

## HOW TO DISCOVER USEFUL PATTERNS

We're going to teach you several ways to organize your subject matter before a test. These different approaches will help you to find patterns within the subject. You'll find some approaches are more suited to particular subjects or more suited to your way of thinking. You may want to use more than one approach. They are all going to help you to study better.

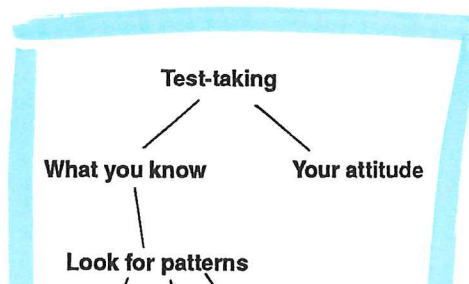
### DETERMINING THE MAIN POINTS OF STRUCTURE

When you begin to study, you should first determine the structure of the subject. Think of the material as having **two basic parts**: the **structure** of the subject — you could call this the big picture and secondly, **the details** within the big picture.

Perhaps you can see that in the design of this chapter we've been dividing up the subject. First we said that there are two things that are important in test-taking: what you know, and your attitude. Then we said that within the general area of what you know, you should look for patterns, and that there are several different methods for finding the patterns. Then we plunged into the first of these approaches which divides subject matter into the structure and the details. We've been structuring the subject of test-taking to give you an overview, the big picture.

You could take this structure and make a diagram of it like this:

Here's another example: The United States consists of 50 states, grouped



Create a diagram of this information about U.S. geography:

United States








The counties are the larger sections of land, some of which contain large cities, but many of which have very little population or commercial activity.

In saying this much about our country, we've given a general idea of how things are organized — the structure. It will now be possible to fill in details: to learn the names of the regions and states and their capital cities, and learn the general characteristics of each group, to learn what makes each state and city unique, and so on. By having an overall structure in mind, we know where to put details as we gather them.

When it comes to reviewing for a test, decide what **general divisions** you can make in the subject. Then **group the facts** you have to learn **into clusters** that can be put somewhere in the overall structure. Keep making your **structures within structures** more detailed as you fill in information.

### How to Look for the Structure

Here are some questions to ask yourself to get thinking:

-  What are the different categories of facts or concepts?
-  How are the different categories related to one another?
-  Which can be grouped together?
-  Are some categories within other categories?
-  Can I arrange these categories in a framework diagram or map?

To make sure you understand the key terms, define them in two different ways. First, write down a verbal description of each term. Second, draw a picture or diagram representing the concept behind the term.

Drawing the picture is important because too often we memorize definitions without actually understanding what they mean. But you can't draw a picture of something until you know what it is. If you're having trouble drawing a picture of a particular definition, think about the definition until you understand it — then you'll be able to draw it.

### COMPARING AND CONTRASTING

Another way to deepen your understanding of key terms is to explore the similarities and differences between them. Compare and contrast the main ideas in the subject you are studying. If you're studying types of literature, make sure you can list many similarities and differences between poems and short stories, or between the drama and the novel. In literature you'll also want to look for repeated patterns in the behavior of characters or in plots. If you are studying biology, compare and contrast fins, wings and legs, and so on. The more similarities and differences you can spell out in this way, the better you will understand each concept. And the better you'll become at finding patterns.

### ONCE AGAIN, APPLY WHAT YOU'VE LEARNED

So let's explore an example of how you might apply this method. You might take the subject of the human body and write down a list

Now represent all the relationships and meanings in a sketch of the human body which includes not only the body parts but some way



For example, when we think of New York City in terms of content, we think of things that are likely to be there for long periods of time, such as the Empire State Building, Broadway, Madison Avenue, Harlem, the Brooklyn Bridge, and other such landmarks.

But when we think of New York City's political system, which can be considered process, we think of continual change: new candidates for office who may or may not be elected, political issues that are hot for a while and may disappear later, campaign slogans, corruption, voter blocs, conventions, and many other events that are seldom the same from one week or year to the next.

By dividing your subject into content and process, you can identify lists of things you have to remember. For the subject of anatomy, a content list might include the bones, muscles, systems, and reactions found in the human body — things you can identify by pointing to a picture, diagram, or chart.

A process list might include how the blood circulates, what happens when someone drinks too much alcohol, how a broken bone is repaired, how the body adjusts to nerve damage, and other continually changing interactions.

Often the best way to keep track of content is to make lists, diagrams of the structure, mind maps, or memory devices. The best way to keep track of process is to make flow charts, stories, or models. Prepare your own story and visual aids and your subject material will really sink in.

Check for more information:

Diagrams of structure — p. 63

Mind Maps — p. 68

Memory devices — Chapter 8

Flow charts — p. 34

Stories — p. 80, p. 91