M. Neil Browne and Stuart Keeley look to change the way we perceive the environment around us. Through a series of progressive steps, they take the reader on a journey of self-improvement in the hopes that the reader will likely pick up the tools to become a critical thinker. Asking the Right Questions: A Guide to Critical Thinking teaches that nothing you see, hear, or read should be taken at face value, and by being more critical will allow you to get the most out of the information that is provided to you. The heart of this book comes from the notion that by being more critical, gives us the tools with which to make more effective and relevant decisions. It is the evolution of the decision making process that makes this reading so relevant, much like the initial reading of the term when the author compares the economic man to the administrator, Browne and Keeley distinguish between the sponge and the prospector who pans for gold. In the sponge approach we depend on memorization and the ability to absorb huge amounts of information, much like the economic man. However the problems with the sponge approach stem from the likely hood that the reader, listener etc... Will adapt the position most commonly held in the reading, the absorber of the information will not come to their own conclusion but rather regurgitate another authors opinions. Then there is the panning for gold approach, in which you sift through the information for the golden nuggets that will help you to draw your own conclusions, again much like the administrator that we have become all too familiar with. And as a result we are interested in the panning for gold approach, or in essence becoming a critical thinker. The process of panning for gold provides a model for active readers and listeners as they try to determine the worth of what they read and hear. Although there is great deal of effort involved in becoming a critical thinker the rewards are well worth it, being able to make informed decisions on your own, as well as the ability to critique arguments can be invaluable tools. It is the goal of this book to guide the transition between the sponge and the man who pans for gold. There are eleven key points that come into play when trying to become a critical thinker.

They are;
1. What are the issue and the conclusion?
2. What are the reasons?
3. Which words or phrases are ambiguous?
4. What are the value conflicts and assumptions?
5. What are the descriptive assumptions?
6. Are there any fallacies in the reasoning?
7. How good is the evidence?
8. Are there rival causes?
9. Are the statistics deceptive?
10. What significant information in omitted?
11. What reasonable conclusions are possible?
It is the goal of this book to be an aid, not just for school, or work but in life. I appreciate the way in which the author builds the book. With every chapter consisting of skills that are key in critical thinking and the format of the book takes on a form much like a 12 step program where every chapter builds upon the one previous. And the authors also allow the readers to gauge their progress with little quizzes at the end of each chapter. In order to understand the dimensions of critical thinking and their relevance to decision making we must look at the different steps as outlined in the book to understand the process.

The first step in becoming a critical thinker is being able to pick out the issue and the conclusion that an argument is putting forth. There are two main types of issues discussed; descriptive and prescriptive. Descriptive issues are those that raise questions about the accuracy of the past, present, or future. Prescriptive arguments are those that raise questions about what we should do or what is right or wrong, good or bad. Once we have identified the issue then we can infer as to the conclusion, finding a conclusion is not as simple as it may seem at first glance. It is very common for readers and listeners to “miss the point.” Communications frequently make the task difficult. The main reason is that you must infer a conclusion. The authors also suggest that if else fails then the failsafe is to ask the question “And therefore?” If you cannot find a therefore you probably have found a conclusion. Much like in decision making we are looking to make a decision about something. In the first few chapters we are looking at determining the material surrounding the decision.

Once we have found the conclusion and the issue we must find the evidence to provide support or an answer as to why the author came to the conclusion that they did. So we seek the answer the question “what are the reasons?” and not determine the worth of a conclusion until you identify the reasons.

Reason + Conclusion = Argument

Reasons are explanations or rationales for why we should believe a particular position. They are what are offered as a basis for why we should accept the conclusion. There are some important characteristics of reasons that are important to discuss.

?? They have intent. Those who provide then hope to convince us to believe certain things or act in certain ways. Consequently, they call for a reaction. We can imitate the sponge or the gold prospector, but we ordinarily must respond somehow.

?? Their quality varies. Critical thinking is required to determine the extent of quality in an argument.

?? They have two essential visible components – conclusion and reasons. Failure to identify either component destroys the opportunity to evaluate the argument. We cannot evaluate what we cannot identify.

As we have seen numerous times the strength of a decision relies on the support behind the conclusion, and much like when we make a decision we must go through and evaluate the sources of information that might lead us to a conclusion, so it is in the
interest of the decision maker to evaluate the reasons. And the authors provide some useful steps to aid us in this endeavour. The first question we must answer is “which words or phrases are ambiguous?” Problems with ambiguity tend to stem from the flexibility of words. The more abstract a word or phrase, the more likely it is to be susceptible to multiple interpretations and thus need clear definition by the author. We often misunderstand what we read because we presume that what words mean is obvious. Ask yourself “Do I understand the meaning?” Ambiguity refers to the existence of multiple possible meanings for a word or phrase, so making sure you understand the meaning in key. The author then goes into great deal describing how to locate and identify ambiguity. When we analyse the reasons we must not only search for ambiguity but we must also look for value conflicts and assumptions. In other words how does the author bridge the gap between reasons and conclusions? Why does the author believe this to be the conclusion? There are numerous reasons; the ones that we are most interested in at this point are the value assumptions that bridge the gap. By value assumption we mean a taken-for-granted belief about the relative desirability certain competing values.

An example to illustrate;

Reason: Illegal drugs cause excess violence and crimes

Conclusion: Recreational drugs should not be legalized.

The value assumption here is that public safety in more important than freedom of choice. In order to understand the author’s arguments it is often important to investigate the author’s background to see where his values lie. For values are standards of conduct that we endorse and expect people to meet, these value conflicts can effect the reliability or factuality of information, so when evaluating material we must be careful not to mistake value judgments for facts. The other type of assumption that we must be concerned with are the descriptive assumptions or assumptions on how the world is. Descriptive assumptions are not always as easy to discover as the value conflicts and assumptions and may require practice. Hopefully by now it is clear to see how the book is progressing, first we identified the issues, and at this point we are looking at the validity of the argument. We are hoping to get the most out of the information provided, and this will help us in our efforts to be critical thinkers, and more effective decision makers. This process of critical thinking can be linked to a movement in technology, the technology I believe we can draw similarities to be data mining. Data mining is an evolution of the standard searching tools that looks for relevant matches and pulls more accurate data for the user, it is more dynamic and useful for the process of decision making.

Once we understand the reasoning behind the argument and the argument itself the author then goes into an evaluation of the legitimacy of the argument. Here we start by looking to see if there are any fallacies in the reasoning. This is at the core of critical thinking, for the objective of critical thinking is to judge the acceptability and worth of conclusions. A fallacy is a trick that the author plays on the reader to make the conclusion appear more acceptable. There are a few different types of fallacies that
appear quite commonly, fallacy of equivocation, ah hominem, ad populum, and the ever popular either-or or false dilemma fallacy. Fallacy of equivocation occurs when the author takes a word that can have many meanings to mean one specific to his/her claim. Ad hominem occurs when the author attacks a person instead of the material in order to prove his point. Ad populum is in essence appealing to the group think phenomena. And either-or or false dilemma occurs when the author makes a situation appear to only have two outcomes, when in fact there might be many more. It is important to get to the heart of the matter, and fallacies get in the way of critical analysis. Sometimes we are distracted from looking for fallacies by Red Herrings. Next we look at the quality of the evidence; here the author looks at intuition, appeals to authority, testimonials, personal observation, case studies, research studies, and analogies. In our attempt to become critical thinkers we must evaluate not only the reasons and conclusions reached by the author but we must also go to the very heart of the argument and learn to become critical of the evidence also. Although evidence like case studies and testimonials may appear to be persuasive they may only be skin deep. The intent of this section is to learn how to go about finding the truth amongst everything thrown at us. We must always question these authorities and studies, and only by asking questions can we truly hope to become critical thinkers. Argument vs. Evidence. Another common mistake that can be made is drawing the wrong conclusion from an argument, so it is important to note that the conclusion rendered may not be the only conclusion for the reasons provided, so it is key to look for rival causes. A rival cause is a plausible interpretation, different from one author’s interpretation, that can explain why a certain outcome occurred. The clues for detecting rival causes are:

?? Can I think of any other way to interpret the evidence?
?? What else might have caused this act or these findings?
?? If I looked at this from another point of view, what might I see as important causes?
?? If this interpretation is incorrect, what other interpretation might make sense?

Then there are times when the author tries to mislead the reader by concluding that the reason is the cause, when in actuality it may just be a cause. This is sometimes known as the Post hoc fallacy – after this therefore because of this. Another important aspect to look at when evaluating the argument is whether the statistics are deceptive; the key here is to try to obtain as much information as you can about how the statistics were obtained. Averages and sample sizes, as well as where the sample is drawn from. When an average is presented, ask yourself “Would it be important for me to know the range and distribution of values?” Although statistics may lead to a conclusion they may not necessarily prove a thing. And they might be deceiving, that is why you must always know where the statistics come from. And lastly we are looking to see what pieces of information might have been omitted.

Although this process might seem lengthy in reality once mastered critical thinking will greatly reduce the amount of time and information you must us to draw your own conclusion. The authors of this book do a great job in teaching the tools, and these tools are the fundamental skills that I believe is the basis of effective decision.
making. For once we have mastered the process of critical thinking then we can look at things differently, all in the hopes of becoming the administrator, only now instead of having to satsifice due to a limited amount of information, we will be maximizing the value of the information used. This book is an invaluable tool for these purposes and more.