



A Guide  
For Educators to

# Critical Thinking Competency Standards

Standards, Principles, Performance  
Indicators, and Outcomes  
With a Critical Thinking  
Master Rubric

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Foundation for Critical Thinking

# Letter to the Reader

Much lip service is given to the notion that students are learning to think critically. A cursory examination of critical thinking competency standards (enumerated and elaborated in this guide) should persuade any reasonable person familiar with schooling today that they are not. On the other hand, a reasonable person might also conclude that no teacher in any single subject could teach all of these standards. We agree.

The critical thinking competency standards articulated in this guide serve as a resource for teachers, curriculum designers, administrators and accrediting bodies. The use of these competencies across the curriculum will ensure that critical thinking is fostered in the teaching of any subject to all students at every grade level. We can expect large groups of students to achieve these competencies only when most teachers within a particular institution are fostering critical thinking standards in their subject(s) at their grade level. We cannot expect students to learn critical thinking at any substantive level through one or a few semesters of instruction.

Viewed as a process covering twelve to sixteen years and beyond, and contributed to by all instruction, both at the K-12 as well as the college and university level, all of the competencies we articulate, and more, can be achieved by students. We recommend therefore that those responsible for instruction identify which competencies will be fostered at what grade level in what subjects for what students. The most important competencies must be reinforced within most instruction. Some competencies might well be taught in a more restricted way.

We believe any well-educated student or citizen needs the abilities and dispositions fostered through these competencies. We also believe that any reasonable person who closely studies these competencies will agree.

To transform classrooms into communities of thinkers, we need to take a long-term view. We need to reflect widely and broadly. We need to be systematic, committed, and visionary. The task is challenging indeed. But it is a challenge we ignore at the risk of the well-being of our students and that of our society.



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<sup>1</sup> Additional competencies can be developed by teachers, faculty, and departments, competencies that focus on any specific domain, subject, or discipline.

# Critical Thinking Competency Standards: A Guide for Educators

Education is not the filling of a pail. It is the lighting of a fire.

—WILLIAM BUTLER YEATS, ENGLISH POET

Critical Thinking Competency Standards provides a framework for assessing students' critical thinking abilities. It enables administrators, teachers and faculty at all levels (from elementary through higher education) to determine the extent to which students are reasoning critically within any subject or discipline. These standards include outcome measures useful for teacher assessment, self-assessment, as well as accreditation documentation. These competencies not only provide a continuum of student expectations, but can be contextualized for any academic subject or domain and for any grade level. In short, these standards include indicators for identifying the extent to which students are using critical thinking as the primary tool for learning.

By internalizing the competencies, students will become more self-directed, self-disciplined, self-monitored thinkers. They will develop their ability to:

- raise vital questions and problems (formulating them clearly and precisely);
- gather and assess relevant information (using abstract ideas to interpret it effectively and fairly);
- come to well-reasoned conclusions and solutions (testing them against relevant criteria and standards);
- think open-mindedly within alternative systems of thought (recognizing and assessing, as need be, their assumptions, implications, and practical consequences); and
- communicate effectively with others in figuring out solutions to complex problems.

Students who internalize these competency standards will come to see that critical thinking entails effective communication and problem solving skills, as well as a commitment to overcoming one's native egocentric and sociocentric tendencies.

All students (beyond the elementary level) are expected to demonstrate all of the critical thinking competencies included in this battery of demonstrable skills, but not at the same level of proficiency, or in the same subjects or at the same speed. These competencies signal important habits of thought that manifest themselves in every dimension and modality of learning: for example, in student reading, writing, speaking, and listening, as well as in professional and personal

activities. It is up to the teacher or institution to contextualize and sequence the competencies, for different disciplines, and at differing levels.

## The Structure of This Guide

Before detailing the competencies, we begin with a brief overview of critical thinking. We focus specifically on the seminal role that critical thinking should, and eventually must play in education, if we are ever to foster the skills of mind necessary for functioning effectively in an increasingly complex world.

After a brief discussion of critical thinking and its relationship to education, we outline and detail the competencies, relate them to seminal critical thinking concepts, and then provide rubrics for scoring. In the appendix we provide a brief overview of the theory underlying the competencies.

It is important to note that, only when teachers understand the foundations of critical thinking can they effectively teach for it. This fact should become clearer as you work through the competencies.

Throughout the guide (including the appendix), we recommend readings, readings that lay the groundwork for understanding and fostering the competencies. Before attempting to foster any particular competency, or set of competencies, we recommend that teachers spend time internalizing the related critical thinking concepts we reference for each competency.

The simple truth is that teachers are able to foster critical thinking only to the extent that they themselves think critically. This may be the single most significant barrier to student achievement of critical thinking competencies. For teachers to aid students in becoming deep thinkers, they must themselves think deeply. For teachers to aid students in developing intellectual humility, they must themselves have developed intellectual humility. For teachers to foster a reasonable, rational multi-logical worldview, they must themselves have developed such a worldview. In short, teaching for critical thinking presupposes a clear conception of critical thinking in the mind of the teacher.

Unfortunately, we cannot assume that teachers have a clear concept of critical thinking. Indeed, research indicates that the opposite is true. Available evidence suggests that critical thinking is rarely fostered in a systematic way in academic programs at any level. The institutions most effectively able to use critical thinking competencies are those guided by leaders who themselves understand critical thinking, and who support an effective long-term staff development program in critical thinking.<sup>2</sup>

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<sup>2</sup> For two related articles on long-term staff development designed to foster a substantive concept of critical thinking, see the following links: <http://www.criticalthinking.org/professionalDev/model-for-colleges.shtml>  
<http://www.criticalthinking.org/resources/articles/the-state-ct-today.shtml> Though these articles focus specifically on staff development in higher education, the same basic approach would apply to K-12 schooling.

2. **MASTER RUBRICS:** Overall, the student has evidenced understanding and internalization of the critical thinking competency (as detailed in the performance indicator) with the following frequency and depth:
- Virtually never (0 points)
  - Rarely (1–2 points)
  - Sometimes (but with limited understanding) (3–5 points)
  - Often (but inconsistently and sometimes superficially) (6–8 points)
  - Typically and characteristically (and with depth of understanding) (9–10 points)

The overall score is an average score of all outcomes (either of the complete list of outcomes, or only those outcomes fostered in the teaching process). In determining the master score, then, one of two procedures can be used:

1. Calculating the average score of only those outcomes included in the instructional process.
2. Calculating the average score of all outcomes listed for each competency, regardless of whether an outcome has been fostered in the learning process. In this case, a score of “0” is given for the excluded outcomes, and then the average of all outcomes in the competency is calculated. This score would be the most accurate of the two possibilities.

## **Standard One: Purposes, Goals, and Objectives<sup>7</sup>**

Students who think critically recognize that all thinking has a purpose, objective, goal or function.

### **Critical Thinking Principle**

If you are clear about your purpose, about what you are trying to accomplish or achieve, you are far more likely to achieve it than when you are not. Moreover, the pursuit of any specific purpose is justified only when the purpose is fair to all relevant persons, animals, and/or groups.

### **Performance indicators and dispositions**

Students who think critically seek to understand not only what they are learning but why. They formulate purposes, goals, and objectives that are clear, reasonable,

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<sup>7</sup> For a deeper understanding of the elements of reasoning and the intellectual standards, which are the focus of the first nine standards, see: *Critical Thinking: Tools for Taking Charge of Your Learning and Your Life* by Richard Paul and Linda Elder, 2001, Upper Saddle River, New Jersey: Prentice Hall, chapters 4-5. Also see *A Miniature Guide to the Foundations of Analytic Thinking* by Linda Elder and Richard Paul, 2003, Dillon Beach, CA: Foundation for Critical Thinking, [www.criticalthinking.org](http://www.criticalthinking.org)

and fair. They also identify purposes that are unclear, inconsistent, unrealistic, and unfair.

### **Outcomes include**

1. Students explain in their own words (clearly and precisely) the purpose and significance of what is happening in class—of classroom activities, tests, and assignments.
2. Students explain in their own words (clearly and precisely) the purpose of the subject or discipline being studied.
3. Students explain in their own words (clearly and precisely) the purpose of reasoning through a problem or issue (within a discipline or subject, or across disciplines).
4. Students explain in their own words (clearly and precisely) the purpose of reasoning through problems in their own life.
5. Students notice when they or other students are straying from the purpose at hand, and redirect the thinking back toward the purpose.
6. When asked to select a goal or purpose (for example, to choose a problem to solve), students demonstrate the ability to adopt realistic ends.
7. Students choose reasonable secondary (instrumental) goals that make sense in working toward the accomplishment of a more ultimate goal.
8. Students regularly adjust their thinking to fit their ultimate purposes.
9. Students choose purposes and goals that are fair-minded, considering the relevant needs and rights of others (and assess the purposes of others for fairness).

### **Standard Two: Questions, Problems, and Issues**

Students who think critically recognize that all thinking is an attempt to figure something out, to settle some question, or solve some problem.

#### **Critical Thinking Principle**

To settle a question, you must know what it is asking and how to go about answering it. In other words, for every question one might ask, there are conditions that must be met before the question can be settled.

#### **Performance indicators and dispositions**

Students who think critically seek a clear understanding of the main question they are trying to answer, problem they are trying to solve, or issue they are trying to resolve. They formulate questions clearly and precisely. They recognize when they are dealing with a complex question and they think deeply within its complexities before attempting to answer such a question. They recognize when a question



3. Students make assumptions that are consistent with one another.
4. Students are aware of the natural tendency in humans to use stereotypes, prejudices, biases and distortions in their reasoning; they regularly identify their own stereotypes, prejudices, biases and distortions; they demonstrate skill in accurately identifying the stereotypes, prejudices, biases and distortions in the thinking of others.
5. Students accurately state the assumptions underlying the inferences they, or others make, and then to accurately assess those assumptions for justifiability.
6. Students demonstrate understanding of the fact that assumptions function primarily at the unconscious or subconscious level of thought
7. Students demonstrate recognition that the mind naturally (egocentrically) seeks to hide unjustifiable assumptions in the mind in order to maintain its belief system or pursue selfish ends.
8. Students seek out, in their thinking, unjustifiable assumptions generated and maintained through native egocentric tendencies (hidden at the unconscious level of thought).
9. Students accurately identify assumptions within subjects, disciplines and texts.
10. Students identify the assumptions embedded in the concepts they use and the theories they study.

## **Standard Six: Concepts, Theories, Principles, Definitions, Laws, & Axioms**

Students who think critically recognize that all thinking is expressed through, and shaped by, concepts and ideas.

### **Critical Thinking Principle**

Thinking can only be as clear, relevant, realistic and deep as the concepts that shape it.

### **Performance indicators and dispositions**

Students who think critically seek a clear understanding of the concepts and ideas that shape their reasoning and the reasoning of others. They understand the powerful role of concepts in human thought, that it is through concepts that people define and shape their experiences. They understand that humans often use distorted concepts, concepts that negate fundamental agreed-upon definitions and understandings. They recognize that people often distort concepts in order to maintain a particular viewpoint, position, or to control or manipulate the thinking of others. They regularly and routinely assess the concepts they use, making

sure they are using concepts justifiably. Similarly, they regularly and routinely assess the concepts used by others.

### **Outcomes include**

1. Students are able to state, elaborate and exemplify what a concept is.
2. Students demonstrate understanding of the following distinctions: theories, principles, definitions, laws, & axioms (they can accurately state, elaborate, and exemplify each one).
3. Students identify the key concepts and ideas they and others use.
4. Students are able to accurately explain the implications of the key words and phrases they use.
5. Students distinguish nonstandard uses of words from standard ones.
6. Students are aware of irrelevant concepts and ideas and use concepts and ideas in ways relevant to their functions.
7. Students think deeply about the concepts they use.
8. Students analyze concepts and to draw distinctions between related but different concepts
9. Students use language with care and precision, while holding others to the same standards.
10. Students demonstrate awareness of the mind's naturally tendency to distort concepts in order to maintain a particular viewpoint or set of beliefs; they show a propensity to identify when concepts are being misused.

## **Standard Seven: Implications and Consequences**

Students who think critically recognize that all thinking leads somewhere, that it has implications and, when acted upon, has consequences.

### **Critical Thinking Principle**

To reason well through an issue, you must think through the implications that follow from your reasoning. You must think through the consequences likely to follow from decisions you make. Implications of your thinking and behavior exist whether you see them or not.

### **Performance indicators and dispositions**

Students who think critically seek a clear understanding of the implications of their thinking and of the consequences of their behavior. They think through the likely implications of their behavior before they act. They are especially aware of significant implications. Because they think through the implications of their behavior before acting, their behavior tends to lead to positive or desirable consequences. Students who think critically also think through the implications of

others' thinking and behavior where relevant. They are not only able to follow out the implications of thinking and behavior, but also to follow out the implications of implications. In other words, they think in the following way: "If we decide to do this, the following implications are likely..., and if this or that consequence occurs, the implications (of that consequence) are as follows..."

### **Outcomes include**

1. Students distinguish, clearly and precisely, the difference between (and overlap between) an implication and a consequence.
2. Students identify the most significant implications and consequences of their reasoning and behavior.
3. Students distinguish clearly defined implications and consequences from vaguely expressed ones.
4. Students consider negative as well as positive implications (of their own thinking or behavior, of others thinking or behavior).
5. Students distinguish probable from improbable (and therefore unlikely) implications and consequences.
6. Students identify the implications of language usage in context (and recognize the relationship between language used and the concepts formed in a situation).
7. Students think through implications when reasoning through issues and problems within subjects and disciplines.

## **Standard Eight: Points of View and Frames of Reference**

Students who think critically recognize that all thinking occurs within some point of view.

### **Critical Thinking Principle**

To reason justifiably through an issue, you must identify points of view relevant to the issue and enter them empathically.

### **Performance indicators and dispositions**

Students who think critically seek a clear understanding of the points of view relevant to an issue they are considering. When dealing with an issue where more than one viewpoint is relevant to the issue, they enter differing viewpoints in good faith (with a mind that can be changed when faced with better reasoning than the reasoning one begins with). Students who think critically appreciate the fact that some issues are not only complex, but broad in scope, and that these issues are often difficult, if not impossible, to settle definitely. Critical thinkers have a world view that is broad in perspective, that seeks the most flexible and open-minded