

THE ASPIRING THINKER'S

# Guide to Critical Thinking

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The Foundation for Critical Thinking

## Introduction for Teachers and Students

Humans live in a world of thoughts. We accept some thoughts as true. We reject others as false. But the thoughts we perceive as true are sometimes false, unsound, or misleading. And the thoughts we perceive as false and trivial are sometimes true and significant. The mind doesn't naturally grasp the truth. *We don't naturally see things as they are.* We don't automatically sense what is reasonable and what unreasonable. Our thought is often biased by our agendas, interests, and values. *We typically see things as we want to.* We twist reality to fit our preconceived ideas. Distorting reality is common in human life. It is a phenomenon to which we all, at times, unfortunately fall prey.

Each of us views the world through multiple lenses, often shifting them to fit our changing feelings. In addition, much of our perspective is unconscious and uncritical and has been influenced by many forces – including social, political, economic, biological, and psychological influences. Selfishness and narrow-mindedness are deeply influential in the lives of most people.

We need a systematic way to further *sound* thinking and limit *unsound* thinking. We need to take command of our minds in order to determine in a reasonable way what thinking to accept and what to reject. Critical thinking is that process, that orientation, and in the finest cases, that way of living.

This guide focuses on the essence of critical thinking concepts. For teachers it provides a shared concept of critical thinking. For students it introduces critical thinking and provides strategies for developing one's own critical thinking. Teachers can use it to design instruction, assignments, and tests in any subject. Students can use it to improve their learning in any content area.

The skills implicit in this guide apply to all subjects. For example, critical thinkers are clear as to the purpose at hand and the question at issue. They question information, conclusions, and points of view. They strive to be clear, accurate, precise, and relevant. They seek to think beneath the surface, to be logical, and fair. They apply these skills to their reading and writing as well as to their speaking and listening. They apply them in all subjects and throughout life.

If you are a student using this guide, get in the habit of carrying it with you to every class. Consult it frequently in analyzing and synthesizing what you are learning. Aim to deeply learn the ideas you find in it - until using them becomes second nature.

## Contents

<b>There are Three Main Kinds of Thinkers .....</b>	<b>3</b>
The Fairminded Critical Thinker .....	4
The Selfish Critical Thinker .....	5
The Naïve Thinker .....	6
<b>Developing Intellectual Character .....</b>	<b>7</b>
How to Become a Fairminded Critical Thinker .....	8
<b>Intellectual Standards Help You Think Better .....</b>	<b>10</b>
Be Clear: Don't Confuse People .....	11
Be Accurate: Make Sure it's True .....	12
Be Relevant: Make Sure You Stay on Track .....	13
Be Logical: Make Sure Everything Fits Together .....	14
Be Fair: Make Sure You Consider Others .....	15
Some Important Intellectual Standards .....	16
A Checklist of Questions You Can Ask to Target Intellectual Standards .....	17
Thinking About Fairness .....	18
Journal Entry Focusing on Unfair Thinking and Behavior .....	19
<b>We Take Our Thinking Apart to Find Problems in Our Thinking – and Solve Them .....</b>	<b>20</b>
Think About Purpose .....	21
State the Question .....	22
Gather the Information .....	23
Check Your Inferences .....	24
Question Your Assumptions .....	25
Clarify Your Concepts .....	26
Understand Your Point of View .....	27
Think Through the Implications .....	28
Clarifying Inferences and Assumptions .....	29
Finding Your Inferences and Assumptions .....	31

**Critical Thinkers Seek Better Ways of Doing Things . . . . . 33****Strategies for Using the Parts of Thinking:**

Analyzing Problems . . . . .	34
Analyzing Characters in a Story . . . . .	36
Analyzing Chapters in a Textbook . . . . .	38
Analyzing Experiments . . . . .	40
Analyzing the Data Collected (After Experiments) . . . . .	41
Analyzing Subjects or Disciplines . . . . .	42
Asking Questions Which Target the Parts of Thinking . . . . .	43

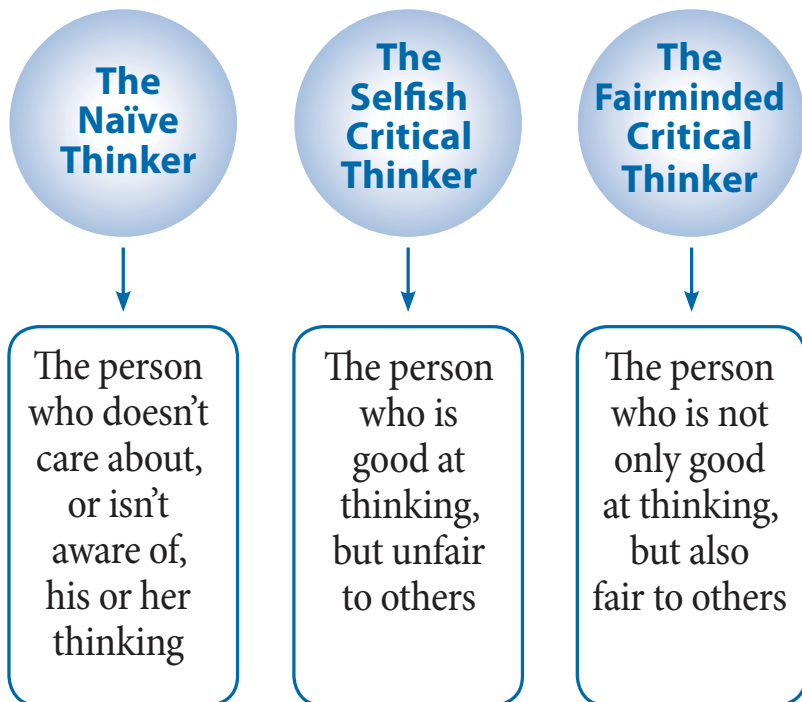
**Strategies for Clarifying and Understanding Important Ideas:**

Clarifying Your Own Ideas, Clarifying What Others Say . . . . .	44
Thinking Through Conflicting Ideas . . . . .	45
Thinking Through Important Ideas . . . . .	46

**Reflecting Upon Important Ideas Learned . . . . . 47**

The Thinker's Guide Library . . . . .	48
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## There are Three Main Kinds of Thinkers



Each of us may sometimes be a naïve thinker, sometimes a selfish critical thinker, and sometimes a fairminded critical thinker.

We can create a better world when we work together to be fair to everyone. We will never be perfect, but we can always improve our thinking.

This guide will help you develop as a fairminded thinker.

## The Fairminded Critical Thinker

Fairminded critical thinkers work to improve their thinking whenever they can. They want things for themselves, but they aren't selfish. They want to help other people. They want to help make the world better for everyone. They are willing to give things up to help others (when it makes sense to). They don't always have the right answers, but they work to improve their thinking (and actions) over time.

### Here is the voice of the fairminded critical thinker...

"I think a lot. It helps me learn. It helps me figure things out. I want to understand the thinking of other people. In fact, I even want to understand myself and why I do things. Sometimes I do things I don't understand. It's not easy trying to understand everyone and everything. Lots of people say one thing and do another. You can't always believe what people say. You can't believe a lot of what you see on TV and the internet. People often say things they don't mean because they want things and are trying to please you.

"I would like to make the world a better place. I want to make it better for everyone, not just for me and my friends. To understand other people you have to look at things as they do. You have to understand their situation and what you would feel like if you were them. You have to put yourself in their shoes. I think about people who don't have



what I have, like people who are starving or homeless. I want to help create a world where everyone has enough to eat and somewhere to live.

"It isn't easy to be fair. It's a lot easier to be selfish and just think about yourself. But the world isn't a nice place to be if people are selfish."

## The Selfish Critical Thinker

Selfish critical thinkers are people who use their thinking to get what they want, without considering how their actions might affect other people. They are good at thinking, and they know it. But they are also very selfish. They may be greedy and unkind as well.



### Here is the voice of the selfish critical thinker...

"I think a lot! It helps me get what I want. I believe whatever I want to believe as long as it gets me what I want. I question anyone who asks me to do what I don't want to do. I figure out how to get other people to do what I want them to do. I even figure out how to avoid thinking if I want.

"Sometimes I say 'I can't!' when I know I could but don't want to. You can get what you want from people if you know how to manipulate them. Just the other night, I talked my parents into buying me a really expensive new computer gadget I knew they couldn't really afford. But hey, they work don't they? They can always make more money. I'm their kid so they should give me what I want.



"It helps to tell people what they want to hear. Of course, sometimes what they want to hear isn't true, but that doesn't matter because you only get into trouble when you tell people what they don't want to hear. You can always trick people if you know how. Guess what, you can even trick yourself if you know how."

## Intellectual Standards Help You Think Better

The best thinkers don't believe any and everything they hear or read. They use intellectual standards to decide what to believe. They use intellectual standards to keep their thinking on track. In this guide, we focus on some of the important ones. When you use them every day, your thinking improves.

- Be clear!** — Can you state what you mean?  
Can you give examples?
- Be accurate!** — Are you sure it's true?
- Be relevant!** — Is it related to what we are thinking about?
- Be logical!** — Does it all fit together?
- Be fair!** — Am I considering how my behavior might make others feel?
- Be reasonable!** — Have we thought through this problem thoroughly and with an open mind?



**If everyone in the world regularly used intellectual standards, we could solve most of our big problems.**



## Be Relevant: Make Sure You Stay on Track

Something is relevant when it relates directly to:

- the problem you are trying to solve.
- the question you are trying to answer.
- whatever you are talking about or writing about.



All instruments in a cockpit are *relevant* to flying the airplane, but they are not relevant to riding a bicycle.

### Questions you can ask when you are not sure whether something is relevant:

- How does what you say relate to the problem?
- How does this information relate to the question we are asking?
- What will help us solve the problem?
- How does what you say relate to what we are talking about?
- How does this relate to our purpose?

## **Be Logical: Make Sure Everything Fits Together**

Thinking is logical when everything fits together, when everything makes sense together.

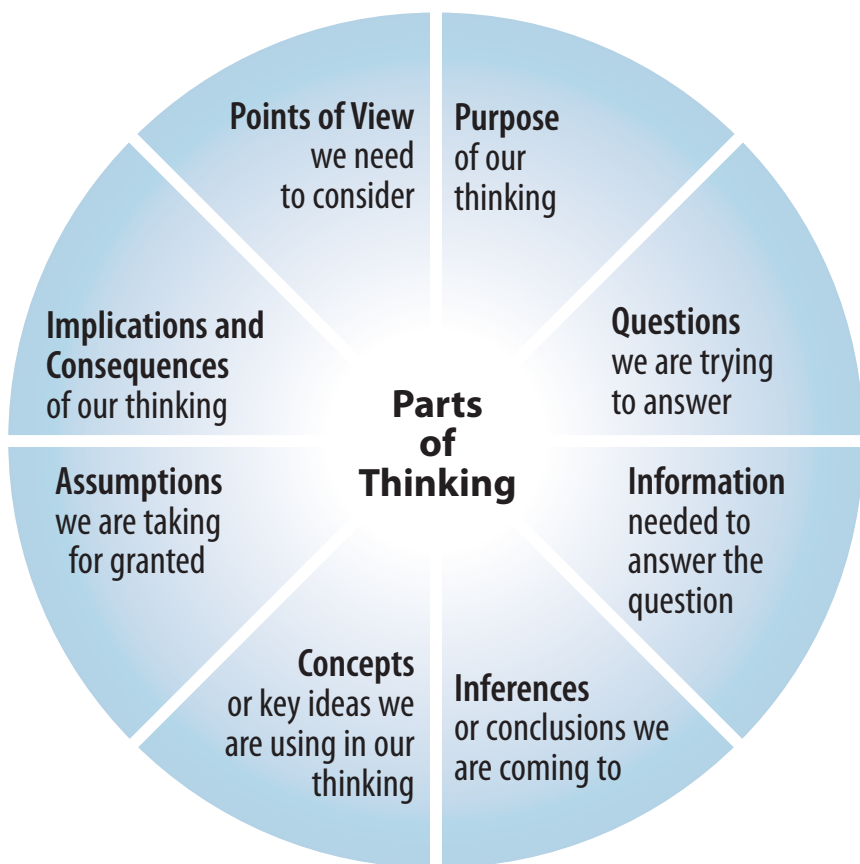


### **Questions you can ask when you are not sure whether something is logical:**

- This doesn't make sense to me. Can you show me how it all fits together?
- The sentences in this paragraph don't seem to belong together. How can I rewrite this paragraph so that the sentences all fit together?
- What you are saying doesn't sound logical. How did you come to your conclusions? Explain why this makes sense to you.
- The messages I am getting from this TV show don't seem sensible. Should I follow along with these ideas, or should I reject them?

# We Take Our Thinking Apart to Find Problems in Our Thinking – and Solve Them

Here are the parts:



## Think About Purpose

Your purpose is what you are trying to achieve or make happen.



**Good athletes stay focused on their goals.  
Good thinkers do too.**

### Questions you can ask to target purpose:

- What is our purpose in doing what we are doing?
- What is my purpose in doing what I am doing?
- What is your purpose?
- What is the purpose of this assignment?
- What is the purpose of the main character in this story?
- What is my teacher trying to accomplish?
- What is my friend's purpose?
- What is the purpose of this textbook?
- Should we change our purpose?
- Is my purpose fair to everyone?

## Analyzing Chapters in a Textbook

Every textbook, and every chapter in every textbook, has a logic that can be figured out. One important way to do this is by looking at the parts of the author's thinking.

Here is a template to follow:

**1) The main **purpose** of this chapter is...**

(Here you are trying to state, as accurately as possible, the author's purpose in writing the chapter. What was the author trying to accomplish?)

**2) The key **question** at the heart of the chapter is ...**

(Your goal is to figure out the main question that was in the mind of the author when he/she wrote the chapter. What was the key question she or he addresses?)

**3) The most important **information** in this chapter is ...**

(You want to identify the key information the author is using in the chapter to support his/her main arguments. Look for facts, experiences, and/or data the author is using to support his/her conclusions.)

**4) The main **inferences** in this chapter are...**

(Figure out the most important conclusions the author comes to and presents in the chapter.)

5) The key **concept(s)** we need to understand in this chapter is (are)...

**By these concepts the author means ...**

(Look for the most important ideas at the heart of the author's reasoning. These might be concepts like "science" or "power" or "poverty" or "civics.")

6) The main **assumption(s)** underlying the author's thinking is (are)...

(Ask yourself: What is the author taking for granted in this chapter [that might be questioned]? The assumptions are beliefs the author does not think he/she has to defend. Assumptions are usually not stated and therefore can be hard to figure out.)

7a) If people take seriously what this author is saying, some important **implications** are...

(What consequences are likely to follow if people take the author's ideas seriously?)

7b) If we fail to accept what the author is saying, some important **implications** are...

(What consequences are likely to follow if people ignore the author's thinking in this chapter?)

## Thinking Through Conflicting Ideas

It is important to be able to think about and write clearly on ideas that conflict with one another. After all, lots of ideas do. Here is a structure you can use. Write your answers on your own paper.

- 1. Find two important potentially conflicting ideas. These ideas may be in a textbook or in different books or just two ideas you are concerned with.** For example, you might be concerned with ideas like:
  - individual freedom vs. laws that limit individual freedom
  - human rights vs. protecting the earth
  - love vs. control
  - animal rights vs. human desires
  - mainstream views vs. dissenting views
  - education vs. indoctrination
  - reasonable cooperation vs. blind loyalty
- 2. Think through one important conflict between the ideas you have selected.**
- 3. Clearly state one important point about that idea.** This is your thesis.
- 4. Elaborate your thesis** (in several sentences).
- 5. Give an example of your thesis** (some negative consequences that some people or animals actually experience because of this problem).
- 6. Write out at least one reasonable objection to your position** (from a different point of view).
- 7. Respond to that objection** (pointing out and giving credit to any strengths in this position).
- 8. Construct a dialogue between some one defending your view and someone who (intelligently) opposes it.**

## The Thinker's Guide Library

The Thinker's Guide series provides convenient, inexpensive, portable references that students and faculty can use to improve the quality of studying, learning, and teaching. Their modest cost enables instructors to require them of all students (in addition to a textbook). Their compactness enables students to keep them at hand whenever they are working in or out of class. Their succinctness serves as a continual reminder of the most basic principles of critical thinking.

### For Students & Faculty



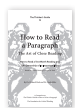
**Analytic Thinking**—This guide focuses on the intellectual skills that enable one to analyze anything one might think about — questions, problems, disciplines, subjects, etc. It provides the common denominator between all forms of analysis. **#595m**



**Asking Essential Questions**—Introduces the art of asking essential questions. It is best used in conjunction with the Miniature Guide to Critical Thinking and the How to Study mini-guide. **#580m**



**How to Study & Learn**—A variety of strategies—both simple and complex—for becoming not just a better student, but also a master student. **#530m**



**How to Read a Paragraph**—This guide provides theory and activities necessary for deep comprehension. Imminently practical for students. **#525m**



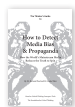
**How to Write a Paragraph**—Focuses on the art of substantive writing. How to say something worth saying about something worth saying something about. **#535m**



**The Human Mind**—Designed to give the reader insight into the basic functions of the human mind and to how knowledge of these functions (and their interrelations) can enable one to use one's intellect and emotions more effectively. **#570m**



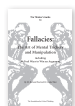
**Foundations of Ethical Reasoning**—Provides insights into the nature of ethical reasoning, why it is so often flawed, and how to avoid those flaws. It lays out the function of ethics, its main impediments, and its social counterfeits. **#585m**



**How to Detect Media Bias and Propaganda**—Designed to help readers come to recognize bias in their nation's news and to recognize propaganda so that they can reasonably determine what media messages need to be supplemented, counter-balanced or thrown out entirely. It focuses on the internal logic of the news as well as societal influences on the media. **#575m**



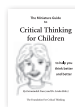
**Scientific Thinking**—The essence of scientific thinking concepts and tools. It focuses on the intellectual skills inherent in the well-cultivated scientific thinker. **#590m**



**Fallacies: The Art of Mental Trickery and Manipulation**—Introduces the concept of fallacies and details 44 foul ways to win an argument. **#533m**



**Engineering Reasoning**—Contains the essence of engineering reasoning concepts and tools. For faculty it provides a shared concept and vocabulary. For students it is a thinking supplement to any textbook for any engineering course. **#573m**



**Critical Thinking for Children**—Designed for K–6 classroom use. Focuses on explaining basic critical thinking principles to young children using cartoon characters. **#540m**



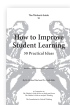


**Glossary of Critical Thinking Terms & Concepts**—Offers a compendium of more than 170 critical thinking terms for faculty and students. **#534m**

## For Faculty



**Active and Cooperative Learning**—Provides 27 simple ideas for the improvement of instruction. It lays the foundation for the ideas found in the mini-guide How to Improve Student Learning. **#550m**



**How to Improve Student Learning**—Provides 30 practical ideas for the improvement of instruction based on critical thinking concepts and tools. It cultivates student learning encouraged in the How to Study and Learn mini-guide. **#560m**



**Critical and Creative Thinking**—Focuses on the interrelationship between critical and creative thinking through the essential role of both in learning. **#565m**



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**Socratic Questioning**—Focuses on the mechanics of Socratic dialogue, on the conceptual tools that critical thinking brings to Socratic dialogue, and on the importance of questioning in cultivating the disciplined mind. **#553m**



**Critical Thinking Competency Standards**—Provides a framework for assessing students' critical thinking abilities. **#555m**



**Intellectual Standards**—Explores the criteria for assessing reasoning; illuminates the importance of meeting intellectual standards in every subject and discipline. **#593m**



**Educational Fads**—Analyzes and critiques educational trends and fads from a critical thinking perspective, providing the essential idea of each one, its proper educational use, and its likely misuse. **#583m**

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- 25–199 copies \$5.00 each
- 200–499 copies \$4.00 each
- 500+ copies \$3.50 each

*Prices subject to change.*

For pricing of other guides, please visit our web site at **[www.criticalthinking.org](http://www.criticalthinking.org)**

## For More Information

(To order guides or to inquire about other resources)

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## Foundation for Critical Thinking

The Foundation for Critical Thinking seeks to promote essential change in education and society through the cultivation of fair-minded critical thinking, thinking predisposed toward intellectual empathy, humility, perseverance, integrity, and responsibility. A rich intellectual environment is possible only with critical thinking at the foundation of education. Why? Because only when students learn to think through the content they are learning in a deep and substantive way can they apply what they are learning in their lives. Moreover, in a world of accelerating change, intensifying complexity, and increasing interdependence, critical thinking is now a requirement for economic and social survival. Contact us to learn about our publications, videos, workshops, conferences, and professional development programs.

## About the Authors:



**Dr. Linda Elder** is an educational psychologist who has taught both psychology and critical thinking at the college level. She is the President of the Foundation for Critical Thinking and the Executive Director of the Center for Critical Thinking. Dr. Elder has a special interest in the relation of thought and emotion, the cognitive and the affective, and has developed an original theory of the stages of critical thinking development. She has coauthored four books on critical thinking, as well as twenty thinkers' guides. She is a dynamic presenter with extensive experience in leading seminars on critical thinking.



**Dr. Richard Paul** is a major leader in the international critical thinking movement. He is Director of Research at the Center for Critical Thinking, and the Chair of the National Council for Excellence in Critical Thinking, author of over 200 articles and seven books on critical thinking. Dr. Paul has given hundreds of workshops on critical thinking and made a series of eight critical thinking video programs for PBS. His views on critical thinking have been canvassed in *New York Times*, *Education Week*, *The Chronicle of Higher Education*, *American Teacher*, *Educational Leadership*, *Newsweek*, *U.S. News and World Report*, and *Reader's Digest*.