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Chapter 1

The 411 About Critical Thinking

1.1 (pages 1-3)

A World Without Critical Thinking Thought Experiment (p. 1): Answers will vary. Students need to demonstrate that they've thought about what life would actually be like if no one engaged in critical thinking and how they would be personally impacted. The point of this activity is for them to identify for themselves the value of critical thinking and the role it plays in their lives. This requires them to use many of the cognitive skills important to critical thinking: comprehension, analysis, evaluation, and communication.

My Prediction (p. 3): Predictions will vary. The students need to think about the cartoon "The Anatomy of the Teen Brain" and predict what it has to do with the chapter. They will have an opportunity to revise their predictions during the chapter. The application of neuroscience research to learning shows the value of predictions for helping students buy into learning about a topic. It also requires them to use the cognitive skills of analysis and evaluation. This prediction activity is getting students to think about how their brain and the size of the various centers in the brain relate to critical thinking. The tie-in is that the brain of the teenager and young adult is still developing, especially the prefrontal cortex (the CEO of the brain) and that affects their ability to engage in critical thinking. Their executive functions of reasoning, judgment, planning, and impulse control are limited and will continue to develop until their mid-twenties (around 26 years old). So one of the obstacles to critical thinking for teens and young adults is that their brain is still developing and being restructured.

1.2 (pages 4-5)

Critical Thinking Skills Quiz (p. 4)

Creativity	Comprehension
Analysis	Evaluation
Construction	Communication

Activity Thought Experiment (p. 4): Answers will vary. Students are to evaluate an activity they like to do in terms of how well they did it the first time and the role practice plays in learning the activity and getting better at it. This is to help them buy into practicing their critical thinking skills.

Prediction Revision (p. 5): Students have an opportunity to revise their predictions based on what they have learned already. They may choose not to revise their prediction. This is another way of reinforcing buy-in and interest.

"What Is Critical Thinking?" Thought Experiment (p. 5): Designs will vary. In this Thought Experiment, students need to explain what critical thinking is and why it is important. By designing their own webpage, they will use many of their critical thinking skills as well as reinforce what they've learned about critical thinking as they select the content to put on their webpage. If there is time in class, have the students share their webpages with one another in small groups. If you have a website for your class, consider having the class select one of these to use. You may choose to have students continue to contribute to the class website for each chapter. This will enable them to teach one another and can be used as a coaching tool for students who need it or would like to refresh their learning.

Chapter 3

Some Basic Concepts for Critical Thinking

3.1 (page 44)

Toolbox Thought Experiment (p. 44): Answers will vary. The students need to demonstrate that they have made the connection between critical thinking and their own lives by identifying what tools they need to add to their critical thinking toolbox to help them become better critical thinkers. The names of these tools are not particularly important. What is important is that they can describe the tools and explain how they would help them with their critical thinking. Some examples of what students might say are:

- The Good Argument Evaluator—a tool to help me evaluate arguments so that I know which ones are good and to accept.
- The Scam Sniffer—a tool to help me sniff out scams in advertising.
- The Evidence Tool—a tool to help me decide when to accept evidence or not as trustworthy.

3.2 (pages 45-50)

Student Poll (p. 45): Answers will vary. This poll has students identify where they encounter facts and opinions. It also has them explain what they think a fact is and what they think an opinion is before the section provides definitions for these terms. This will help their buy-in. There is no “wrong” answer in the sense that this is based on the students’ experience; both facts and opinions can be found in all of the listed locations. In 3.7 Group Activities & Discussion activity #1, the class will discuss their answers to this student poll and any differences they might have.

Definitions of Fact & Opinion (p. 45): Answers will vary. Students are to define both of these words. This facilitates their thought around the difference between the meanings of the two words. Engaging in some initial thought about a topic will help them buy into what they are learning.

My Prediction (p. 46): Predictions will vary. Students are to make a prediction about the connection between the picture of the woman knitting the hat and the chapter topic, which centers around examining some basic concepts in critical thinking that are important to add to their toolbox. Specifically, this prediction relates to creativity and creative problem solving and the importance of these for critical thinking. Creativity is an important cognitive skill for critical thinkers, and it is particularly important in problem solving. When creative thinking is applied to a problem, critical thinkers make use of their factual knowledge, skills, and special talents; their ability to come up with lots of new solutions to a problem (divergent thinking); and their ability then to make the best choice among all possible solutions (convergent thinking). Creativity and creative problem solving also make use of many other interacting cognitive processes and emotions in the brain.

Example of an Opinion Using a Signal Word (p. 47): Answers will vary. The student is to create their own example of an opinion using a signal word. The activity will reinforce the learning about signal words for opinions. Consider using the student examples in class as you discuss this topic.

Student Poll (p. 48): This poll allows students to struggle with the difference between a fact and an opinion. The example is an opinion because it represents what the friend thinks or believes—in this