviewing and preparing for tests.

The ***Student Success Guide*** may be used independently by the student who wishes to improve his or her chances of success in humanities and social science courses. The book could also be used as the sole text in a Study Skills course or as an adjunct text in an English or Humanities course.

The driving idea behind the ***Student Success Guide*** is that methodical and purposive studying is the most effective and efficient. I don't claim that my method is the only one. In fact, I can't even call it **my** method, since very little of it has been originated by me. I have taken the work and suggestions of many people and applied them as I saw fit. What has resulted is a work unified by the idea that **purpose, method, practice, and a way of measuring achievement** are central to any effective and efficient learning.

The ***Student Success Guide*** is easy to use and understand, but it does not make studying effortless. Any method which promises amazing results but requires no work is a sham. I can't promise that if you follow the program here you will be able to learn Mandarin Chinese in a week during your sleep (as one text I reviewed promised!). The successful student will have to work hard. If you do, I can promise that you will not be uncertain about the payoff for the work put in. It has been said before, but it bears repeating: you will get out of it what you put into it.

Robert T. Carroll
Sacramento City College
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**Acknowledgment and dedication**. For the first half of my teaching career at Sacramento City College I was fortunate to have had Les Read as my colleague in the philosophy department. Les was one of my closest friends until his sudden death at age 48. Ed Stupka—who taught college success classes—Les, and I spent many fruitful hours discussing, arguing, and evaluating various teaching techniques and ideas. Without their insights and criticisms, this guide would not have been written.

The Los Rios Community College Board of Trustees granted me a sabbatical leave in the spring of 1986 to complete this project.

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# Two Essentials: Strong Vocabulary and Motivation

## VOCABULARY

The good college student--the one who can read, write and study well--must have an adequate vocabulary. Since a vocabulary cannot be inherited, it must be earned. We are all born equally ignorant in this respect: even the one with the biggest mouth was born with no words.

As you read for your college courses, you will find that at times you do not understand what the author means. Sometimes this will be due to poor writing. Even the greatest thinkers sometimes write poorly. Very often, though, your lack of understanding will be due to your weak vocabulary or your lack of background knowledge. In such cases, you may be tempted to throw up your hands in disgust and quit reading. Alternatively, you might set aside the book for a while to do the research needed to understand the author. However, a reasonable alternative would be to continue reading. Admit that you cannot understand this part of the book; but move forward, trying to understand as much as you can.

If you cannot understand something in your text due to obscure writing or due to lack of knowledge or experience, skip it and move on to what you can understand. Of course, before you begin reading an assignment, you should read any introductory material that your book provides. Also read any comments, notes or outlines provided by the author or editor. Introductions, notes, comments, outlines and summaries can provide vital information. They can help you understand the meaning and significance of the material.

Above all, keep a good dictionary at hand while you read. Of all the books you will purchase in your college career, none can be as useful as a good dictionary. A good dictionary provides more than synonyms or lists of meanings; it will give examples of words used in sentences and describe subtle differences of closely related words. Not only should you look up the meaning of any word you do not know and which hinders your understanding, you should keep a notebook or card file of new and important words or expressions and their definitions. Every day you should study your word list. Set a goal to learn one, two, five, or even ten new words a day or week.

If, after having read the introductory material to a written work and after looking up unfamiliar words in your dictionary, you still do not understand a sentence or passage, skip it. Don't worry about it any further. You have done your best. If, after finishing the whole reading assignment, you still think you should understand a sentence or passage which you had to skip, ask your teacher what it means or go to the library and do some research [see Appendix A: Using the Library].☞

[The hand icon is used to indicate that an activity follows. You should finish the activity before proceeding.]

## Activity 1 - Vocabulary Cards

1. While doing a reading assignment, use 3 x 5 index cards (or pieces of paper) to record any words you are unfamiliar with or whose meaning you are not sure of. Put one word or expression on a card. Look up the meanings of the words and write them on the backs of the appropriate cards. After the definition, give an example of the use of the word.

2. Review the cards for about 5 minutes each day for five days.

3. Test yourself at the end of the week by looking at each word and giving its meaning (without looking at the other side until ready to check your answers).
Repeat the test until you know each word.

| |
|---|
| fulsome |

| |
|---|
| offensively flattering or insincere<br><br>Example: "Mrs. Bistro is always the first with a word of praise but her manner is fulsome." |

## Activity 2 - Vocabulary: Prefixes

Dr. James I. Brown of the University of Minnesota put together a list of 14 words, which he claims can be used to build a super vocabulary. Each of the 14 basic words consists of a prefix and a root. The 14 master words are: ***detain, intermittent, precept, offer, insist, monograph, epilogue, aspect, uncomplicated, nonextended, reproduction, indisposed, oversufficient, and mistranscribe.***

Since six of the words have two prefixes each, the list which follows consists of 20 prefixes rather than 14. Your task is to look up each prefix in a dictionary and write down its meaning. (Note: if your dictionary does not list prefixes, you need a better dictionary.) Alternative spellings of the prefixes are also given.

The first one is done for you as an example.

| PREFIX | ALTERNATE SPELLING | MEANING |
|---|---|---|
| 1. DE- | | ***down or away*** |
| 2. INTER- | | |
| 3. PRE- | | |
| 4. OB- | OC-/OF-/OP- | |
| 5. IN- | IM-/IL-/IR- | |
| 6. MONO- | | |
| 7. EPI- | | |
| 8. AD- | AC-/AG-/AL-/AN-<br>AP-/AR-/AS-/AT- | |
| 9. UN- | | |
| 10. COM- | CO-/COL-/CON-/COR- | |
| 11. NON- | | |
| 12. EX- | E-/EF- | |
| 13. RE- | | |
| 14. PRO- | | |
| 15. IN- | IR-/IL-/IM- | |
| 16. DIS- | DI-/DIF- | |
| 17. OVER- | SUR- | |
| 18. SUB- | SU-/SUC-/SUF-/SUG-<br>SUM-/SUP- | |
| 19. MIS- | | |
| 20. TRANS- | TRAN-/TRA- | |

## Vocabulary: Roots of the 14 Master Words

Below is a list of the 14 master words described in activity 2. Included is a list of their roots, their other spellings and their meanings. Look them over carefully.

| MASTER WORD | ROOT | OTHER SPELLING | ROOT'S MEANING |
|---|---|---|---|
| DETAIN | TAIN | TANT/TEN/TIN | to have, to hold |
| INTERMITTENT | MITT | MISS/MIS/MIT | to send |
| PRECEPT | CEPT | CAP/CAPT/CIP | to take, to seize |
| OFFER | FER | LAT/LAY | to bear, to carry |
| INSIST | SIST | STA/STAT | to stand, to endure, |
| MONOGRAPH | GRAPH | | to write |
| EPILOGUE | LOG | LOGY | science or body of knowledge; |
| ASPECT | SPECT | SPEC/SPI/SPY | to look |
| UNCOMPLICATED | PLIC | PLEX/PLY | bend, twist or interweave |
| NONEXTENDED | TEND | TENS/TENT | to stretch |
| REPRODUCTION | DUCT | DUC/DUIT/DUK | to lead; to make, shape or fashion |
| INDISPOSED | POS | POUND/PON/ | to put or place |
| OVERSUFFICIENT | FIC | FAC/FACT/ | to make or do |
| MISTRANSCRIBE | SCRIBE | SCRIV/SCRIP/ SCRIB/SCRIPT | to write |

## Activity 3 - Vocabulary: 14 Master Words

INSTRUCTIONS. 1) Look up each master word in the dictionary.
2) Write down its meaning.
3) Use the word or one of its cognates (a related word) in a
*The first word is done for you as an example.*

| MASTER WORD WORD | MEANING | SENTENCE USING THE MASTER |
|---|---|---|
| DETAIN | to keep from proceeding | The police ***detained*** the suspect for questioning. |
| INTERMITTENT | | |
| PRECEPT | | |
| OFFER | | |
| INSIST | | |
| MONOGRAPH | | |
| EPILOGUE | | |
| ASPECT | | |
| UNCOMPLICATED | | |
| NONEXTENDED | | |
| REPRODUCTION | | |
| INDISPOSED | | |
| OVERSUFFICIENT | | |
| MISTRANSCRIBE | | |

## Activity 4 - Vocabulary: Building Words from Prefixes

1) Find three words beginning with each prefix listed in activity 2.
2) Write down each word's meaning.
3) Use each word in a sentence.

| PREFIX | NEW WORD | MEANING | SENTENCE USING NEW WORD |
|---|---|---|---|
| DE- | defend | to ward off attack from | "A good vocabulary can help **defend** me from ignorance." |
| | default | failure to act; neglect | "He lost a friend by sheer **default**." |
| | derive | to receive or obtain from a source or origin | "He **derived** his income from an inheritance." |

## Activity 5 - Vocabulary: Building Words from Roots

For each of the roots listed on page 4, column 2:

1) Come up with three words which use the root.
2) Write down the meaning of the word.
3) Use it in a sentence.

| ROOT | NEW WORD | MEANING | SENTENCE USING NEW WORD |
|---|---|---|---|
| TAIN | **maintain** | to keep in existence or continuance; preserve | A strong defense helped us ***maintain*** our position." |
| | **sustain** | to support, hold or bear up from below | "His faith ***sustained*** him in his time of need." |
| | **retain** | to keep possession of | "Though he lost all his money, he ***retained*** his dignity.*"* |

## Activity 6 - Vocabulary: Combining Prefixes and Roots

1) Construct as many new words as you can by attaching different prefixes from the list on page 3 to different roots from the list on page 4.
2) Write down the meaning of the new word.
3) Use the word in a sentence.

***(Use your own paper to complete this exercise. Some examples are given.)***

| NEW WORD | MEANING | SENTENCE USING NEW WORD |
|---|---|---|
| DECEIVE | to mislead by a false appearance or statement | "This looks difficult, but looks are **deceiving**." |
| DEFER | to put off (action, consideration, etc.) to a future time | "I will **defer** my decision until I have considered all the evidence." |
| DESIST | to cease, as from some action or proceeding; stop | |
| DEDUCT | | |
| DEPOSE | | |
| DEFICIT | | |
| DESCRIBE | | |

## Activity 7 - Vocabulary: Prefixes and Roots

1) Go through a page or two of one of your textbooks and highlight each use of the 20 prefixes or 14 roots listed on pages 3 and 4.

2) Write down the words and their meanings.

## Independent Activities - Vocabulary Building

In addition to the suggestion made earlier that you keep a notebook or card file of new words and their definitions, which you should study and add to each day or week, the following activities should help you build your vocabulary as you progress through college.

1. **Read books on vocabulary building.** Your college or local library should have several such books.

2. **Purchase a vocabulary calendar.** Most major bookstores carry small, tear-off calendars, featuring a new word each day.

3. **Create your own glossaries or dictionaries** for each chapter of your text books.

# MOTIVATION

**Y**ou may have a rich vocabulary, but it won't do you much good if your attitude toward studying is poor. To be a successful college student, it is not enough just to want to be successful. Nor is it enough merely to have the skills necessary for success. Desire and skill are necessary, but they aren't sufficient. You will need ***motivation,*** also.

**WHAT IS MOTIVATION?** Many people confuse drive or energy or commitment with motivation. But, having a strong desire to learn, or putting a lot of energy into your studies, is not the same as being a highly motivated student. ***Motivation has to do with setting goals and moving toward them.***

**Each of the following is essential to being a highly motivated student:**

***1) Knowing what you want from college;***

***2) Planning how to achieve what you want;***

***3) Knowing what aids and hindrances there are to achieving your goals;***

***4) Committing yourself to a plan of action which takes advantage of the aids and deals intelligently with the hindrances; and,***

***5) Coming up with a meaningful way to measure your successes, short term as well as long term.***

Motivation, like vocabulary, is not something you are born with. You can develop and systematically improve your motivation. In short, a motivated student has ***a purpose, a plan and a yardstick.*** You must know what you want out of college, how to get it and how to measure your progress. It is as simple as that. ☞

## Activity 8 - Motivation

*The following activities are designed to help you focus on your purpose, plan and yardstick. Each question should be answered in a careful, reflective manner.*

1. What do you want to achieve by going to college?

2. What are you doing or planning to do to succeed at achieving your college aims?

3. What aids does the college provide to help you achieve your aims?

4. What hindrances are there which may make achieving your aims difficult?

5. What *can* you do and what *will* you do to overcome these hindrances?

6. How will you measure your success in college? Do you have short-term as well as long-term goals? How will you evaluate your attempts to achieve both kinds of goals?

# STUDY SKILLS

**A** successful college student must possess a number of skills. You must be able to read and write well, to listen and take notes well, to concentrate and take tests well, to participate in class and manage time well. The better developed these skills are, the better able you will be to achieve the goals you have set for yourself. Each of the following sections aims at helping you develop one or more of these skills.

## TIME BUDGETING

Time management may not seem to be a study skill, but effective studying requires that you spend time studying before and after class. Effective studying also requires that you preview and review material, and that you be as wide awake as possible while studying. To accomplish all these tasks effectively, you must manage your time.

Generally, the day before a class meets is the best time to prepare for the class. Since most classes meet on a regular basis, your pre-class study should be on a regular basis also. (What to do during this study time will be discussed later.)

You also need to study after each class meets. It is usually best to review what went on in class just after the class has met, when it is fresh in your mind. If possible, review class notes just before the class meets.

How much time you should spend studying depends on many things. Typically, a full-time student should plan to put in about 30 hours a week studying outside of class, roughly two hours out of class for every hour in class.

Effective study requires that you study your most difficult subjects when you are most alert, and that you not spend too much time at one stretch studying any subject. The most careful schedule will be of little value if you can't concentrate on what you are studying. Don't try to study when you are tired or agitated. Don't study in a place where you are likely to be distracted. (Turn off the music. Concentrating on two things at once is for jugglers and magicians!) If you must plaster your wall with alluring and inviting photos and posters, make sure that your back is to that wall while you study. ☞

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## Activity 9 - Time Management

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Design a weekly schedule. Begin by marking off the hours of each day you are in class. Next, schedule pre-class study times for each of your courses. Try not to schedule more than an hour at a stretch for any one subject and don't schedule more than three consecutive hours for studying. Include a five to ten minute break every hour.

Schedule about 15 minutes as soon as possible after class for reviewing material. (How to effectively review material will be discussed later.) Schedule your time to study your most difficult subjects when you are most alert.

Finally, try to schedule your studying so that when you switch from one subject to another, you change to a dissimilar subject.

# Activity 9 - Time Management

## WEEKLY SCHEDULE

| | SUN | MON | TUES | WED | THUR | FRI | SAT |
|---|---|---|---|---|---|---|---|
| 8 am | | | | | | | |
| 9 am | | | | | | | |
| 10 am | | | | | | | |
| 11 am | | | | | | | |
| 12 pm | | | | | | | |
| 1 pm | | | | | | | |
| 2 pm | | | | | | | |
| 3 pm | | | | | | | |
| 4 pm | | | | | | | |
| 5 pm | | | | | | | |
| 6 pm | | | | | | | |
| 7 pm | | | | | | | |
| 8 pm | | | | | | | |
| 9 pm | | | | | | | |
| 10 pm | | | | | | | |
| 11 pm | | | | | | | |
| 12 am | | | | | | | |

## CONCENTRATION

**T**he ability to concentrate, to focus your attention on the matter at hand and to ward off all distractions, is the basis of effective studying . Unfortunately, paying attention to anything for more than a few seconds at a time seems to be an extremely difficult thing for most human beings to do. Observe yourself being distracted while studying or listening to someone speak. You will probably find that you can't pay total attention to anything for more than about 20 or 30 seconds at a stretch.

How can you improve your ability to concentrate? The first thing you can do is remove obvious distractions. Study somewhere quiet, where you won't be disturbed or interrupted, where there are no pictures or sounds in the background. If there are, you can be sure that from time to time they will slip into the foreground and the subject you are supposed to be studying will slip into the background.

Another thing you can do to improve your ability to concentrate while studying is to get your life in order. Get your priorities straight. You are not going to be able to devote yourself to studying if your life is an emotional shambles or if you are usually exhausted from working on a job or exercising or playing. If your health is a mess, if you don't eat or sleep properly, you won't have any energy left to focus.

In addition, the ability to concentrate is directly proportionate to one's preparation. Both good listening and good reading require good preparation. (How to prepare to listen and to read will be discussed in later sections.)

Finally, concentration is a matter of will. You must consciously choose to concentrate on what you are reading or on what someone is saying. And, you must **practice** focusing your attention. ☞

## Activity 10 - Concentration

1. Write a list of the main distractions which affect your ability to concentrate while you study or are in class.

2. Suggest ways to minimize the distractions you listed.

3. Are you a distraction to others? Do you come late to class or do things in class that distract others? If so, why?

### LISTENING

**E**ffective listening requires concentration and preparation. Motivation is also a key factor in good listening. The motivated student, remember, is one with a plan, a purpose and a yardstick. The unmotivated student is generally bored. Boredom is as much internally as externally caused. Almost anyone will be bored by a lecture or a reading that he or she doesn't understand. If you haven't studied the material to be lectured on, or if you've studied it ineffectively, chances are good that you will not understand the lecture and that you will be bored. But, if you are prepared to listen and to be informed you will rarely be bored, even by the speaker who is not entertaining, dynamic, or charismatic.

If you become a good listener, it will assist you in becoming a good note taker. Note taking is an essential skill of the successful student. (Taking notes from lectures and from readings will be discussed later.) You must come to see clearly the relationship between good studying, good listening, and good note taking. They do not exist as independent skills, but as mutually supportive skills.

If you have read the assignment and taken good notes on it, then you are prepared to listen to the class lecture and discussion. If you have no idea of the significance of what the speaker is saying, then most likely you are not prepared to listen.

Now, assuming that you are prepared to listen, what can you do in the classroom to improve the effectiveness of your listening?

**PREPARE TO CONCENTRATE.** In addition to reading and studying the assignment, select a seat in the room which promises the least distraction. Sit away from known busybodies and prattlers. Get a seat with a good view----of the speaker!

**CONCENTRATE**. Force yourself to pay attention. When you find your mind wandering, catch yourself and refocus your attention on the speaker. Focus and refocus. Unless you are very special, you will have to do this for the rest of your life no matter who the speaker is and no matter what the subject.

**ATTEND**. Pay attention to the speaker's ***pattern of organization***. Use handouts, blackboard outlines, pauses or shifts in emphasis to try to figure out the form of the speaker's lecture. Separate the main point from supporting facts, examples or illustrations. Try to understand general ideas rather than individual facts. Above all, try to measure the significance of what is said.

Obviously, attending to the speaker's pattern of organization, picking out the main ideas and seeing the significance of what is said are the most difficult listening tasks. But if you have not prepared well, these tasks become impossible. And if you do not master these tasks, you will never become an effective note taker. Remember: studying, listening and note taking go hand in hand. ☞

## Activity 11 - Listening

1. Make a list of all the things that hinder you from listening well in each of your classes.

2. Make a list of suggestions for yourself as to how to overcome or minimize the hindrances you listed.

3. After each class, grade yourself on how well you listened.

# READING AND STUDYING

## READING SKILLS

**D**ifferent kinds of written works require different skills to read them. To read a philosophical or historical essay, for example, usually requires skill at identifying, analyzing and evaluating arguments and explanations. To read a lyric poem, on the other hand, requires skill at recognizing and appreciating mood, tone and rhythm.

In order to read well in your college courses, you will need a basic understanding of the essential elements of the different kinds of writing you are likely to be asked to read. The key to effective reading is knowing the *purpose* of the writing. For the sake of simplifying matters, I will divide written material into two kinds: **text books** and **primary source materials**. In the ***Student Success Guide, Part III, Reading Primary Sources***, I try to guide you through the specific purposes of certain kinds of writing (e.g., philosophy, Greek tragedy and epic poetry). Here, however, the focus is on reading text books.

**Text books** are quite varied in style, but they all share a common purpose--to convey information about an entire field of study. **Primary sources**, on the other hand, either are themselves only a part--often a minute part--of a field of study, or they focus on only a part of a field of study. In short, the text book is a book ***about*** philosophy, economics, history, etc., while a primary source ***is*** a philosophical treatise or essay, an analysis of an economic system, a history of Greece, etc. Because of this difference between text books and primary sources, you must use different skills when reading text books and when reading primary source materials. But, since text books share much in common regarding their purposes and methods of writing, we can consider the text book as if it were a single kind of book.

## EFFECTIVE STUDYING

Of course, reading is only the beginning of studying. But the more effective you become as a reader of a subject, the easier it will be for you to 1) listen effectively to lectures and discussions;
2) take worthwhile and useful notes, and 3) outline and review your texts and notes. Effective and efficient studying requires that you become skillful at each of these activities.

Knowing how to read well should make it easier for you to understand lecture material, since you will have a ***focus*** and will know the ***significance*** of the lecture material. It will also be clearer to you what the main point of the lecture is. You will be more interested in the subject when you understand it better and you will come to understand the material better as you become a more effective reader.

Becoming a more effective **reader** should help you become a more effective **listener**. Becoming a more effective listener should help you become a more efficient **note taker.** You won't try to write down everything, but only such notes as will help you remember certain key points. Because of your effective reading and listening, you will be better able to recognize key points.

**Outlining and reviewing** will also become easier as you become a more effective reader. An outline is simply a short summary of the most significant aspects of what you've read. Doing an outline will help you understand the material better, and it will aid you in reviewing for tests or papers. Doing an outline is also a good way to exercise your logical, organizational and writing skills.

Finally, the better you have read the material, listened to the lectures and the discussions, taken notes and outlined the material, the better prepared you will be to review for a test. Remember: a review is not *original* studying or learning; it is going over again what has already been learned. ***Reviewing is really relearning.*** Both learning and relearning are done most efficiently and effectively by those who are skilled at reading.

## TEXTBOOK ORIENTATION

There are several steps to reading a text book well. First, you must **orient** yourself to the text. Then, before reading a chapter you should **preview** it. While reading the chapter you should take notes and mark or highlight your text. You should create your own study questions in addition to those provided by the author. (See Activities 16-18, below.) Finally, you should answer your study questions, as well as do any assigned exercises. It is generally a good idea to do exercises even if they are not assigned; at least do enough of them to give you confidence that you understand the material. ☞

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## Activity 12 - Textbook Orientation

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1. Textbook preview checklist:

| | YES | NO |
|---|---|---|
| PREFACE | ___ | ___ |
| TABLE OF CONTENTS | ___ | ___ |
| NUMBER OF CHAPTERS | ___ | ___ |
| ANSWERS TO EXERCISES | ___ | ___ |
| INDEX | ___ | ___ |
| GLOSSARY | ___ | ___ |
| APPENDICES | ___ | ___ |
| BIBLIOGRAPHY | ___ | ___ |

2. What is the TITLE of your text? Briefly describe what you expect to find in the text.

3. Who wrote the text? List names, qualifications, potential biases, etc. (Does the text have a section About the Author(s)?)

4. When was the text written? Does it matter to you when it was written?

5. If the text has a GLOSSARY, skim through it and state what kind of information it provides.

6. If the text has an INDEX, skim through it and state what kind of information it provides.

7. If the text has any appendices, what are their titles and what kind of information do you think they will provide?

8. If the text has a bibliography, skim through it and state what kind of information it provides.

9. Examine the table of contents and answer the following questions:

a. What kind of structure does the text have? (Chronological, Problems, Topics (simple to complex?, pros and cons? parts of a whole?), etc.)

b. Can you tell from the structure of the text what the author's purpose is? Is there any evident bias revealed by the structure of the text?

10. Look through several chapters. Is there a consistent pattern of presentation? (e.g., title, subtitles, marginal notes, boxed off definitions, cartoons, summaries, study questions, exercises, answers to exercises, etc.) If there is a consistent structure to the chapters, describe it.

## PREVIEWING TEXTBOOK CHAPTERS

**B**efore reading a textbook chapter, spend ten to fifteen minutes previewing it. Previewing will give you a general idea of the content and organization of the chapter. Previewing is something like reading a guide book before setting out on a trip: knowing the landmarks and having some idea of where you are heading makes the trip more interesting and meaningful by giving your trip a focus. ☞

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## Activity 13 - Previewing a Textbook Chapter

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| 1. Preview Checklist: | YES | NO |
|---|---|---|
| a. INTRODUCTORY SECTION | ___ | ___ |
| b. CONCLUDING SECTION | ___ | ___ |
| c. SUMMARY | ___ | ___ |
| d. GLOSSARY OF TERMS | ___ | ___ |
| e. STUDY QUESTIONS | ___ | ___ |
| f. EXERCISES | ___ | ___ |
| g. CHARTS OR DIAGRAMS | ___ | ___ |
| h. OTHER _____ | ___ | ___ |

2. What is the title of the chapter?

3. Read the introduction, outline and summary, if your text has them. Try to get a feel for the **topics** brought up. Don't try to understand the material yet. Write down what you think are the major topics of the chapter.

4. Write down major headings and subheadings in the order they appear in the chapter. Indent subheadings. (Major headings are often indicated by bold type. Sub-headings should be smaller. Some texts use a numbering system. Some use italics or various indentations of heads to indicate their relationship to one another.)

5. If there are any charts, diagrams or illustrations, try to figure out their purposes and briefly state them.

6. Look at the instructions for any exercises at the end of the chapter (or section). Briefly state what you think the purpose of each exercise is.

# FOCUSED READING: THE STRUCTURE OF A CHAPTER

After you have previewed a chapter, you are ready to begin reading in a focused way. Now you have some idea as to the purpose and content of the chapter. You have something you can FOCUS on, and something around which you can direct your reading.

One way to help focus your reading is to become aware of the ***structure*** of the author's writing. You have already begun doing this by previewing the overall structure of the chapter. Now we must focus on the structure of the ***parts*** of the chapter.

Most textbook chapters are divided into sections which are further divided into subsections which may be divided into subsections themselves. Each section and subsection will have a structure, and the body of the chapter, made up of all its sections, will also have a structure. Think of the structure as the relationship of the parts to each other and to the whole that they comprise. To understand the structure of the chapter is to see how the parts of a section fit together and how the sections are related to each other. Each section or subsection is likely to have

A. AN INTRODUCTION
B. A MIDDLE PART (or BODY)
C. A CONCLUSION, OR A TRANSITION.

Each section or subsection is likely to have

A. A MAIN POINT AND MINOR POINTS
B. SUPPORT FOR THE MAIN OR MINOR POINTS.

The support for main or minor points will generally consist of

A. BACKGROUND MATERIAL and/or
B. EXPLANATORY MATERIAL and/or
C. EVIDENCE OR PROOF and/or
D. SUPPLEMENTARY MATERIAL

Background information and explanatory material clarify the ***meaning, function*** or ***significance*** of the material.

Evidence and proof are given to support the truth or reasonable certainty of claims.

Supplementary material relates the main or minor points to other material, either directly by mentioning it, or indirectly by referring you to other information or sources.

## TRANSITIONAL EXPRESSIONS

While the sections or subsections of a chapter have their own structure, they must be connected together to give the whole body of the chapter its singular structure. To indicate a shift from section to section, or subsection to subsection, or a shift from one idea to another supporting or contrasting point, writers use ***transitional expressions.*** These expressions not only mark shifts in ideas; they also ***relate*** ideas. They connect what comes before them with what comes after them. Recognizing transitional expressions will help you see the structure of the chapter. It will help you focus on the relationships of the various parts of the material you are reading.

**Transitional expressions** are phrases such as the following:

...on the other hand....
...while...but....
...by comparison....
...as we have said....
...in contrast....
...nevertheless....
...yet....
...but....
...again....
...also....
...besides....
...consequently....
...finally....
...for example....
...hence....
...however....
...in conclusion....
...likewise....
...moreover....
...on the whole....
...similarly....
...still....
...that is....
...therefore....
...thus....
...so....
...too...

There are, of course, many more transitional expressions than are listed here. Any expression which serves to relate previous to later material is a transitional expression. ☞

## Activity 14 - Focusing on the Structure of a Chapter

**F**or an assigned chapter which you have already previewed, do the following for a single section of the chapter:

1. At the end of each paragraph, stop and state to yourself the main idea of the paragraph. Underline or highlight any statement in the paragraph which expresses what you think is the main idea of the paragraph.

2. Circle or box any transitional expressions. Draw lines from the circle or box to lines you put under the statements which express the ideas that are connected by the transitional expression.
In the margin, next to the transitional expression, indicate what kind of connection is being made.

A. Contrast or comparison;
B. Example or illustration;
C. Explanation or proof;
D. Addition
E. Sequence.
F. Emphasis

3. Stop after reading all the subsections of the section to review the statements you have underlined or highlighted as main points. Try to identify what topic the main ideas deal with, and write that topic (in a word or phrase) in the margin of your text next to these paragraphs.

4. Repeat the above three steps for other sections of an assigned chapter. and topics. How are the sections related?

# FOCUSED READING: TYPES OF QUESTIONS

**I**t will help you focus your reading even more if you take a moment to consider why you are reading the chapter. Besides the fact that it has been assigned, let's assume that you are reading the chapter in order to gain knowledge and to prepare for tests.

If so, then the way you study the chapter should provide you with (1) a way of figuring out what questions are likely to be on a test, (2) the answers to those questions, and (3) a way to help you remember those questions and answers.

Two skills are needed to be good at answering listing questions: (1) the ability to figure out which facts or ideas should be remembered and which need not be remembered (i.e., the ability to distinguish the significant from the trivial fact or idea), and (2) the ability to remember what needs to be remembered!

**2. SEQUENCE QUESTIONS.** An exam question might ask you to present a sequence of ideas, events, etc. The sequence may be a ***time sequence***, in which events are to be presented in *chronological* order. Or, the sequence might be a ***logical sequence***, as in ordering ideas from the simple to the complex, the particular to the general, the general to the more general or the general to the more specific, etc. Often, sequence questions are ***process questions.*** They ask ***how*** did an event or idea 'X' come about? What was the process that began it and by which it developed to become 'X'? ***To do well on sequence questions the ability to see the connections between ideas and events is essential.***

**3. RELATIONSHIP QUESTIONS.** There are many kinds of relationship questions. Four of the most important types of relationship questions are:

**A. COMPARISON AND CONTRAST QUESTIONS.** These questions require you to

<u>TYPES OF QUESTIONS</u>

While it is true that there is no limit to the number of questions that teachers or text book authors can devise, there is a limit to the ***types*** of questions that can be asked about any material. Most questions you will be asked on tests will fall into one of the following four categories:

**1. LISTING QUESTIONS.** An exam might require you to ***list facts.*** These are the *who, what, when or where* questions. They may require very short answers--a list of one item, for example.

Identify significant similarities and/or differences between facts, ideas, events, arguments, etc. The ability to identify what might be compared or contrasted and how they might be compared or contrasted is essential to doing well on this type of question.

**B. CAUSE/EFFECT QUESTIONS.** These questions ask you to describe causal relationships. The ability to identify causal relationships and to distinguish significant from trivial ones is essential to doing well on this type of question.

**C. PREMISE/CONCLUSION QUESTIONS.** You might be asked questions which require that you have understood an argument which has been presented. An argument occurs when reasons are given to support a conclusion. To do well on questions concerning arguments you need the ability to identify arguments and the ability to recognize and evaluate premises with respect to their conclusion.

**D. CLASSIFICATION QUESTIONS.** You might be asked questions which ask you to define or classify items. To do well on classifying questions you need the ability to identify what kind of thing something is. When an example or item is given, you need to be able to identify what kind of thing it is an example of. ☞

## Activity 15 - Identifying Types of Questions

Study the questions asked at the end of a chapter of your text. Classify the questions as either listing, sequential, relationship or classifying. Specify whether it asks for facts, similarities, arguments, explanations, definitions, etc.

(Before starting, look at the examples.) If your text does not have questions at the end of the chapter, borrow one that does or ask your teacher to provide you with a set of the kinds of questions you will be required to answer on exams.

| QUESTION # | TYPE OF QUESTION | SPECIFICALLY |
|---|---|---|
| example 1 | listing | name of person |
| example 2 | sequence | how does it work |
| example 3 | relationship | causal |
| example 4 | classification | type of thing or process |

## THE LANGUAGE OF QUESTIONS

Certain words are likely to recur in test questions, especially in essay exams. You can anticipate what questions will be asked about a chapter by becoming familiar with the language of questions.

**1. WORDS THAT INDICATE LISTING QUESTIONS.** The following words are frequently used in listing questions:

***list....enumerate....state....define....describe....***

For example:

***List*** the causes of the civil war.
***Enumerate*** and describe the bones of the hand.
***Define*** *fascism*.
***State*** Thales' belief about the nature of reality.

**2. WORDS THAT INDICATE SEQUENCE QUESTIONS.** The following words are frequently used in sequence questions:

***trace... describe... explain...summarize***

For example:

***Trace*** the development of socialism in France from 1848 to 1954.
***Describe*** the process of osmosis.
***Explain*** how the ignition system of a 1965 Chevrolet works.
***Summarize*** the events leading up to Socrates' trial.

**3. WORDS THAT INDICATE RELATIONSHIPS.** The following words are frequently used in relationship questions:

***relate...compare....contrast....discuss....evaluate***
***criticize....analyze....justify....prove....argue***
***refute....explain....review....interpret....outline***
***summarize....diagram....what caused.....***

For example:

"***Relate*** (or, ***what is the relationship between***) Plato's idea of the just person and his idea of the just state." In a question asking you to relate items or show the relationship between them, your answer should focus on making connections and associations, such as similarities and dissimilarities or causal

connections. Usually, your answer should stick to being descriptive, rather than critical or analytical.

"***Compare*** Plato's idea of virtue with that of Aristotle." In a question asking you to compare items, your answer should point out similarities and differences.

"***Contrast*** the notions of justice presented by Hume and Aquinas." In a question asking you to contrast items, your answer should point out differences.

"***Discuss*** the criticisms Nietzsche makes of Christianity." In a question asking you to discuss an item, your answer should look at the item from various sides and consider
it from different viewpoints.

"***Evaluate*** Spinoza's argument for determinism." In a question asking you to evaluate an item, your answer should present both good and bad points, advantages and disadvantages, strengths and weaknesses.

"***Criticize*** Sartre's idea of freedom." In a question asking you to criticize an item, your answer should give your own or others' opinions as to the merits or demerits, advantages or disadvantages, strengths or weaknesses of the item.

"***Analyze*** the arguments for the existence of God presented in the text." In a question asking you to analyze an item, your answer should distinguish the separate parts of the item (such as premises and conclusions, presuppositions and stated assumptions), and describe their relationship. (**Note well**: some teachers use the words `evaluate', `criticize' and `analyze' interchangeably, and when they use one of these words they mean do all three of these things!)

"***Justify*** (or, what is the justification for) preferential treatment of women and minorities." In a question asking you to justify an item, your answer should give reasons sufficient to support the rightness of a position or action.

"***Prove*** (or, what is the proof) that there cannot be more than one omnipotent being." In a question asking you to prove an item, your answer should give reasons sufficient to warrant accepting the truth of that item.

"***Argue*** for (or give the argument for) the position that in a state of nature there would still be moral obligations." In a question asking you to argue for an item, your answer should either prove or justify that item.

"***Refute*** (or give so-and-so's refutation of) the theory of the origin of the planet Venus given by Velikovsky." In a question asking you to refute an item, your answer should show that the item is false or badly argued for.

"***Explain*** why the concept of civil liberty must entail a limitation of freedom in order to be meaningful." In a question asking you to explain an item, your answer should provide sufficient reasons for understanding why that item is as it is or happens as it happens.

"***Review*** the arguments for making abortion illegal." In a question asking you to review an item, your answer should focus more on what it is you are asked to review than on the act of reviewing itself. To review is to look at again or go over. You may be asked to review arguments, explanations, refutations, proofs, etc. (Of course, if you are in a film class and asked to do a movie review or in an English class and asked to do a book review, then 'review' means something different. In those cases, a review is a critical examination, i.e., an analysis, criticism and evaluation.)

"***Interpret*** Plato's myth of the cave." In a question asking you to interpret an item, your answer should enable the reader to understand the item better. The fact that something must be interpreted implies that its meaning is not to be taken literally. Your job as an interpreter is to aid in the understanding of the item at a non-literal level.

"***Outline*** the differences between Hobbes's view of the state of nature and that of John Locke." In a question asking you to outline an item, your answer should focus more on what it is you are asked to outline than on the process of outlining itself. To outline is to describe in an organized way, focusing on main points and omitting minor details.

"***Summarize*** the main arguments for and against the legalization of marijuana." In a question asking you to summarize, your answer should focus more on what it is you are asked to summarize than on the process of summarizing itself. To summarize is to condense, to briefly state main points.

"***Diagram*** the process of photosynthesis." In a question asking you to diagram an item, your answer should consist of a drawing, chart, plan or other graphic representation. You will be expected to label your diagram and give a brief description or explanation of it.

"***What caused (***or, ***were the causes of)*** the Civil War?" In a question asking you what caused an item, your answer should state those factors which brought the item about or made the item happen.

**4. WORDS THAT INDICATE CLASSIFICATION QUESTIONS.** The following words are frequently used in classification questions:

***define... identify...what kind...what type***

For example:

***Define*** 'distributive justice.'
***Identify*** three ***types*** of metaphysical theories.
How many ***kinds*** of evil are there, according to St. Augustine? ☞

## Activity 16: Anticipating Questions After Previewing

Before you read an assigned chapter, and using only the information you have gathered by previewing the chapter, write three ***relationship*** questions you expect the chapter to answer. ☞

## Activity 17: Anticipating Questions: Making Study Cards

As you read each section of an assigned chapter, turn the section heads and subheads into questions and write them down on index cards or 3x5 pieces of paper . Read the section to find the answer to your question. Write your answer on the other side of the card. Try to make the subhead questions relationship questions, relating subheads to main heads or other subheads. As you work your way through the chapter, try to ask primarily relationship questions.

## Activity 18 - Anticipating Questions: Marking Your Book

As you read each section of an assigned chapter, turn the section heads and subheads into questions. This time, however, instead of writing down the questions and answers on a separate sheet of paper ***mark your text in such a way that you rewrite the heads and subheads so that they become questions. And, box off parts of the text that best answer the question.***

(After using both the study card and the book marking methods, you should decide for yourself which you prefer and use your preferred method when you study in the future.)

## TAKING NOTES

**A** good student takes notes during two very different kinds of situations: while studying and while attending class. Since taking good notes during class depends on having properly studied the assigned material, you must know how to take good notes while studying before you can take good notes while attending class.

**Taking notes while studying will help you learn the material, as well as help you prepare for tests.** Some of the material you learn will be tested by ***listing questions***, e.g. definitions of terms, facts, and specific ideas. No one is expected to remember every fact, term or idea put forth in a text. You must learn how to separate what must be learned from what need not be learned, i.e., **you must develop the ability to recognize what is significant.**

Before reviewing some useful techniques for recognizing what is significant, think for a moment about what you just read: **you are not expected to remember everything you read in the text.** Why, then, don't teachers make your learning easier by giving you only material you must remember? Why do we waste your time having you read materials we don't expect you to remember? In fact, why don't we simply give you a list of definitions, facts and ideas and ask you to memorize them? Or, better yet, why don't we give you a list of questions with the answers and have you memorize them? Wouldn't you learn more efficiently if you did not have to waste time trying to figure out what questions your teachers are going to ask on tests? And wouldn't you save a great deal of time if you only had to read what you knew you would be tested on?

I don't think so. First, I think that as a matter of fact many teachers do give their students the option of memorizing specific questions and answers as the sole learning activity required to pass a course. I also think that such teachers do their students a great disservice because they are not teaching their students to develop higher-order cognitive skills.

**Remembering is a very low-order cognitive skill.** Remembering long lists of definitions or facts or true/false claims about statements, and knowing how to match names with places or words or ideas are useless abilities except for passing certain tests and courses. Unless all libraries, dictionaries, encyclopedias, tape recorders, computers, etc. are suddenly destroyed, the ability to recite strings of data will continue to be of little service. Books and machines are much more efficient at storing data than we are. What we need to learn is not more facts, but how to get the facts we need for a specific task at hand.

Another reason teachers shouldn't just give their students lists of questions and answers to memorize is because it encourages the misconception that remembering is the same as knowing. When we test your memory, we are not necessarily testing your knowledge. When you answer a question you have learned by rote memory, all we know is that you learned to memorize this material. We do not thereby know that you understand the material. More importantly, if we have not required you to exercise some higher-order cognitive skill (e.g., the kind of skill required to answer ***relational questions***), then we have failed you as teachers. We would be like stone masons who give their apprentices rocks, cement and tools along with a short description of each and send them off (to another city, no doubt) to build houses and bridges.

Finally--just one more caveat about courses demanding only memory skills--there are many brilliant persons with poor memories and many idiots with brilliant memories. (Though I can't remember where I read that!)

Though memory should be neither the sole nor the primary cognitive skill exercised in a college course, remembering a great deal of new material will be required by many of your courses. You will have to learn the meanings of new terms in order to talk intelligently about a new field of study. You will have to learn new names and facts in order to appreciate the significance of what has been done in the field you are studying, to develop your understanding and knowledge of that field and to relate new information to what you already know. In short, there will have to be new ideas learned or you will gain no knowledge at all from the course. Therefore, you will need a study method which will not only help you determine what is worth remembering but will also help you remember it.

The first step in such a method is to do a good job **previewing** each chapter of your texts. The second step--which we take up now--is to **take good notes** as you read each chapter. These notes should be of two kinds: those you write in the book itself and those you write in a notebook. We will begin with taking notes in the text itself. Examples of each of the following suggestions are given after Activity 19. (You might find it useful to refer to these examples as you read the following section.)

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## TAKING NOTES: MARKING YOUR TEXT

Think of your note-taking task as four-fold: (1) marking **listing** material (the facts, basic ideas and terms, etc.), (2) marking **sequential** material, (3) marking **relational** material, and (4) marking **classifying** material.

**MARKING LISTING MATERIAL.** *Here you need only two kinds of marks: one to indicate questions and one to indicate answers.* If you use the marking-the-text method of previewing, then much of your note-taking here is finished. What you need to do now is select what types of marks you will use--the **underline and circle or box** will work fine. Underline the preview questions (made by turning heads and subheads into questions) and circle or box the answers. (You might use a line or dotted line to connect the two, if you think it will help.) As you read through each section, underline new terms and circle their definitions. If the term is not defined in the section, find its meaning--is there a glossary?--and write its definition in a box in the margin . Circle important material and write questions in the margin of your text which the circled material would answer.

**MARKING SEQUENTIAL MATERIAL.** If several items are related in a temporal or logical way, put numbers by the items (which may be boxed or circled themselves) and draw lines connecting the items. Arrows showing a numerical sequence might also be used. Numbers may also be put in the margin to indicate sequence.

**MARKING RELATIONAL MATERIAL.**
Relational material may be indicated by circles or boxes and lines or arrows connecting them. The nature of the relation ought to be indicated on one of the lines or in the margin. Relational material might also be indicated by a vertical line in the margin with a brief comment indicating what kind of relation exists or an indication of a connection with something from an earlier or later page (in which case the page number should be noted, too). Highlighters are useful in note-taking, especially if more than one color marker is used. Similar colors can be used to indicate a grouping of related items, while different colors can be used for different groups of related items or for contrasting items. Also, a highlighter might be used instead of underlining, employing different colors for listing, sequential, relational and classifying materials.

**MARKING CLASSIFYING MATERIAL.**
Highlighting or underlining, along with marginal notes, might be used for marking classifying material. ☞

## Activity 19 - Taking Notes: Marking Your Text

While reading an assigned chapter of your text,

1. Mark your book by turning heads and subheads into questions and either box off answers or write them in the margin;

2. Write questions in the margin of your text and circle or box off the answers;

3. Underline key terms and write their definitions in the margin or box them off in the text;

4. Use numbers to indicate sequential relations.

# TAKING NOTE OF RELATIONS

As you become more experienced at reading college level texts, you should become more adept at perceiving relations among ideas. You should, in other words, become more skilled at asking and anticipating relational questions. It is probably obvious to you that remembering a person's name or a date, or memorizing a definition, is not as difficult as recognizing an argument or seeing a problem and evaluating solutions offered.

The ability to perceive relationships among ideas is higher-order cognitive skill, often used to measure intelligence. An intelligent reading of a textbook would not be one which aimed at getting a list of discrete and separate units of information. (Unfortunately, many teachers will give you tests requiring you to perform this rather dull activity of remembering discrete units of information. Good teachers will also require you to relate bits of information in intelligent ways.) An intelligent reading of a text aims at seeing the relationships that exist among materials presented in various parts of the chapter and book. But it need not stop there: look for relationships to what is in the text to the world around you.

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## Activity 20 - Taking Note of Relations

In the margin of your text or on index cards, write at least five relationship questions as you go through an assigned chapter.

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## USING A NOTEBOOK

**M**any students do not like to mark up their texts and would prefer a method of notetaking which has them put their notes in a separate notebook. Although it is more time-consuming to take notes than to mark a book as it is read, when it comes time to review material for a test, good notes are almost always superior to a well-marked text book.

What kind of notebook should you use, spiral or loose leaf? There are advantages to both. Spiral notebooks ensure that pages will be kept together unless forcibly removed. Loose leaf has the advantage of easy and neat insertion of material between pages of notes already taken. No matter what kind of notebook you decide on, select one which you can use both while reading the text and while in class. Also, you will want a notebook for each class.

Plan to have facing pages of notes, so that, for example, notes from your reading are on the left side and notes from class are on the right (or vice-versa). Try to take in-class notes on a page across from where you have taken notes from the assigned readings on the same material. (Remember to leave enough room to do this.)

Also, divide each page into two parts with a vertical line down the center. On the right side of the page, take notes in grammatically correct, paragraph form. Be brief, trying to capture general ideas and the bare bones of relational material. Use some sort of mark to indicate where one idea ends and another begins (usually, skipping a line suffices). Use numbers or letters to indicate sequences or subordinate relations.

On the left side of the page, put key words, phrases or questions. The key words or phrases should serve as cues to the material on the right. The questions should be like those made by turning heads and subheads into questions and the relational questions created as you read along (as in activities 16 and 17). The material on the right should answer those questions in a brief way.

## Activity 21 -Using a Notebook

Draw a vertical line down the center of each page you take notes on. Use only the left or only the right side pages if you are using a spiral notebook. If you are using looseleaf paper, write only on one side of the paper.

As you read an assigned chapter take notes. Use the right side for general ideas and short paraphrases of relational material. Use the left side for key words or questions.

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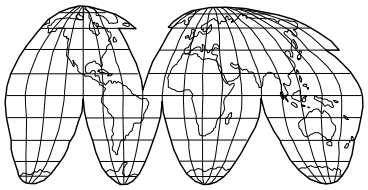
## TAKING VISUAL NOTES: MAPPING



**S**ome of us seem to learn faster and remember more when we can **visualize** material. Visualization can involve pictures, drawings, shapes, colors, or symbols. You have already seen some examples of visualization in the examples of note-taking for activities 18 and 19. Arrows are used to indicate direction and relations. And an asterisk is used to indicate a key question. (In case you were wondering why that asterisk is there, now you know!) One especially effective visualization technique is known as **mapping**. The purpose of mapping is to create a visual image of relationships of ideas, thereby making them easier to recall.

## Activity 22 - Mapping

While taking notes on an assigned chapter, instead of using the left hand column of your notebook for key words and questions, use it to produce maps of the material you present in the right hand column.

### TAKING NOTES IN CLASS

**T**aking notes in class requires the ability to listen, select and write down quickly while still listening and selecting from what is being said. It is not easy to take useful classroom notes. While you may be a good listener, you may not be good at selecting what to write down. Or, you may be good at selecting what to write down, but not good at listening while you are writing. Or, you may be good at listening and selecting but not good at writing quickly in a legible fashion. There is very little advice I can give on learning to write more quickly or more legibly. Practice, practice, practice! That's about all I can say on the matter. I can, however, offer you some practical techniques for improving your abilities to listen and to select.

**LISTENING & SELECTING.** We have already addressed the issue of listening in an earlier section. (It probably would not do you any harm to review that material now. See Activity 11.) The main point we made was that to listen well a student must be motivated to listen. And, to be motivated is to have a purpose, a method and a yardstick.

If you have no goal to achieve by taking notes, no set way of achieving that goal and no way to measure whether you are successful or not, then the chances are great that you are not going to take very useful notes. The goal of taking notes ought to be to gain knowledge and to prepare for tests. Notes will only help you gain knowledge if they are organized and accurate. And notes will only help you prepare for tests if they can be easily used to review material before exams. Listening and selecting must be part of the method of taking good notes in class.

**To listen well you must be prepared to listen.** At the very least this means that you have the background knowledge required by the course you are taking. Being prepared to listen well also means having read and studied any assignments before the class lecture or discussion on the material. Only if these two conditions are met will you be able to confidently and efficiently select what needs to be recorded from all that is said.

Of course, you could try to write down ***everything*** that is said. That would ensure that you get down what ought to be recorded. But recording everything is not necessary. It would be much more efficient to be able to select what needs to be recorded while listening. Otherwise, you will have to go over the entire lecture and then select what ought to be recorded.

How does one know what ought to be recorded? Well, assuming that you have the necessary prerequisites for a course and that you have read and

studied the assignment to be discussed in class, you determine what ought to be recorded by what you already know you don't know but know you need to know.

That may sound strange at first, but think about it. You have taken notes on what you've read. You have a general idea of topics, arguments, positions, etc. introduced in the reading. Most of the material is probably new to you. Any help in clarifying or enhancing your notes ought to be sought. With your notebook open to the page where you have taken notes on the readings, you ought to be able to use the lecture material to fill in your notes. **Above all, you ought to be listening for material which connects to your study notes.**

You shouldn't try to record everything which connects to your study notes, however. There is no need, for example, to write down from a lecture something which you have already written down when you were studying the material. That kind of repetition is not useful. But if an idea is expressed in a slightly different way in lecture, or if an idea not brought up in the book is brought up by your teacher, by all means include such material in your notes. **Try to grasp and record general ideas** rather than all the examples, illustrations and background material that might be presented.

**WRITING DOWN YOUR NOTES.** It should go without saying that your notes should be written clearly and neatly. You probably should use abbreviations (or shorthand, if you know it) to save time, but remember that you will want to use these notes two weeks or two months later as you prepare for exams. As advised above, you ought to make a vertical line on your notebook pages, using the right hand side for your written notes and the left hand side for mapping and for adding key words or questions later on. Try to record your right side notes in the form of paragraphs. Use the visual aids of **a blank line** (to separate distinct ideas or trains of thought) and **the indentation** (to indicate subordinate material).

For mapping, use whatever visual patterning seems useful to you. Some note takers use arrows to indicate a connection between items. Some use symbols such as asterisks, exclamation marks, question marks, etc. to indicate importance, interest, confusion, etc. Others use geometrical shapes--squares, circles, ellipses, etc. to indicate classification groupings (circling all items which seem to belong together, putting triangles around other items that seem to belong together, or circling a central item and drawing lines to boxed items which relate to the central item, etc.).

All of the above assumes that the lecture will cover material for which there has been a reading assignment already. **But what if the lecture precedes the reading assignment?** How will you be able to prepare to listen and select if the material is completely new?

First, a good lecturer will always announce the general topic of the lecture. This may be done orally at the previous class or at the beginning of the lecture. You may be presented with a handout stating what the topic for the class will be. Without a general idea as to what the topic for the class is, there is little hope that you will be able to take intelligent and selective notes. (Often, a quick glance before class at the course outline or syllabus will help.)

Secondly, remember to listen and look for keys as to what is important. Inflections in speech, outright proclamations (**NOW THIS IS IMPORTANT!**), blackboard notes or handouts can help you separate the general and key ideas. Notes on examples, illustrations, anecdotes, background information, and ancillary details of main points can be added later, if needed, when reading the assigned material. When taking lecture notes, try to get down the general ideas. Don't worry about the specific and supporting details.

## Activity 23 - Taking Notes in Class - Paragraphs, Maps and Key Phrases

Before class, draw vertical lines down the center of several pages of your notebook that correspond to pages for which you have already taken notes while reading the assigned material. (Some notebooks come with vertical lines printed on each page. It might save you some time to purchase such a notebook.)

Take notes in paragraph form in the right hand column and take notes in mapping form in the left hand column.

After the lecture, take a few minutes to go over your notes and clarify illegible parts or fill in any purposely left blanks.

Then, in the left hand column, box key words or phrases that correspond to notes in the right hand column.

## Activity 24 - Taking Notes in Class - Paragraphs, Maps and Questions

Before class, draw vertical lines down the center of several pages of your notebook that correspond to pages for which you have already taken notes while reading the assigned material.

Take notes in paragraph form in the right hand column and take notes in mapping form in the left hand column.

After the lecture, take a few minutes to go over your notes and clarify illegible parts or fill in any purposely left blanks. Then, in the left hand column, write questions whose answers correspond to the notes you have in the right hand column. Box off the answers.

### Activity 25 - Taking Notes in Class - Emphasis on Mapping

Before class, draw vertical lines down the center of several pages of your notebook that correspond to pages for which you have already taken notes while reading the assigned material.

Take notes in paragraph form in the right hand column and take notes in mapping form in the left hand column.

After the lecture, take a few minutes to go over your notes and clarify illegible parts or fill in any purposely left blanks. As you review your marginal notes, circle key words which bring to mind visual images connected with the ideas they represent.

On a separate sheet of paper, link key words or ideas in a visual pattern using geometric shapes, lines, or arrows to indicate relationships.

Save your map for use during review.

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## CRITICAL READING & NOTE TAKING

**M**emorizing new terms and names, and recognizing relationships among ideas, are important cognitive activities. More important, however, is questioning and making comments on what you read.

Get in the habit of writing down not only questions which you are likely to be tested on, but also questions you would like to have answered yourself.

Also, comment on the material you are reading: indicate your disagreement or questioning of what an author has written. Raise issues you think are avoided or evaded or treated inadequately.

## Activity 26: Critical Reading: Questions & Comments

1. While taking notes for an assigned chapter, develop at least three critical questions or comments.

2. While taking notes during a lecture, develop at least one critical question or comment.

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### REVIEWING

**O**ne of the truly depressing facts about devoting years to studying is that we will forget most of what we learn. In fact, we will forget most of what we forget shortly after learning it.

Reviewing material aids in overcoming the almost instant amnesia many of us have after reading or hearing something. As an aid to memory, reviewing well is an essential skill of the successful student.

Since the function of reviewing is to aid memory, it may be useful to consider a few things about memory in general before going directly to the reviewing activities.

### MEMORY

There are at least two very different kinds of things that our memories work with: **facts** and **processes.** In fact, some psychologists distinguish between two kinds of memory systems: 1) the **declarative memory system** and 2) the **procedural memory system.**

### DECLARATIVE MEMORY

The declarative memory system retrieves facts and individual bits of information (the answers to listing questions). Facts are easy to learn, but they are just as easy to forget. We know, however, that individual bits of information are easier to remember if they are learned as being **interconnected** with other bits of information. The more items we relate to an item we want to remember, the better our chances are of remembering it. When we want to learn a new item, our chances of learning it are greater if we can relate it to something we already know. And the more we can relate it to, the better. That is why you should use boxes, arrows, lines, etc. while taking notes: the connections you are making will help you remember the material. But visual connections such as lines connecting boxes, etc., should not be the only aids to memory you use.

Connecting what you read and hear to your own intellectual, physical and emotional experience is probably an even more effective aid to memory and learning than mapping or other forms of visual note-taking. You can make a personal connection to the material you are studying either by relating your experiences to what you are now learning or by responding intellectually

or emotionally to the material. The former is often done by using **analogical reasoning**--seeing the similarities between what you already know and what you are learning. The ability to compare the unfamiliar (the material to be learned) with the familiar (what we already know) is an essential learning skill.

Just as important to learning is the ability to get involved with the material--by asking critical questions, for example. But, if you can't relate the new material to your experience, and are unable to respond intellectually or emotionally to it, then you might try responding **physically**: recite the material and write it down. The connection between the sound, the vocalization, the writing of words, and any visual connections made while taking notes may be enough to help you remember the material.

## ENHANCING DECLARATIVE MEMORY

One of the more effective techniques for enhancing the memory of bits of information is to make a visual connection in your imagination which links the items to be remembered. For example, beginning students in philosophy often have trouble remembering whether Plato was the teacher of Socrates or Socrates was the teacher of Plato, or whether Aristotle was the student of Plato or Plato was the student of Aristotle. Students have no trouble remembering that the three men are related to each other as teacher to student. To help remember the order these philosophers came in, the student might take the first letters of the names of the men in the order in which they lived, namely, SPA--Socrates, Plato, Aristotle. Imagine a spa with three bearded men sitting nude in a tub while drinking wine and discussing philosophy.

The above example not only uses visualization as a memory aid, it also uses an **acronym**--a word made from the first letters of other words. SPA is an acronym derived from *Socrates, Plato* and *Aristotle*. Try making acronyms to help you recall the first words in lists of material you must remember. There are two main ways to do this. Imagine you have to remember Kübler-Ross's five stages of dealing with death: Denial, Anger, Bargaining, Depression, and Acceptance. You could follow the same method used for creating SPA. The result would be the nonsense word DABDA. From that you might visualize dabbing a district attorney with hair oil or anything else crazy and visual which will help you make a connection between the list to be remembered and an acronym.

Another method for aiding memory is to create a nonsense sentence made up of as many words as there are items to remember. The first letter of each word must correspond to the first letter of the words to be remembered. And the order of the words in the nonsense sentence must be such as to yield an acronym whose letters match the first letters of the sequential list you are trying to remember. Then when you recall the sentence, you can use the acronym to help you remember the list. Furthermore, the nonsense sentence will be more effective if it creates a picture you can remember. For example, to help you recall the five stages of dealing with death, you might create the nonsense sentence "Dinky Animals Bite Dirty Ankles," and visualize a Chihuahua biting the dirty ankle of a barefoot girl.

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## Activity 27: Memory
## Acronyms, Nonsense Sentences & Visualization

Go through your notes for an assigned chapter you have read or for a lecture, and create acronyms, nonsense sentences and visualizations for any lists or sequences of material to be learned. (The example provided is based on the notes presented as an example for activities 17 & 18.)

EXAMPLE. Civil liberties are the freedoms of **t**hought, **s**peech, **p**ress, **r**eligion and the right of **d**issent.

1. the **T**all **S**quirrel **P**ounded the **R**ice and **D**onuts.
   **T**>hought **S**>peech **P**>ress **R**>eligion **D**>issent
2. Imagine a preacher at the pulpit (**Religion**) with a cartoon bubble over his head (**Thought**) with the word "NO!" in it (**Dissent**), waving a newspaper (**Press**) while preaching (**Speech**).
3. Imagine a priest (**Religion**) hitting a protester carrying a sign (**Dissent**) with a newspaper (**Press**) while saying "NO THINKING OR SPEAKING ALLOWED!" (**Thought and Speech**). ☞

## Activity 28: Memory - Visual Connections

To help remember a list or sequence of items, create a visual connection between each item in the list or sequence and some item in the classroom where you will be tested.
For example, to remember that the civil liberties are the freedoms of speech, press, religion, thought and the right to dissent, you might focus on the **tiles** (for **Thought**) and imagine someone saying, instead of `a penny for your thoughts', `***a tile for your thoughts***.'

Focus on the **poster** on one wall (for **Press)** and imagine posters coming off the presses.

Focus on the **sink** (what? you don't have a sink in your classroom. I thought everybody did!) (for **Speech)** and imagine some soap, then a soapbox and somebody standing on the soapbox giving a speech.

Focus on the **ruler** on the wall (for **Religion**) and imagine rules flying out of the ruler, rules to bind you with, the Ten Commandments, for example.

Finally, focus on the **door** (for **Dissent**) and imagine your teacher throwing students out the door for disagreeing with him).

If all goes well, during the test you need only do a visual survey of the room to help you recall what freedoms are part of our civil liberties. Looking at the poster should trigger the image of the posters coming off the press; when your eyes get to the door, you should recall the dissenters being dumped, etc.

## PROCEDURAL MEMORY

In addition to learning and remembering **facts** and **bits** of information, we also learn and remember **processes.** We learn not only ***that*** something is, but also ***how*** to do things. In a logic course, for example, the student should learn not only what a premise is and what a conclusion is (the elements of an argument), but also how to analyze and evaluate arguments. Here, as in other learning, mastery begins at the declarative memory level. Thus, it is important for every student to develop techniques for simplifying and facilitating such mundane tasks as learning the definitions of new terms and other declarative memory tasks. The preceding activities on note-taking and memory were designed to help you in this area. The activities which made you focus on relations and relational questions are designed to make you aware of a higher order of learning and memory than the declarative level.

Processes, such as solving a type of problem or testing the validity of an argument, are often hard to master, but they are also hard to forget. Once a procedural skill such as bicycle riding or testing causal hypotheses is mastered, it is extremely difficult to forget the process. Of course, some processes are easier to learn than others because they are simpler. But some are easier to learn because they are sequential. Such processes can be taught almost by recipe: list the ingredients and list the operations to follow in their proper order. Much of formal logic can be taught this way, as can much math and certain laboratory processes in biology or chemistry. Generally, the best way to learn and remember such processes is argument. Your teacher reads your evaluation, comments on it (i.e., gives you some feedback to let you know what moves you made were good, which ones you didn't to do them over and over until they become second nature.

Other processes are not necessarily sequential, but they can be made so to great advantage. For example, there is no particular sequence of steps that all writers take, yet it is possible to construct a set of sequential steps to take when writing an essay exam, a term paper or a book report.

Developing such a sequence for writing is to develop a writing method. Theoretically, there might be many writing methods which prove useful and effective. Different methods might even be employed for different kinds of writing. The point is that a process which need not be methodically sequential can be made so to great advantage. Many students who perceive themselves as having a difficult time with writing may benefit from becoming more methodical. Writing might then appear to them as something they know how to do, rather than as something they are trying to learn how to do.

Developing skills at what we might call **relational thinking** (thinking in terms of the relations stated above in the presentation on relational questions) is learned best by observing experts doing relational thinking, by practicing it ourselves, and by having our attempts evaluated and guided. For example, you read an argument and an evaluation of it by someone acknowledged to be good at argument evaluation. Your teacher goes over the argument and the evaluation with you, explaining and evaluating the moves made and, in general, serving as a model of an expert argument evaluator herself. Then you, the student, are assigned to read and evaluate an

make but should have, and perhaps asking you why you made a particular move, etc.). If this kind of activity continues for an entire semester, most students should become much better at evaluating arguments. And once they have developed that skill, it is not likely they will soon forget it. (It should be obvious that no one can become skilled at evaluating arguments in any field whatsoever simply by becoming skilled at evaluating arguments in general. Knowledge of the content of a field is essential to any intelligent evaluation of arguments in that field.)

**REVIEWING DAILY**

Most forgetting takes place soon after learning, but much that would otherwise be forgotten (and therefore have to be **re**learned rather than **re**viewed for a test) can be retained in memory by spending as little as 10 or 15 minutes reviewing notes soon after they are taken. Lecture notes ought to be reviewed immediately after class. Notes taken while reading should be reviewed the next day. Review time should be short. Set aside five to ten minutes per class each day to review your lecture and reading notes. Ideally, you probably should review all your notes weekly for about 30 minutes. **(Return to the schedule you made in activity 9 and pencil in this time.)**

Finally, there should be reviewing just before an exam. On the night before the exam, no more than one or two hours should be spent reviewing. Your chances of doing well on an exam diminish considerably if you are burnt out and exhausted while taking the test. ☞

## Activity 29: Reviewing a Text Book Chapter

***Go to a chapter of your text which you have already studied.***

1. Read the chapter title, each section title and subtitle and the first and last sentence of each subsection.
2. Read the outline or summary at the beginning or end of the chapter, if there is one.
3. Read any material you have marked out as significant (by boxes, highlighting or through symbols such as asterisks).
4. Read the instructions for any exercises at the end of the chapter.
5. Make a list of questions that YOU would ask on an exam.
6. *Exchange your list of exam questions with another student in the class. Write down any questions the other student asked you didn't but think you should have.*

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## Activity 30: Reviewing Lecture Notes

***Go over your notes for a lecture and do the following:***

1. Read what you wrote on the right hand side of the page. Write questions--for which your notes are the answers--in the space on the left hand side.

2. Box off key terms and underline definitions. Write the terms in the space to the left of your notes.

3. Put asterisks by important points.

4. Make a map of the material. (See activity 22.)

5. Write a brief paragraph summarizing or outlining the material in your notes.

6. Make a list of questions that YOU would ask on an exam. ☞

## Activity 31: Reviewing Text Notes

***Go over your notes for a chapter you have read and do the following:***

1. Read what you wrote on the right hand side of the page. Write questions--for which your notes are the answers--in the space on the left hand side.

2. Box off key terms and underline definitions. Write the terms in the space to the left of your notes.

3. Put asterisks by important points.

4. Make a map of the material. (See activity 21.)

5. Write a brief paragraph summarizing or outlining the material in your notes.

6. Make a list of questions that YOU would ask on an exam. ☞

## Activity 32: Skimming Your Text for Review

***For a chapter of your text which you have already read do the following:***

1. Read all heads and subheads, and the first and last sentences of each subsection.

2. Quickly go over only main ideas you have highlighted, asterisked or boxed off.

3. Read the chapter summary or outline, if there is one. ☞

## Activity 33: Skimming Your Text Notes for Review

***For the notes you have taken on a chapter of your text do the following:***

1. Read all key terms or questions you have written on the left hand side of the page. And, read the boxed off or highlighted material on the right side.

2. Read your summary or outline, if you made one.

3. Look over any mapping you have done. ☞

## Activity 34: Skimming Lecture Notes for Review

***For your notes on a lecture do the following:***

1. Read all key terms or questions you have written on the left hand side of the page. Read the boxed off or highlighted material on the right side.

2. Read your summary or outline, if you made one.

3. Look over any mapping you have done.

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### TAKING TESTS

**Y**ou can improve your grades by improving your skill at taking tests. Of course, you cannot substitute test-taking skills for proper studying. But if you study properly, there is still the possibility that you are not skilled at taking tests. This section aims at giving you some guidelines for developing your test-taking skills.

### PREPARATION FOR TAKING TESTS

Preparation for tests consists of becoming aware of the kinds of tests and questions you are likely to be asked, anticipating those questions, and reviewing the material to be tested on. We have already presented material and activities on each of these.

Review activities 15, 16, 17, 18, 29, 30, and 31.

If you have studied properly, preparing for the test should not be a cause of major nervousness. For one thing, if you have been faithful to the method of previewing, reading, note taking and reviewing which we have been advocating, you should be very well prepared to take any test. But, to help you see the connection between the earlier activities and preparing for a test, let's go over a few fundamentals regarding tests.

### KINDS OF TESTS

If we think of a test as an attempt to measure what you remember, then we might think of tests as being either tests of declarative memory, tests of procedural

memory, or tests of both kinds of memories.

If, on the other hand, we think of tests as sets of questions to be answered, then we might think of tests as being either sets of listing, sequential, relational and/or classifying questions.

In fact, it is not a bad idea to think of tests in both ways, since the kinds of memories go hand-in-hand with the types of questions. Listing, classifying and sequential questions require a good declarative memory. Relational questions require, in addition, a good procedural memory. The conclusion from what has just been said must be that **the best way to prepare for a test is to habitually study well**. (The worst way is to try to cram as much as possible into short term memory the night before the exam.)

## READING TESTS

Just as there are efficient and inefficient ways to read texts (or newspapers, or anything else, for that matter), there are efficient and inefficient ways to read exams. I advise you to follow this sequence of steps in reading and doing an exam:

1. **Preview the exam**. Is the exam divided into parts? What kinds of questions are asked in each part? Are some parts worth more than other parts? Are some parts easier than other parts?

2. **Manage the exam.** Determine how much time to spend on each part. This will depend on two factors: the value of each part and your relative confidence in doing well on each part. If you are equally confident about all parts, then give a percentage of the total test time equivalent to the value of each part. (For example, if one part is worth 50 percent of the grade, you should spend 50 percent of your time on that part.)

3. **Reorganize the exam.** Determine the order in which you will do the parts of the exam. Begin with the part on which you are the most confident of doing well, i.e., the one you think is the easiest. If all parts are of equal difficulty, begin with the one which has the greatest value. If all parts are of equal difficulty and value, begin with the first part and work your way straight through the exam, making sure that you do not spend too much time on any one part. The only other case where you should begin with the first question and proceed sequentially through the last one would be if each part were more difficult than the one before it. In that case, too, you should make sure you do not spend too much time on any one part.

4. **Do the exam.** Don't start doing the exam until you have previewed, managed and reorganized it. Read the instructions and each test item very carefully. Make sure you understand the question being asked. A sloppy, hurried reading of the instructions or the questions may lead you to give an answer to a question you aren't actually being asked. If you don't understand a question, ask for clarification.

In a true-false/multiple choice test, skip items you are not sure of, as well as those you must take time to think about. Return to the skipped items after you have answered the other questions in that part of the test. If you are not going to be penalized for wrong answers, make an educated (or uneducated, if you must) guess.

Do not spend too much time on any one part of the exam. If you have time, review your answers. ☞

## Activity 35: Preparing for Tests

This activity is based on several activities already presented. Namely, activities 17, 29, 30 and 31.

This activity should be repeated for each test for each course you take. The activities listed above need be done only once to get the idea of anticipating and reviewing.

1. As you read each section of an assigned chapter, turn the section heads and subheads into questions and write them down on index cards or 3x5 pieces of paper. Read the section to find the answer to your question. Write your answer on the other side of the card. Try to make the subhead questions relationship questions, relating subheads to main heads or other subheads. As you work your way through the chapter, try to ask primarily relationship questions.

2. Read the instructions for any exercises at the end of the chapter and make question cards for questions that YOU would ask on an exam.

3. Review your text and notes.
   a) Read the chapter title, each section title and subtitle and the first and last sentence of each subsection.
   b) Read the outline or summary at the beginning or end of the chapter, if there is one.
   c) Read any material you have marked out as significant (by boxes, highlighting or through symbols such as asterisks). If you turned any of this material into questions, make question/answer index cards for them.
   d) Make question/answer cards for any boxed off key terms and underlined definitions.

4. Make a map of the material. (See activity 22.)

5. Write a brief paragraph summarizing or outlining the material.

6. The night before the exam, spend no more than one or two hours reviewing your question/answer cards and looking over your map and summary of the material.

## Activity 36: Taking Tests

Before your next test, commit to memory the four steps presented above for reading and taking tests: **P**review, **M**anage, **R**eorganize, and **D**o. Follow this method of test-taking and write down your comments on the method.

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