

# BEYOND MEMORIZATION: HELPING STUDENTS DEVELOP CRITICAL THINKING SKILLS

## What are critical thinking skills?

Many educators are focusing on developing students' *critical thinking skills*, or *how* to think, rather than just *what* to think. A few experts define "critical thinking" as the:

☆ "...ability to use logic and reasoning to solve problems."<sup>1</sup>

☆ "...process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflections, reasoning, or communication, as a guide to belief and action."<sup>2</sup>

☆ "...thinking governed by reasons and reasoning--by giving reasons, being persuaded by reasons, disliking bad reasoning, valuing good reasoning, and thinking it right to give reasons [for] what one believes and does."<sup>3</sup>

## Why are critical thinking skills important?

Many educators and other professionals agree that individuals with strong critical thinking skills are better able to:

- ✓ differentiate between fact and fiction
- ✓ ask relevant questions to gather information
- ✓ solve difficult problems
- ✓ make sound decisions based on facts and logical reasons
- ✓ identify and question assumptions and bias within data
- ✓ analyze and interpret information/data
- ✓ draw conclusions from data
- ✓ effectively explain their thinking
- ✓ argue persuasively; defend their viewpoints
- ✓ compare and contrast
- ✓ rethink conclusions when new information is presented
- ✓ think about information presented to them, rather than jumping to conclusions or accepting it at face value.

"Shoddy thinking is costly, both in money and in quality of life," wrote Scriven and Paul of the National Council for Excellence in Critical Thinking Instruction.

"Excellence in thought, however, must be systematically cultivated."<sup>4</sup>

Students are tested on their critical thinking skills within academic content areas. On one MCAS exam, eighth graders were asked to, "*Write a persuasive essay describing one change that will improve your school. Give at least two reasons to show how your suggestion will improve your school. Remember, you must argue in a convincing manner so that the school committee will understand and agree with your position.*"<sup>5</sup> The SAT exam now requires test-takers to compose an essay in which they defend their viewpoint on a topic.<sup>6</sup>

## But what about facts?

Critical thinking involves taking one's knowledge of facts to a higher level. Case in point: A student memorizes the 50 states and their capitals; learns that the capital is where the state's government is located (not necessarily the largest city); and finds the states and capitals on a map. The next step may be to gather information about the capital cities via research. The student might then use *critical thinking skills* to analyze the information; compare/contrast the cities; draw conclusions about why certain cities were chosen to be capitals while others were not; and explain their conclusions.

## Supporting Critical Thinking Skills Development

◆ Have discussions with youth. Ask for their opinions on current events or situations relevant to their lives. Ask open-ended questions about their beliefs (in a non-judgmental way) such as, "Why do you feel that way?" or "What do you think about...?" This will give them practice in verbalizing their thoughts and providing reasons for their thinking.

◆ Point out various perspectives.<sup>7</sup> Say, for example, "I see why some may feel that way, but on the *other side*..."

◆ Encourage children to compare and contrast objects or ideas. Even young children can answer questions such as, "How are cats and dogs similar/different?"

◆ When setting limits, give youth a reason for the rules. ("You can't do that because it is dangerous.")

◆ Many daily situations can become "teachable moments." If you see a chart, diagram, or visual display in the environment, ask youth what they think the information means. Talk about your interpretations, too.

◆ When watching TV, listening to the radio, or reading together, ask youth what they notice about the content presented, especially in advertisements.<sup>8</sup> Are there persuasion techniques, false claims, or biases?

## For more information, read...

□ "*Develop Your Child's Critical Thinking Skills*," Marie Magdala Roker (2004), at [www.suite101.com/print\\_article.cfm/parenting\\_insights/111930](http://www.suite101.com/print_article.cfm/parenting_insights/111930).

□ "*Critical Thinking Skills*" (the 35 dimensions of critical thought) by the North Central Regional Educational Laboratory at <http://www.ncrel.org/sdrs/areas/issues/envnmnt/drugfree/sa3crit.htm>.

**Cited Sources:** (All retrieved from the Internet on Nov. 30, 2005.)

1. Definition from <http://add.about.com/cs/addthebasics/a/glossaryc.htm>.

2. & 4. "*Defining Critical Thinking*," Michael Scriven and Richard Paul, National Council for Excellence in Critical Thinking Instruction. Retrieved from [www.criticalthinking.org](http://www.criticalthinking.org).

3. Alec Fisher, Director of the Centre for Research in Critical Thinking, University of East Anglia, quoted in "*Teaching Critical Thinking Skills*," (2004) by Dr. Winford James. Retrieved from [www.trinicenter.com/winford/2004/Nov/21.htm](http://www.trinicenter.com/winford/2004/Nov/21.htm).

5. "*2000 MCAS Sample Student Work, Grade 8 English Language Arts Composition*." Retrieved from the Massachusetts DOE Website at [www.doe.mass.edu/mcas/student/2000/g8comp.html](http://www.doe.mass.edu/mcas/student/2000/g8comp.html).

6. "The SAT Writing Section: Short Essay." Retrieved from [www.collegeboard.com/student/testing/sat/about/sat/writing.html](http://www.collegeboard.com/student/testing/sat/about/sat/writing.html).

7-8. Summarized from "*How to encourage your child to become a critical thinker*," by Beth Guning and Marta Mulhern. Retrieved from the Peel District School Board Website at [www.peel.edu.on.ca](http://www.peel.edu.on.ca).