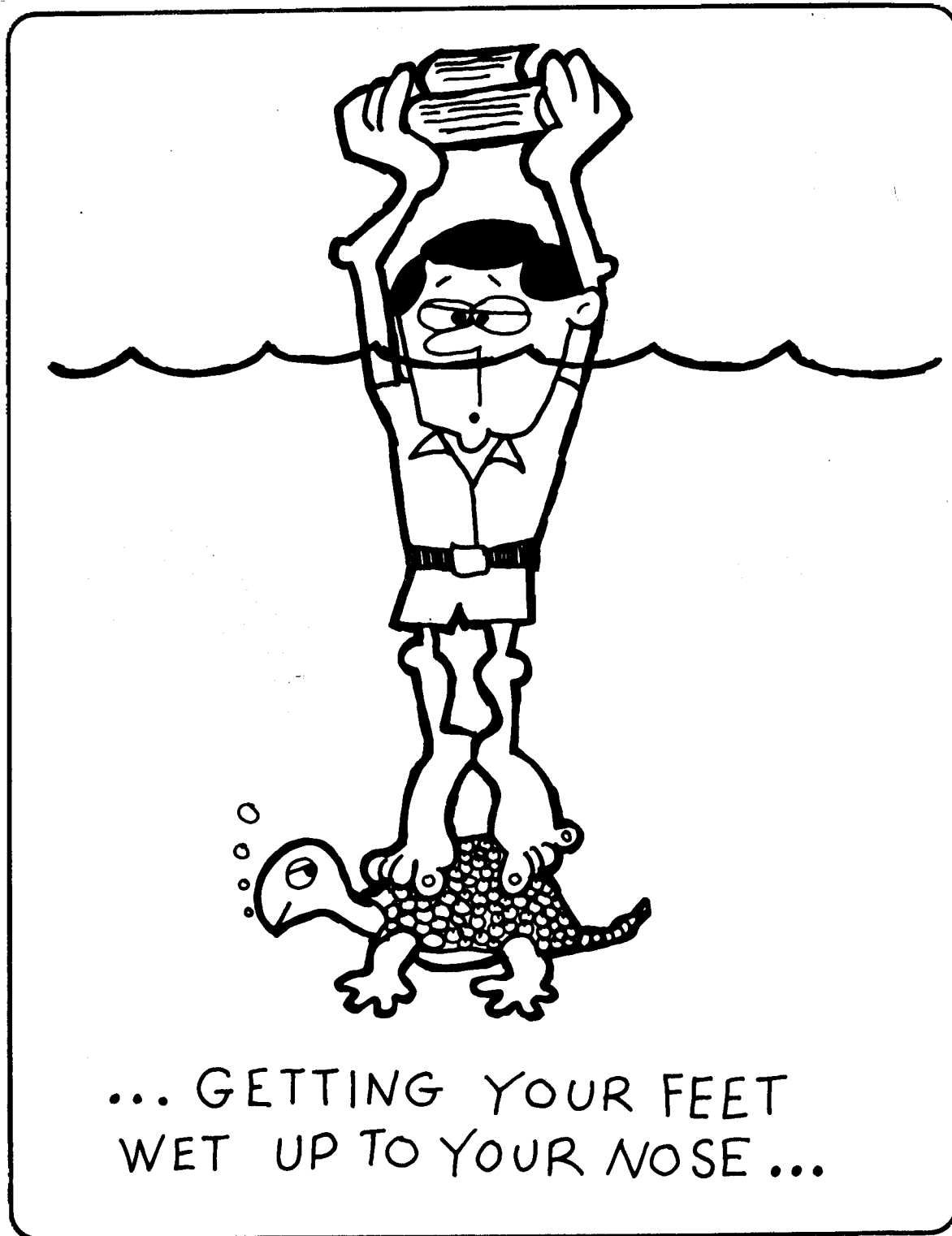


chapter **2** THE FIRST WEEK:

Getting Your Feet Wet, Up to Your Nose



... GETTING YOUR FEET
WET UP TO YOUR NOSE ...

chapter 2

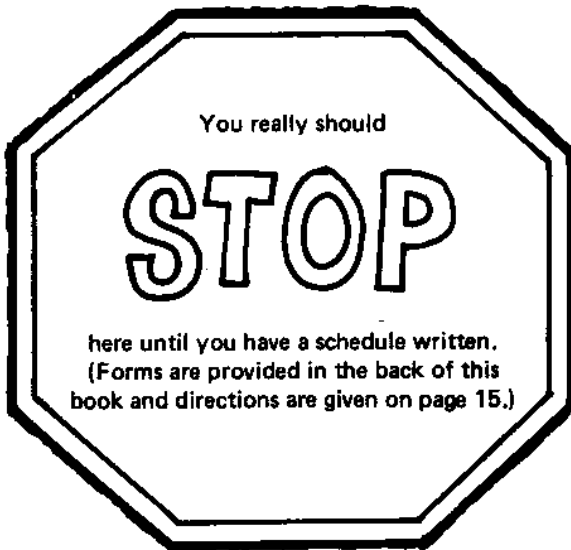
THE FIRST WEEK:

Getting Your Feet Wet, Up to Your Nose

This is it! Classes; study; lectures; reading; homework; assignments; references;

IF you followed the suggestions of Chapter 1, your classes should really go surprisingly smoothly. If you are a more typical student, you may have lost this headstart. Don't worry, however ——— you're still very much in the race.

DO YOU HAVE A SCHEDULE?



Even if you don't have a *written* schedule, you will still be following a schedule probably a rather erratic (and possibly self-defeating) one.



Now take the oath:



"I solemnly swear to abide by my **WRITTEN** schedule for a period of one week."



You really should **DO IT!** (regardless of the temptations the worries the "other things that must be done"*)

*See Chapter 9

Next week you can change your schedule as necessary, but you should resist all temptations to change it now.

During this week you should divide your academic work into 4 parts:

1. What I do *before* class. (Section 2.1)
2. What I do *in* class. (Section 2.2)
3. What I do *immediately after* class. (Section 2.3)
4. What I do during other *scheduled study* times. (Section 2.4)

The use of these four parts will help you develop your academic *efficiency*. And efficiency is the “time saver” that will provide you with the maximum freedom in the long run. (A study at the University of California has shown that 30 hours of EFFICIENT study resulted in grades just as high as those obtained in 50 HOURS of “typical” studying for the same classes). Successful professionals plan their time carefully. *So do* successful students!

2.1 PREPARATION FOR CLASS

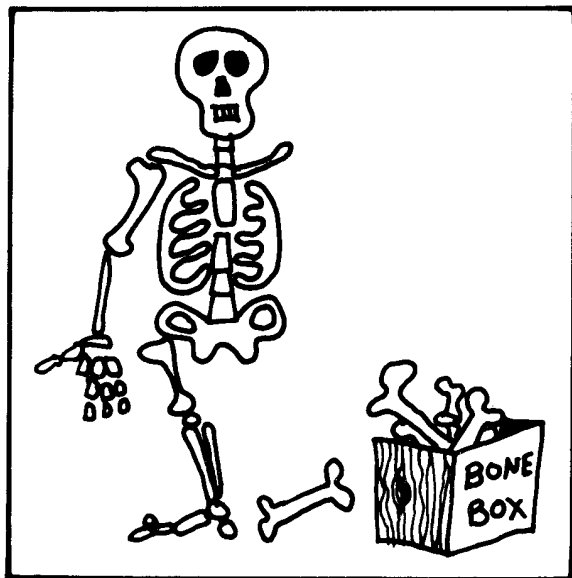
The class is usually the *best* place to learn, but to get the real benefit from it, you must go prepared. The game is to *guess what the professor is going to discuss*.

To see how this is done, get one of your textbooks and do the following:

AW, COME ON! YOU SHOULDN'T BE READING THIS UNTIL YOU ACTUALLY GET YOUR TEXTBOOK!

Thank you for getting the book. Now look at the material for your next class. (Introduction and 1st Chapter for your first class.) On scratch paper, *write* the CHAPTER TITLE while you try to imagine what will be discussed. (The Guessing Game has started!) Note that *zero* knowledge is required to *guess*; it really doesn't matter whether your guesses are correct or not at this stage.

Now check the following to build a better overview of the chapter material:



SECTION HEADINGS

FIGURE AND TABLE HEADINGS

ITALICIZED TERMS

SUMMARY (Try the first and last paragraphs if no summary is given.)

OBJECTIVES* (if given)

The first time through the chapter, you are *NOT even trying* to “learn” the material. You are simply SCANNING the chapter to see how it's organized. You are only *looking for the skeleton* on which the chapter will be built.

*Objectives are brief statements, which may be phrased as questions, indicating precisely what you need to learn. These must cover the major ideas important to the course and how they are interconnected. For further information, see pages 23 and 68.

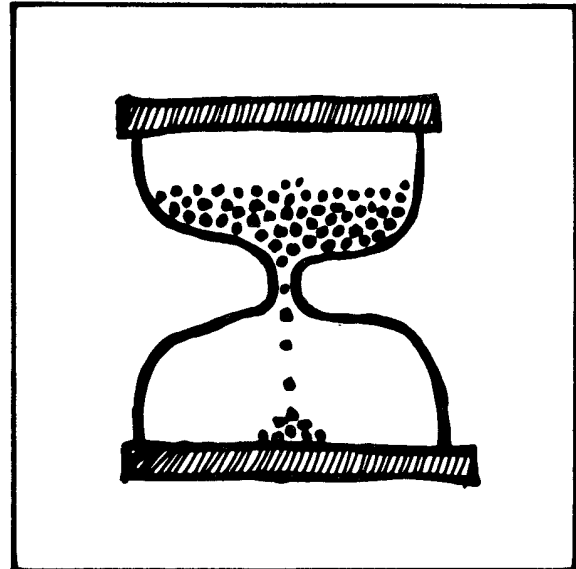
The first SCAN should take no more than three minutes. If you use more time than this, you are trying to LEARN some of the material. Please, don't do that yet!

If the objectives are given, *write* them (but in your own words) on the scratch sheet under the chapter title. If objectives are given for each section, that's even better. Write them together with the section heading. If objectives are not stated, make a *short* list of your guesses of the major ideas the chapter intends to teach. *These* are your learning objectives. Questions and problems at the end of the chapter can also help (never mind that you can't answer them yet).

Has your opinion of what the chapter intends to teach changed since you originally wrote the title down? STOP and think about that for one full minute—these changes in your concepts can truly save you hours of wheel-spinning.

Now, *IF* your schedule permits, READ through the chapter rapidly. How carefully you read will depend on how much time you have. As you read, make your best guess about what the professor will discuss in his lecture. The better your guesses, the more TIME you will save in the long run. Formulate your "guesses" as a written "main-topic" outline, leaving space for notes to be taken during class.

Proper PRE-CLASS preparation will *increase* the amount that you learn DURING THE CLASS PERIOD. In most cases, you can *nearly double* the effectiveness of class-time learning by appropriate pre-class preparation. Research has shown that this *increase in efficiency averages a factor of 1.75*.



DO allow time to arrive just a bit early for class. Get a seat as close to the front and center as possible. If you are assigned a seat where you have difficulty hearing or seeing, ask the professor for a better seat assignment. YOU SHOULD GO TO SECTION 2.2 NOW, UNLESS YOU GOT LOST IN THE PRECEDING SECTION.

If you are reading this, you are scared by the course(s) in a way that is *not reasonable*. If you are honest with yourself, you will see that you have not been asked to get anything correct up to this point. If the chapter title was Glazes for Pottery and you guessed that it dealt with the love life of garter snakes, that's OK. In class you

may find that it deals with solid-state transducers—so far you are only guessing and there's no penalty (now) for bad guesses. Good guesses will save you TIME, and this book will help you make good guesses well before you get to the exams.

2.2 WHAT TO DO IN CLASS

Don't get disappointed—not every oyster sends forth a continuous string of pearls!

2.2a Do Go To Class!

All studies show that students who attend class faithfully come out, on the average, a full grade higher than those who take even allowable cuts!

2.2b Stay Awake!

If this prof is a real bore, you should be able to preguess him very accurately and thus pick up virtually all his exam questions right in class. When you realize this, you will remain wide awake in the very worst class. If *you* start to fall asleep in class, *you* are doing something wrong—play the game to *your* advantage.

The worst case is the prof who reads from the book. (Boring, isn't it?) But, even in this case, LISTEN for the EMPHASIS. For the prof who reads directly from the book in a MONOTONE, be ready with questions for each part that you didn't understand clearly. For the prof who reads from the book in a monotone AND won't answer questions, consult your advisor IMMEDIATELY concerning a change of classes.

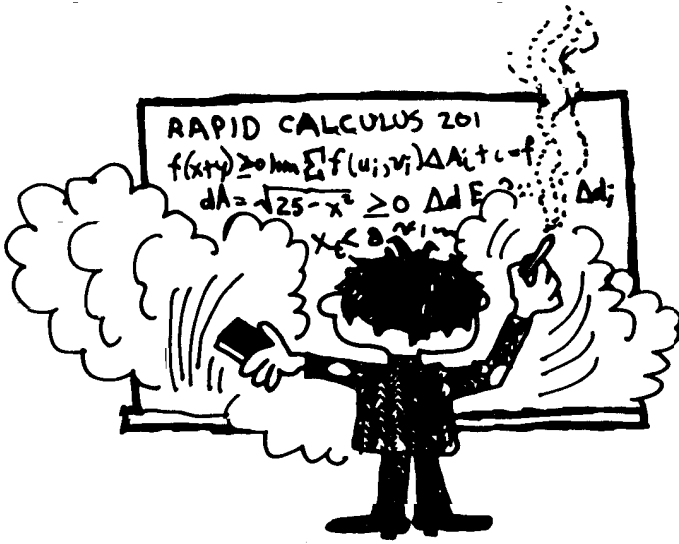
2.2c Pre-Guess

You used your pre-class study time to outline what you expected to hear from the prof. NOW, listen *intently* when your guesses are either wrong or incomplete. If the prof is dynamic and fascinating, still play the game—you are looking for his personal additions, plus the more subtle nuances.

2.2d Take Notes

But don't spend the entire hour as a poor stenographer. Good notes have:

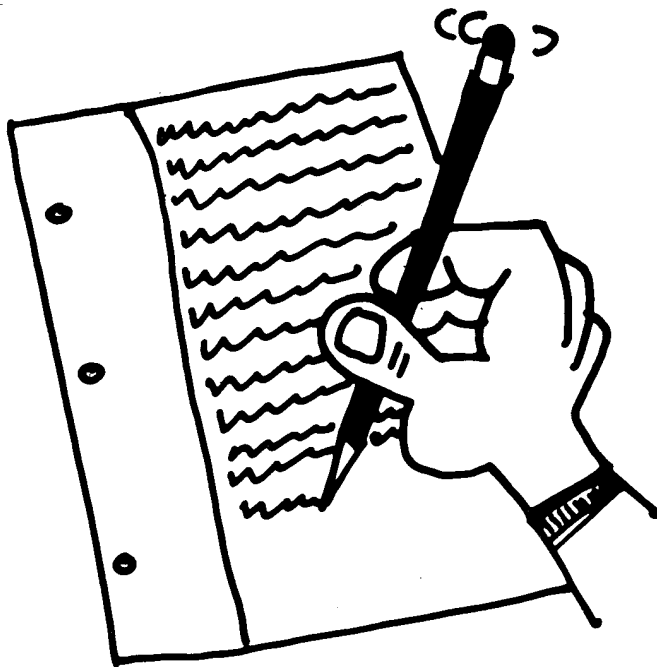
1. An OUTLINE form (your "guessed" main topic outline), indicating subject matter organization. Revise this IMMEDIATELY after class if necessary.
2. Your own SHORTHAND, e.g., →, \bar{c} , &, (any symbols that *you* understand).
3. SPACES to be filled in after class. (If you are blessed with 100% retention of spoken words and a photographic memory, don't write any notes until after class. If you're like the authors, TAKE NOTES!) Do not write items that come directly from the text. Save time for listening.
4. Indications of what the prof STRESSED.*** The student who copies everything the prof writes (and nothing else) is completely unprepared for class *and* is learning only a minimum amount of material in class.



If the prof writes so rapidly that the chalk catches on fire in one hand, while his other hand is busy erasing, YOU NEED HELP. The good news is that you HAVE help available. There are people sitting beside you and THEY have the same problem! With advance planning, three students cooperating can get a good "collective set" of notes. (You can get together after class to pool information and fill in your private lecture notes.) See also "groups-of-three" (page 44).

Another special case involves lectures in which *nothing* (or

almost nothing) is ever WRITTEN by the prof. In such cases, a tape recorder is a good ally. Listen carefully. Do take notes, but be happy that you also have it on tape. Later, you can listen to the tape in segments to develop good notes. The prof who uses a lot of audiovisual aids (movies, slides, models, etc.) can give excellent lectures, but note-taking can be a problem. Your tape recorder and two fellow students can solve the problem. Plan for each of you to take notes on selected portions of the AV materials. Then get together after class, with your tape recorder (if necessary) to combine information into good lecture outlines.



5. Leave a BLANK COLUMN on the side of the page. When you study these notes, this space will be used to insert "cues" by which you can organize and associate the various pieces. When you check your notes for understanding, you will ONLY look at the cues to see if you can remember the rest of the material. Some of these "cues" will eventually become "Read and Destroy Mental Crib Notes" on exam day (Chapter 4).

2.2e Listen

As silly as it sounds, few students *really* listen. Good listening requires you to be on the same wavelength as the Prof. That is why you “pre-guessed” the lecture material. Good listeners spot potential exam questions quite readily. Concentrate on *relative emphasis* and anything you failed to predict as lecture material. *Zoom* in on the items you guessed incorrectly or incompletely. As you listen, *tune* in to the IDEAS. Keep asking yourself, “What is the point of this?”

2.2f Participate

Get involved at every opportunity. If the prof asks rhetorical questions, *answer them*. This is your opportunity to respond to what this prof considers important before it can cost you exam points. What does the *prof* want as an answer? (See also Chapter 4.)

2.2g Study Your Prof

What makes him tick? What are his pet ideas? What are his prejudices? The prof’s vanity will be flattered by the attention. You will also get a lot more out of his lectures.

Finally notice who are the STUDENTS in this class (not to be confused with all who occupy seats). To qualify as a genuine *student*, a person should be obviously prepared, be alert, and participate. This type of student can be a big help to you later on, so make a mental note of those who qualify.

2.3 ACTIVITIES FOR IMMEDIATELY AFTER CLASS

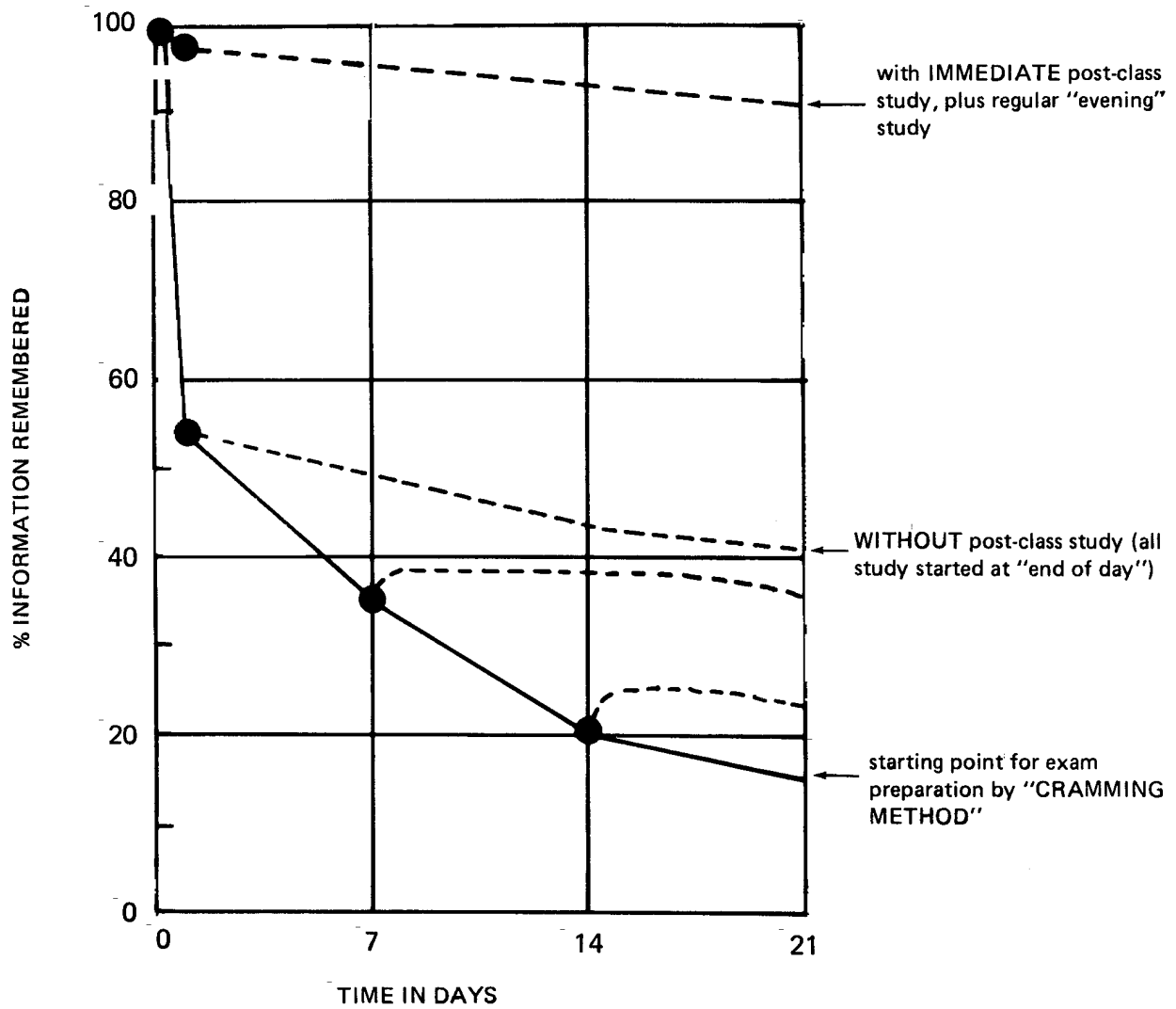
IMMEDIATELY AFTER CLASS you should go over your notes. Now you can FILL IN ANY BLANKS, using what you remember hearing and seeing during class. (Use the text as necessary). Fix the notes so that THEY WILL MAKE SENSE TO YOU LATER ON! This evening will be too late to catch such things as a “not” left out of a sentence or a formula that is incomplete.

While the lecture is still fresh in your mind, get as far as possible on your HOMEWORK. Don’t spend time “stuck” on a particular problem. It is more important to REINFORCE what you *did* learn than it is to struggle with what you missed. Your efficiency will be much greater now and will save you many hours of struggle later on. Ideally, you can do this work together with a couple of other genuine students. Between you, you will be able to settle practically all of the questions that arise.

Back in Chapter 1 you were advised to schedule your classes to have these “sandwich hours” for study between classes. USE part of this time for the class you just finished. If you have two “sandwich hours” together, it’s best to use the first to study the class just finished; then use the second to prepare for the next class. (If you have only one hour between classes, split this time into “post-class” and “pre-class” work.)

To understand the real importance of doing this work IMMEDIATELY after class look at the graph on page 27. We forget very rapidly until we do something to halt that process. Unless you halt the leak in your memory when the retention level is still high, you are going to have a tremendous *relearning* job to do later on.

“But, prof, I *do* know the material; I just keep goofing-up the exams!” That cry of frustration should more accurately be stated, “But, prof, I *DID* know the material.” We are simply telling you



KEY: — = percentage of information remembered, *without* reinforcing review, as a function of time
 - - - = percentage remembered *after* reinforcing review at indicated time points

[Based on data from "Studies in Retention", H. F. Spitzer, *J. Educ. Psych.*, Dec. 1939.]

how to avoid having to go back to the material when you're down below the 20% retention level. **SINCE YOU ARE GOING TO HAVE TO PLUG THE MEMORY LEAK SOMETIME, WHY NOT DO IT WHEN THE TANK'S STILL NEARLY FULL?**

Remember that one important purpose of your post-class activity is to produce a **MEANINGFUL** set of lecture notes. Good lecture notes are invaluable in reviewing for exams!

If you do have time in the post-class block for some of your homework, do it *efficiently*. At this stage you will benefit most from outlining homework (or "setting up" several problems), rather than working intensively on just the first part of your assignment.

In "thought" or "opinion" type courses in which you have little or no specific material to "learn", keep the flow of the class discussion going during your post-class time with a couple of the **BETTER** students.

2.4 SCHEDULED STUDY TIME

"What a day!"

1st interpretation: "What a day! Boy, am I bushed."

2nd interpretation: "What a day! Hooray! I'm going to be a success!"

The first is natural for people who are completely out of shape (academically) and for those who entered the day without a warm-up (pre-class activities).

The second interpretation is equally natural for those who have *followed* the recommended procedures and are now close to the end of their work day!

Your relaxation and recreation time is coming up soon—now finish earning it!

2.4a When to Study?

Follow the learning schedule you set up and follow it religiously (this week). Give it a full week to see how you like it and how well it works. Above all *DON'T* change your schedule until you give it a fair trial. Don't knock it if you haven't tried it! This schedule is one of the **REAL** differences between high school and college.

2.4b Where to Study?

You should study in that "Monk's cell" you prepared according to the instructions in Chapter 1 (page 7) of course! (But take down those pictures and pin-ups before you start—no cheating!) If pandemonium reigns near your cell and you can't control it, you may have to go to the library or a learning resources center. If this becomes necessary, look for a setting as similar to your prescribed "Monk's Cell" as you can find.

During the class day, use a place (your "daytime study area", page 8) very close to your classrooms. The idea is to *utilize* as much as possible of the *valuable* pre-class and post-class times.

2.4c What to Study?

Study what you have scheduled in each time slot. IF you have followed all the suggestions so far (a big “if” isn’t it?), you will feel that you’ve almost finished everything already. That’s where you *want* to be. Now you will just polish it a little to add security and slow the forgetting rate. If your work in one course is not up to the desired level, you can “borrow” a bit of excess study time from another course. But do NOT eliminate one course from the schedule. You do some work in each course *daily*.

2.4d Who Should Study?

The old idea that you should do all your work by yourself is just that—an old idea, and not a very good one. All studies indicate that a group of three students who learn at a similar pace can be much more efficient. To make it work, however, you need to be studying the same material in the same way (preparation for class, participation in class, review immediately after class). Don’t work in a group unless everyone contributes, especially you. (See page 44 for more details.)

2.4e Why Study?

*“The more you study, the more you learn.
The more you learn, the more you know.
The more you know, the more you forget.
The more you forget, the less you know.
So, why study?”*

—an old Sophomore saying—
(original author unknown)

If you really don’t want to study, you should not be in school. But if you want to *cut down* on the time required and *still* get better results, keep on with this guide!

2.4f How to Study?

Efficiently, of course. (TOO simple an answer—but it’s still correct.) To be efficient:

1. Stick by your SCHEDULE. In other words, be organized.
2. REWARD YOURSELF with scheduled breaks, scheduled recreation, scheduled goof-off time. Do note that the old schedule does not get sacrificed. (Remember, you *swore* to stick it out for a week.)
3. WRITE notes, summaries, key concepts, flashcards (page 86) for terms, and all problems. To organize your material so you can remember it, try to produce clear outlines with headings, subheadings, terminology, rules, concepts In the margin of your notes improve those CUES which will key you to this organization.

Some very successful students take time to REDO their notes at least once each week in a special way. The notes are rewritten (using the textbook and other references) as though the student were to USE THESE NOTES TO GIVE THE LECTURES. The success of this method may lend credence to the old axiom: “To learn something really well, teach it.”



4. **PROBLEMS** are a special case because they are the closest thing to practice exams for many courses. Work all problems just as you would take an exam:
 - a. **ONLY** look up material that will be provided in the exam.
 - b. **NEVER** look at the answers until you have finished the problem.
 - c. **DON'T** look at the answer even then *until* you have decided that your answer is reasonable. (Estimate the answer and check that you **ANSWERED THE QUESTION ASKED.**)

For details of tackling *numerical* problems, see Section 8.2, page 87.

5. Get a **CRITIC** (someone who gets good grades) to check any written reports or papers that are going to be graded. (If they will also criticize practice items, that's fine, but such persons are harder to find!)

Try these questions on material you feel you have mastered. Can you:

- a. *List* the objectives for studying this material?
- b. *Write* accurate definitions of the terms?
- c. *Write* a clear outline?
- d. *Answer* the questions and solve the problems in the text?

Notice the emphasis on **WRITING**. You *can't* tell whether you're really ready for an examination until you do a few practice laps. You are taking exams as you study—they just aren't being graded yet.

A little note on **READING** may also be appropriate here. Sometimes reading is **NOT** as simple as we might expect. In some texts the ideas seem very complex; the sentences may be exceedingly complicated; many new terms pop up without definition; vocabulary that you never saw before is used; continuity from the prior material is not apparent. **BOY!** The previous sentence was 37 words long! Was it hard to understand? You probably didn't have too much trouble because that giant sentence was broken into five obvious parts. You can rephrase **ANY** complicated sentence into a series of simpler statements. At first, simply get the main sentence parts. Then add the phrases and modifiers one at a time. When you finish, you will have more understandable prose.

For unfamiliar vocabulary, you don't need to look up every word. The context may make it obvious. If it doesn't, DO look it up. If your textbook has a glossary or terms list, use that to get the specific meaning of a word within the special field of the text.

During this first (trial) week you should make notes on WHAT you like, WHEN you make recognizable progress, WHEN you feel frustrated, etc. But do NOT modify your schedule (or depart from it) until the second week. By that time, you will have developed much better criteria for any possible changes. If you fall from grace at any time during this week, make a WRITTEN note of what you actually did. You will need such notes for next week's reorganization of the schedule. (That's discussed in Chapter 3.)

