Instructor's Manual

for

Facione and Gittens

THINK Critically

Second Edition

prepared by

Melissa O'Connor

Pearson Education

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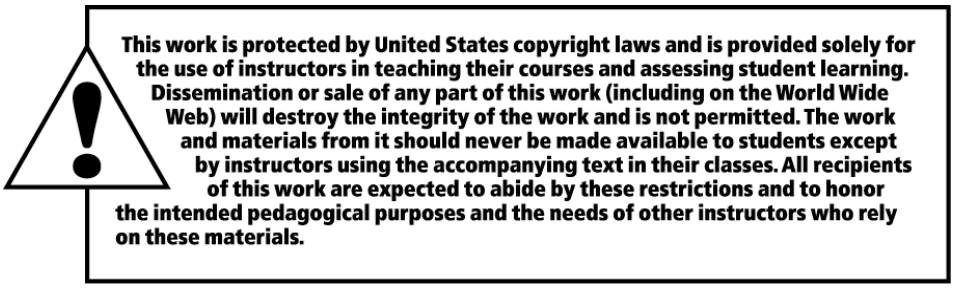

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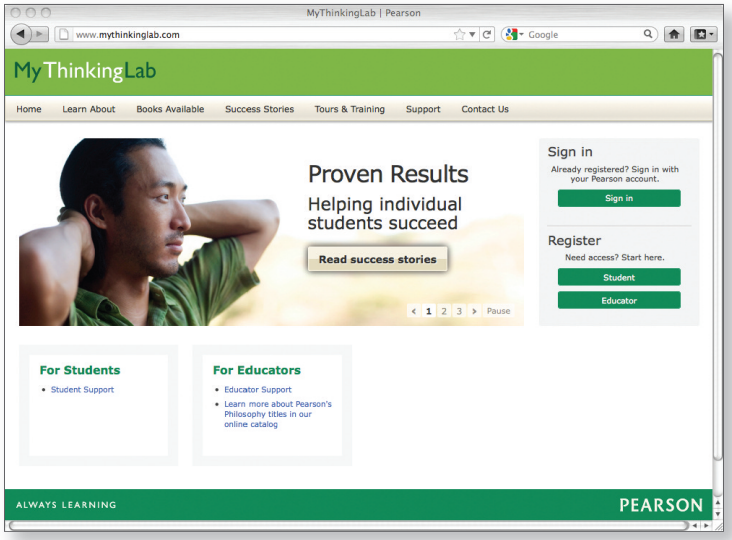

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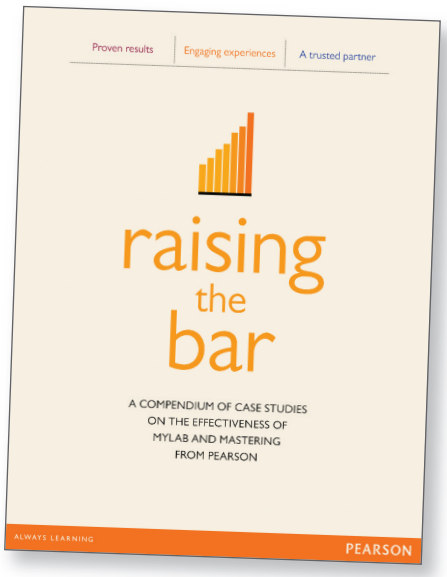

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PREFACE:
An Introduction to *Think Critically 2e*

Welcome to *THINK Critically 2e,* an innovative textbook designed to transform your students as learners. This textbook provides the blueprint for developing the critical thinking skills and dispositions your students will use in their college years. Furthermore, it nurtures the skills and habits of mind that they will need to be successful in their civic, professional, and personal lives. Facione and Gittens make the concept of critical thinking come alive through topics such as clarifying ideas, evaluating claims and arguments, heuristic thinking, using maps to evaluate arguments and decisions, and deciding what to do and doing it. Each chapter includes numerous exercises through which students can practice what they learn. Whether you have taught a course in critical thinking for years or this is a new preparation, *THINK: Critically 2e* will be one of your most valued teaching resources.

Contents of the Instructor's Manual Preface

Purpose and Philosophy of the THINK Critically 2e Textbook

The premise of the textbook is simple: To become stronger critical thinkers, students need to actively engage in thinking critically. In *THINK Critically 2e*, Facione and Gittens distinguish teaching *for* thinking from teaching *about* thinking. It is not sufficient to learn about critical thinking as if it were a set of steps or facts of principles to be memorized. *Teaching for thinking* means you structure your class so that students use their critical thinking constantly.

Teaching for thinking means that students:

- Exercise their critical thinking skills of interpretation, analysis, inference, evaluation, explanation, and reflective self-monitoring independently or in collaboration with others.
- Engage their critical thinking habits of mind, of truth-seeking, open mindedness, and inquisitiveness, as applied to issues where they may already hold strong beliefs.
- Expand the application of their thinking skills and dispositions to novel contexts, themes, problems, and ideas.
- Consider complex themes and problems that have multiple perspectives and imperfect solutions.
- Perform purposeful, reflective judgments about authentic scenarios and real-life situations.
- Receive formative feedback to augment and validate their self-monitoring, self-correction, and self-confidence.

Purpose and Philosophy of the Instructor's Manual

This Instructor's Manual was designed as a pedagogical support to the instructor as he or she uses the *THINK Critically 2e* text book. For each chapter in *THINK Critically 2e,* there is a companion chapter in the Instructor's Manual that explains how to conduct the textbook activities and exercises. Following the guidelines in this Instructor's Manual will facilitate maximal use of the numerous applied exercises that were created to support students' critical thinking.

The Preface chapter of the Instructor's Manual discusses the Active Learning paradigm and describes best practices in teaching for thinking in and out of the classroom. The Preface also contains a discussion of how to write student learning objectives, draft a course syllabus, plan for the assessment of student learning, and prepare for the first day of class. Each subsequent chapter in the Instructor's Manual includes teaching techniques for nurturing students' critical

thinking using the active learning principles. Every chapter includes student learning objectives, one or more activity suggestions that can be used as "Daily Discussion Starters" to begin each day's lesson, and supplemental activities and exercises to augment the ones found in the textbook and on the companion Web site http://www.MyThinkingLab.com. Engaging students with the materials, lessons, ideas, principles and theorems, and applied examples from the textbook, companion Web site, and Instructor's Manual will ensure the necessary opportunity for continual practice and improvement of students' critical thinking skills and habits of mind. You are sure to find that the techniques embedded in *Think Critically 2e* and in this Instructor's Manual have many suitable applications to any of your courses.

Active Learning: Best Practices in the Classroom

Active learning is a process by which students are engaged in an activity that requires them to *Think Critically 2e* (that is, purposefully and reflectively). Active learning is often contrasted with passive learning. Passive learning is teacher-centered. Passive learning can be characterized as a low level of student involvement, effort, or motivation in the learning experience. Transmission of course content is unidirectional from the knowledgeable instructor to the dependent student. The active learning model of teaching, on the other hand, assumes that the student is a partner in the learning process. An active learning classroom is a student-centered classroom. As such, students influence the pace of learning and the selection of activities and course materials. Active learning is collaborative and empowering. Students share the responsibility for their own learning and contribute to the learning experience of others.

Active learning casts the instructor as a resource, guide, and motivator during the learning process. The active learner invests considerable energy, enthusiasm, and effort into the learning experience. Because of this active involvement, the learning is self-reinforcing, which increases retention and transfer of what is learned to other courses and contexts. The underlying premise is the constructivist conceptualization of learning. Through active learning, students actively construct meaning from previous knowledge and skills and the new knowledge and skills they acquire. To facilitate this process, instructors provide students multiple opportunities to connect what

they learn to prior knowledge and to apply what they learn to authentic or real-life contexts. Furthermore, active learning strategies incorporate substantial opportunities for collaborative or cooperative learning.

It is important to note that active learning is more than giving students a choice of topics on a paper assignment, requiring student presentations, or asking a question and calling on a student to provide an answer. Active learning requires planning and commitment on the part of the instructor to put the student at the center of the learning experience and to conduct the course in a manner that maximizes the student's multiple and frequent opportunities to apply and reflect on the knowledge, skills, and values that are central elements of the course.

To reap the benefits of active learning, the instructor should:

- *Model the behaviors students should practice. (In this case, model the positive critical thinking habits of mind and the explicit application of the core critical thinking skills to make well-reasoned, fair-minded judgments.) One way to do this is to talk out loud as you think through a problem or consider an idea. Be a living example of a strong critical thinker. Show the students that you are a truth-seeker who has the courage to follow reasons and evidence wherever they may lead, even if the result is challenging to cherished, long-held beliefs.*

- *Encourage students to view your classroom as a safe space for asking questions, sharing perspectives, and interacting meaningfully with others. Students, regardless of their age or educational level, need to trust that they will be permitted to exercise their critical thinking, explore ideas fully, and be permitted to express well-reasoned opinions.*

- *Insist upon nothing less than the full and thoughtful engagement of all students so that they may be active agents in their own learning. Students should not be permitted to be "free riders" who do not participate but only sit in silent judgment of their peers. Controlling the classroom so that the naturally quiet are drawn into participation and the naturally vocal do not dominate or divert attention is part of the art of good teaching.*

Active learning in the classroom can be identified by the following characteristics:

- Students who ask thoughtful and high-quality questions. The questions aid in understanding the course material. Questions that seek explanation, rationale, interpretation, clarification, definition, and application are common.

- The class is collaborative and non-confrontational. Interactions are constructive and meant to develop and enhance one another's learning and understanding rather than to attack or show disrespect.

- Students challenge, assert, evaluate, and react to the ideas being shared by peers *and the instructor*. This reflective discourse is actively encouraged by all.

- Ideas from the course are applied to novel topics and contexts. The application of one's learning reinforces the development of skills, deepens understanding, and encourages transfer.

- Class time is spent on discussion. Interactions with others aid in clarifying ideas, experiencing multiple and diverse perspectives, comparing findings, explaining one's reasoning, and developing confidence in one's self as a learner.

- Performance feedback is sought and internalized. If a student views his or her role as "partner" with a shared obligation for directing his or her own learning (as opposed to the passive perspective that learning depends exclusively on the talent, skills, and effort of the instructor), then the student is more likely to seek evidence that achieves the course objectives. They desire constructive feedback on what they can do to improve their learning because they view themselves as active agents, not passive recipients.

How Does Active Learning Relate to Critical Thinking?

Critical thinking pedagogy—teaching *for* thinking—fully embraces the principles of active learning. Teaching for thinking is "hands on" and is about practicing the use of one's critical thinking skills and habits of mind. When teaching for thinking, an instructor provides numerous opportunities for students to actively apply their critical thinking skills and nurture their critical thinking dispositions / habits of mind. When teaching for thinking, students are asked to engage reflectively with

novel contexts, multiple perspectives, ideologically challenging themes, and authentic or real-life scenarios.

The active learning model of classroom teaching is highly compatible with the teaching for thinking perspective that is central to the *Think Critically 2e* textbook. The constant engagement with complex ideas encourages students to develop dispositions of truth-seeking, open-mindedness, and objectivity. When teaching for thinking, students are asked to reflect independently or think critically in groups, for this is how they employ their thinking skills and habits of mind in real life. When teaching for thinking, students interact with others to practice their critical thinking skills such as interpretation, analysis, evaluation, and explanation. These active learning features of a teaching-for-thinking approach reinforce students' inquisitiveness, reflection, self-monitoring, and other critical thinking habits of mind. Repetitive practice, alone and in groups, accompanied by opportunities to receive supportive formative feedback will bolster students' growth toward being strong critical thinkers.

Techniques for Promoting Critical Thinking Through Active Learning

Much like the common characteristics of an active learning classroom that were outlined previously, there are key strategies for the instructor and behaviors from the students that promote the development of strong critical thinking. To teach for critical thinking, instructors should employ the strategies outlined in this section and encourage the following behaviors from students.

Techniques an instructor can use to promote strong critical thinking include:

- Pose thoughtful or insightful questions and intentionally allow 10–15 seconds of silence to elapse before calling on students to respond. Cognitive science research has shown that a pause of this length is necessary for the human brain to sufficiently process a question and formulate a reasonable response.
- Work from example to theory. Discuss the examples in the text first, and then draw out the concepts they teach. This technique practices students' inductive reasoning skills and promotes active engagement and inquisitiveness.

- Use critical thinking vocabulary when posing questions to students to reinforce conceptual understanding and promote recognition of reasoning. Use the names of the skills and the habits of mind that are found in the textbook. For example, use phrases such as: “What is your reason for that claim?” “Let’s interpret this statement,” “What inferences can we reasonably draw from these facts?” and “Let’s be systematic in our analysis.”
- Acknowledge when students use critical thinking to promote their self-awareness and recognition of reasoning (don’t forget to use the critical thinking vocabulary). For example, use phrases such as: “The claim you are making,” “The inquisitiveness of this group was evident when,” “I agree with your interpretation of,” and “In your analysis of.”
- Avoid sloppy, misleading, and imprecise expressions such as: “How do you feel about that?” and “What is your view of this?” and even “What did you think of this?”
- Engage students in dynamic learning activities that promote independent thinking or exposure to the thinking of others. Suggested activities include maintaining a reflective journal; conversing with a partner, small groups, or the whole class; investigations, inquires, and informed conversations; debates; simulations; role playing; fishbowl activities; panel discussions; brainstorming exercises; case studies; course blogs or wikis; individual or group argument mapping; social networking features such as asynchronous bulletin boards that are often found in course management systems; maintaining a paper or electronic Portfolio, and so on.
- Provide numerous and frequent opportunities to practice critical thinking skills and receive formative feedback from the instructor and peers. Interactions that result in constructive feedback can be incorporated by the student and reinforce self-regulation.
- Require students to provide reasons or explanations for all of their claims, interpretations, analyses, evaluations, and decisions. Ask why and expect a good, well-reasoned answer. Don’t let students get by with shut-down clichés such as, “That’s just how I feel,” “I was brought up to think that…,” “My parents always said that…,” and “It’s common sense.”
- Model strong critical thinking for your students. Your students watch you to see if you believe in the value of critical thinking, so what you say and what you do might be more powerful in

motivating them to build their critical thinking skills than anything they read or hear in a lecture. If you show that you practice the positive critical thinking habits of mind and that you engage in problems and decisions by applying critical thinking skills, that message comes through to them. If you do not, you reflect a negative message.

Techniques to encourage students to promote strong critical thinking include:

- Practice asking “why” questions that seek reasons, analyses, clarifications, and explanations.
- Practice active listening and note taking. Use the “Divide the Page” technique where you split the notebook page in half with a vertical line. On the left side, take notes from the material that is discussed in class. On the right side, write down questions, analyses, inferences, and connections to other concepts that come to mind during class time.
- Attend each class session and complete each assignment with 100 percent effort.
- Use critical thinking vocabulary when talking with friends, classmates, faculty members, family members, and so on.
- Maintain a reflective journal to document and evaluate one’s thinking processes and decision making. Use the “Reflective Log” exercises in the book to help trigger thoughtful journal entries.
- Log examples of strong and poor critical thinking that come from daily conversations, television programs, films, print media, the Internet, and so on, and evaluate the reasoning displayed.
- Seek to identify the assumptions that are made by one's self or others in a decision-making situation.
- Ask others to give the reasons for their claims or decisions and evaluate what is said.
- Be meta-cognitive (think about your own thinking) and practice self-monitoring and self-correction often.
- Model and display strong critical thinking habits of mind and skills in and outside of the classroom.

Advanced Preparation: Designing Your Critical Thinking Course

As with all course preparations, essential considerations and planning steps should be undertaken to develop your critical thinking course. These planning steps are outlined in the following sections.

STEP 1: Familiarize Yourself with the Think Critically 2e Textbook

The organization of the chapters in *Think Critically 2e* is described in brief in the following list. Please review page ix in the textbook for a fuller explanation.

- Chapters 1 and 2 are introductory chapters. Together, these chapters provide an overview of critical thinking—what it is and why it is important in schooling and in everyday life. The interactive skills associated with critically thinking are explained and the dispositions or habits of mind that characterize a strong critical thinking are described.
- Chapter 3, an important new element in the second edition, connects critical thinking with problem solving. This chapter expands on the practical value of critical thinking by describing the IDEAS approach and applying this approach to the problems faced by college students of all ages and backgrounds in their daily lives.
- Chapters 4 and 5 focus on two of the six core critical thinking skills: interpretation and analysis. In these two chapters, Facione and Gittens describe how context and purpose affect the quality of an interpretation, how problematic vagueness and ambiguity can be resolved, the relationship between claims, reasons and arguments, and how to analyze and map these relationships.
- Chapters 6, 7, 8 and 9 focus on the core critical thinking skill evaluation. In these chapters, students explore how to evaluate claims and arguments. The Four Tests of the Worthiness of an argument are introduced and illustrated, and the evaluation of deductive and inductive reasoning is explained.
- Chapters 10 and 11 focus on meta-cognition and the skill of self-reflection. These chapters locate critical thinking within the larger domain of human decision making and problem solving. Several cognitive heuristics are described, and the role of heuristic thinking vis-à-vis critical thinking is explained. Dominance structuring as a strategy for bolstering confidence in

one's decision making is described and illustrated through example.

- Chapters 12, 13, and 14 form a trilogy that addresses the three most powerful and fundamental modes of human reasoning: comparative reasoning, ideological reasoning, and empirical reasoning. These chapters focus on the skills of inference and explanation. Strategies for evaluating these three widely-used patterns of human reasoning are offered as are the benefits and risks of each pattern of reasoning.
- Chapter 15, another important new element of the second edition, connects critical thinking with the writing process by focusing on strategies for writing sound and effective arguments. This chapter develops students' writing skills through examples, activities and exercises designed to help students "think like a writer".
- Four Supplemental chapters are available with *THINK Critically 2e*. These chapters are designed to help students thinking like a social scientist, or a natural scientist, or an ethical decision-maker, or a logician. Each chapter was written with a focus on connecting critical thinking to the disciplines or professional fields that a student may be studying in a given college course or program of study.

STEP 1A: Familiarize Yourself with MyThinkingLab.com and the Companion Web Site

MyThinkingLab is an open-access Web site for *Think Critically 2e*. This Web site provides the resources students and instructors need to effectively use the text in the critical thinking course. The MyThinkingLab site reinforces course learning objectives by providing numerous exercises, videos, news, and Web sites to be used in or outside of class time. MyThinkingLab contains PowerPoint slides for lecture notes, chapter summaries, flash cards, audio summaries, and chapter quizzes. Instructors should access the MyThinkingLab site to become familiar with the interface and the available resources.

STEP 2: Drafting Student Learning Objectives for Your Course

A Student Learning Objective (SLO) is a specific and detailed statement of the content or level of knowledge, skills, and/or values that an instructor expects students to possess upon completion of a specific course (known as "mastery objectives"). SLOs can also be the expected domain(s) in which students have demonstrated growth or change at the end of a course (known as "developmental objectives").

Student Learning Objectives are typically written in the following format:

Student learning objectives should reflect the desired learning that is to occur as a result of completing this course.

Students will [be able to] + *action verb* + *expected learning outcome.*

- The *action verb* should suggest a measureable cognitive activity such as "identify," "analyze," "design," "evaluate," or "explain."
- The *expected learning outcome* should be an articulation of the knowledge, skills or values that are expected outcomes of your course.

This Instructor's Manual provides SLOs for each individual chapter that can be used as a model for writing your course-level objectives. It is important to note that SLOs should not state *what the student will do* in terms of behaviors that would demonstrate their learning (such as

receiving a passing grade, writing a paper, or giving an oral presentation). To clarify this distinction, consider the following course SLO statements:

Example 1: Students will evaluate arguments using the Four Tests of Worthiness.

Example 2: Students will work in small groups.

Example 1 is an appropriate learning objective for this course because it has a measureable action verb (evaluate) and expected learning outcome (Four Tests of Worthiness as applied to arguments). This can be practiced in several different types of activities, and the evidence of mastery could come from written responses and from oral reports.

Example 2 is an inappropriate learning objective because the action verb (work) is too vague to be measureable in its current form and the expected learning outcome (small groups) is not a statement of learning. Rather, example 2 is a statement of a teaching technique. To fix this second example, the instructor needs to clarify the intended learning that should occur through small group interaction (for example, evaluate different perspectives than their own, negotiate and reach consensus about a decision, develop oral communication skills, and so on), and then rewrite the learning objective with a measureable action verb and a clear statement of the desired learning.

Here are some questions that might help you identify and prioritize what you want students to learn about in this course:

- What do I want my students to learn in this class?
- What are the important ideas, skills, dispositions, principles, strategies, concepts, and experiences that I want my students to learn about and understand?
- What do the students need to be able to do (skills) to successfully complete this course?
- In what dispositional areas should students grow as a result of taking this class?
- How does this course relate to the overarching learning goals and objectives of my department and program?

Things to remember when writing learning objectives include:

- Keep the number of course-level SLOs to a manageable number. Between three and five is a recommended range. These course-level objectives should represent what you want your students to learn as a result of taking the course.

- Be sure to represent the range of critical thinking skills and dispositions (positive critical thinking habits of mind) that you expect students to learn or develop as a result of your class.

- If you find yourself struggling to identify measureable action verbs, consider those active verbs that appear as the six core critical thinking skills and the various subskills identified in Chapter 2 of THINK_Critically. If all else fails, you can always fall back on the verbs that appear on Bloom's Cognitive Taxonomy[1].

- The chapter learning objectives in this Instructor's Manual can be used as examples to emulate.

STEP 3: Develop an Assessment Plan

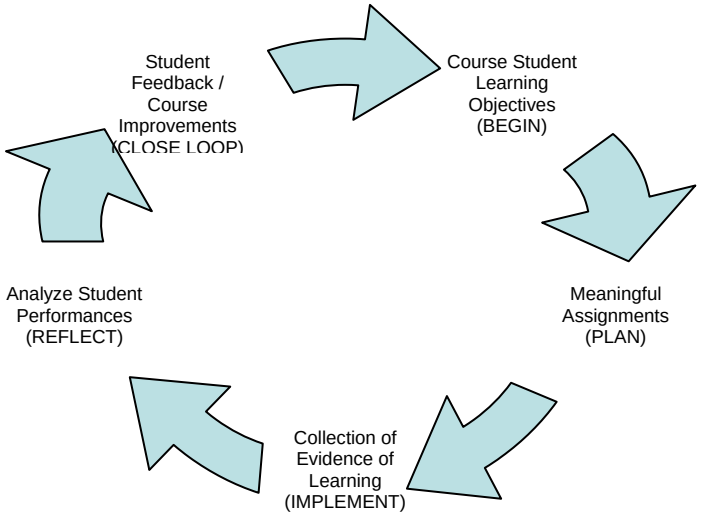
Assessment of student learning is the process by which we come to understand if students are accomplishing the learning objectives we set for them. Assessment occurs at the lesson, course, department and program, school or college, and university levels. Assessment might be *formative* (simultaneous with the learning process, enabling a feedback process that can guide future learning) or *summative* (occurring at the end of the learning process to document accomplishments). The assessment of student learning provides educators with information about students' knowledge, skills, and values. Assessment endeavors provide instructors with opportunities to evaluate what students learn and determine what can be done to improve student learning. Assessment endeavors also provide students with feedback about their learning so that they can build confidence or make adjustments to improve their learning.

Educational assessment follows a cycle of articulating student learning objectives, crafting assignments, conducting learning activities that

[1] In 1956, Benjamin Bloom headed a group of educational psychologists who developed a classification of levels of intellectual behavior important in learning. Bloom and colleagues identified six levels in the cognitive domain, from the simple recall or recognition of facts at the lowest level, through increasingly more complex and abstract mental levels, to the highest order that is classified as evaluation.

elicit evidence of student leaning, the collection and evaluation of these demonstrations of student learning, reflecting on the evidence, and providing feedback to students. Depending on the results of the assessment process, modifications may be made to the learning objectives and / or the learning activities for purposes of improvement. The Assessment Cycle is represented in the following illustration.

The Assessment Cycle



Crafting Assignments to Elicit Critical Thinking

After you have written SLOs for your course, you can begin to consider the specific assignments that you will ask students to complete to evaluate whether they have achieved the learning objectives. Review the learning objectives for the course and for the chapters. Brainstorm assignments that would elicit demonstration of students' critical thinking skills and dispositions. *Don't reinvent the wheel if you don't have to!* There are literally hundreds of activities in the textbook, Instructor's Manual, and companion Web site that can be used as graded assignments in this course. In *Think Critically 2e* and in this Instructor's Manual, there are numerous activities that lend themselves to assignments such as five–minute quick writes, exit tickets, reflective logs, role plays, debates, meta-cognitive fishbowls, and the creation of iMovies, presentations, posters, and Web sites. You

should not feel discouraged about crafting your own assignments or using a favorite assignment from a previous term. Just be sure that the assignment requires students to perform the skills and habits of mind that you are seeking to reinforce based on the course objectives.

As you compile the final set of assignments, consider the following questions:

- Do the assignments enable students to demonstrate that they have met the learning objectives?
- Do the assignments map to the action verbs and key phrases in the course and/or chapter learning objectives?
- Do these assignments reflect optimal ways for students to meet the learning objectives?
- Are there a variety of assignments that engage students in one or more critical thinking skills?
- Are there assignments that elicit students' critical thinking habits of mind?
- Do the assignments provide opportunities to evaluate students' independent critical thinking and their thinking in groups?
- Are there a sufficient number of assignments that will be reviewed and returned to students so that they receive frequent feedback on their performances?
- How will these assignments be supported by in-class activities and other forms of informal feedback so students are able to practice their critical thinking skills and dispositions and make appropriate modifications?

Your graded assignments should demand the same engagement of students' critical thinking as the classroom activities. Whether or not you assign an activity from the textbook, Instructor's Manual, or companion Web site for a formal grade, incorporate as many of these activities as you can in each of your class sessions as an opportunity for students to practice their critical thinking.

STEP 4: Draft Grading Criteria to Evaluate Thinking and Learning

Deciding how you will evaluate students' performances is as important as crafting the assignments. If you adopt assignments from the *Think Critically 2e* textbook or instructor resources, you will have chosen an activity that will engage your students in critical thinking. If you require them to produce evidence of their learning, such as a short-answer essay, argument map, term paper, group report, field notes, reflective log entry, five-minute quick write, quiz or exam, PowerPoint presentation, poster, debate, iMovie, wiki or blog, or portfolio to name a few, then you will have ample sources from which to make your evaluations of their performances. There is also a strong chance that the evidence of student learning will come in a form where you will evaluate narratives or subjective responses. Because of this likelihood that the majority of evidence will be qualitative in nature, it would be wise to create scoring rubrics for these assignments.

Scoring rubrics are descriptive scoring tools that are developed by educators to organize the analysis and evaluation of student performances. Scoring rubrics are effective means of characterizing the *quality* of students' work. Scoring rubrics articulate the criteria used for judging different levels of performance. Scoring rubrics facilitate the evaluation of narrative activities, live performances, or activities where there is likely to be a broad range of content or activity. Scoring rubrics might be used by instructors or peers to provide constructive feedback, given to students for purposes of self-evaluation, or distributed to the class before an assignment is due as a guide to how the student will be evaluated. For help in getting started with writing rubrics, consult one or more of the rubric generator sites geared toward educators on the Internet.

In addition to the rubrics you develop for your specific course assignments, use the Holistic Critical Thinking Scoring Rubric presented in Chapter 1 of *THINK Critically 2e* and the Rubric for Evaluating Written Arguments in Chapter 15 to help establish the overall expectations for what students should endeavor to demonstrate when completing course assignments. Because we often "get what we measure," it is reasonable to let students know that you expect them to demonstrate consistently strong critical thinking skills if they hope to earn a good grade in your course.

As you write grading criteria for the class assignments, look over your course and chapter learning objectives and consider the following:

- Do the grading criteria for assignments permit you to evaluate whether students have achieved the learning objectives and expectations you have for them?

- Hint: Consider the action verbs and key phrases in the learning objectives to determine whether these same critical thinking skills and habits of mind are evaluated with the grading criteria you develop.

A Special Note about Feedback to Students

There are many ways to give feedback to students. One primary way, of course, is through graded assignments. Other opportunities to provide feedback include comments on reviewed but ungraded work products, responses and praise given during an in-class discussion, peer editing and peer evaluation, meetings with individuals or groups during office hours, comments on blog posts, notes on rough drafts, and so on.

The two most important things to remember when giving students feedback are 1) give feedback that is constructive and 2) make sure the feedback is timely.

- Constructive means that the feedback students receive can be directly applied to improve their learning. A letter grade might boost or smash a student's spirits, but the letter grade by itself conveys nothing of value in terms of what they did well and where they need to improve. Communicating a student's successes is vital to nurturing and reinforcing his or her critical thinking. Communicating specific recommendations regarding areas to improve is also vital to supporting students' growth as thinkers.

- Timely means that students have an opportunity to receive formative feedback about their performances at the time that they work or shortly thereafter. To reinforce students' learning, they need to receive informal feedback before they are evaluated formally through a graded assignment. Timely also means that there are multiple and frequent opportunities to receive informal and formal feedback.

PREPARING THE COURSE SYLLABUS

The syllabus is an outline of a particular course, containing the course description, instructor information, student learning objectives, assignments, due dates, classroom policies, and so on. Some instructors view the syllabus as a form of contract between instructor and student, and others see the syllabus as a direction for the course that is open to modification. A detailed and clear syllabus benefits both the instructor and the students by describing the criteria for success in the class. It can convey the instructor's enthusiasm for a subject matter and for the students as learners. The syllabus is a teaching tool. It should describe the SLOs and expectations that the instructor holds for the students and for him or herself. The following questions are useful to consider when preparing your syllabus:

- ✓ ***Have I provided opportunities for students to build critical thinking skills and habits of mind?***
  We were trained to teach students *knowledge*. But, in this course, the learning objectives should reflect the goal of strengthening critical thinking skills. They should also target the development of students' positive critical thinking *habits of mind*. Are the course activities and graded assignments going to foster these critical thinking skills and habits of mind? If you use the exercises that appear in the textbook, the Instructors Manual, and at www.MyThinkingLab.com, the answer will likely be yes!

- ✓ ***Are there additional opportunities for active learning I could incorporate that would be even more effective than what I do now?***
  Remember that in the active learning paradigm, the instructor is a resource, guide, and mentor to students. If we let go of the idea that it is best to use class time to "cover" the material, we can imagine what are often more effective pedagogies, such as encouraging students to analyze, evaluate, research, apply, dramatize, debate, deliberate, collaborate, judge, decide, reflect, and engage with real-life examples.

- ✓ ***Have I listed the course learning objectives on the syllabus?***
  Listing the course student learning objectives on the syllabus will communicate your learning expectations to the students.

SPEND CLASS TIME TEACHING FOR THINKING:
Run the activities and exercises
in *Think Critically 2e*
and the companion resources.

- *Learning by doing—Becoming more skillful and disposed critical thinkers means practice and more practice (with the instructor's support and feedback).*
- *Chapter 2 describe the reciprocal relationship between doing (practice to improve skills) and the strengthening of dispositions.*

✓ ***<u>If appropriate</u>, have I listed the relevant departmental and programmatic learning objectives and General Education objectives on the syllabus?***
Listing these additional learning objectives will facilitate an understanding of how this course fits within the larger context of the students' majors or general educations.

Think Critically 2e in a Quarter Course Format[2]

WEEK	CHAPTERS	STUDENT LEARNING OBJECTIVES
1	Intro to Course / CH 1 & 2	CH 1 • Articulate a working definition of critical thinking. • Explain why critical thinking is important in our daily lives. • Identify the characteristics of strong or weak thinking. • Defend the need for critical thinking in a free society. CH 2 • Identify the core cognitive skills involved in critical thinking. • Describe the relationship of cognitive skills during the critical thinking process. • Describe, compare, and contrast inductive and deductive reasoning. • Identify and evaluate instances of critical thinking found in human conversation. • Describe the characteristics of a strong critical thinker. • Explain ways to cultivate the seven critical thinking habits of mind. • Contrast being a strong critical thinker and an ethical thinker. • Explain why strong critical thinking requires one to be both "willing" and "able."
2	CH 2 (cont.) & 3	CH 3 • Identify the five steps of the IDEAS Critical Thinking Problem Solving and Decision Making Process. • Explain how to use the IDEAS process to think critically and solve problems that occur in the day-to-day lives of

[2] The instructor and students need access to the Internet during class time.

		college students. • Recognize the potential application of the IDEAS process to any decision making situation.
3	CH 4	CH 4 • Explain how context and purpose affect the quality of an interpretation. • Apply five strategies to effectively resolve problematic vagueness and ambiguity. • Describe the central characteristics of a language community. • Explain why strong critical thinking, particularly judicious interpretation, is helpful when encountering a new language community.
4	CH 5	CH 5 • Define the terms reason, claim, premise, conclusion, and argument. • Explain how reasons, conclusions, and arguments are related to one another. • Use visual maps to represent a person or group's reasons, arguments, and decisions.
5	CH 6 & 7	CH 6 • Define expertise as it relates to evaluating the credibility of the source of a claim. • Identify and apply 12 criteria to evaluate the trustworthiness of a source. • Explain how to evaluate the plausibility of a claim independently. CH 7 • Name and explain the four presumptions (or presuppositions) that are made when people offer reasons to support their claims. • Apply four tests to determine whether an argument is worthy of acceptance. • Use the argument mapping

		techniques developed in Chapter 5 to facilitate the analysis and evaluation of arguments. • Describe and recognize common reasoning mistakes.
6	CH 8 & 9	CH 8 • Evaluate the logical strength of *deductive* arguments. • Identify common fallacies that are encountered when evaluating deductive arguments. CH 9 • Evaluate the logical strength of *inductive* arguments. • Identify common fallacies that are encountered when evaluating inductive arguments.
7	CH 10 & 11	CH 10 • Describe the “two systems” approach to human decision making. • Explain the value of each system in the “two systems” approach. • Identify common cognitive heuristics when they are used in decision making. • Explain how heuristic thinking can help or hinder decision making. CH 11 • Apply the concept of dominance structuring to explain how people can maintain a steadfast commitment to their decisions. • Explain the benefits and risks associated with the natural tendency toward dominance structuring. • Identify specific critical thinking skills and dispositions that can improve decision making. • Explain how critical thinking can be used to make better decisions.
8	CH 12 & 13	CH 12 • Identify the three most fundamental

		patterns of human reasoning. • Recognize comparative reasoning. • Evaluate comparative reasoning. • Explain the uses, benefits, and risks of comparative reasoning. CH 13 • Recognize ideological reasoning. • Evaluate ideological reasoning using the four tests of worthiness of an argument. • Explain the uses, benefits, and risks of ideological reasoning.
9	CH 14 & 15	CH 14 • Describe the three central characteristics of empirical reasoning. • Describe the steps in conducting an empirical investigation. • Explain the uses, benefits, and risks of empirical reasoning. CH 15 • Identify the critical thinking questions that effective writers ask. • Explain how effective writers organize and develop their presentations. • Evaluate the credibility of sources. • Evaluate the effectiveness of one's own and others' writing.
10	Supplemental Chapter(s)	• In this final week of classes you can cover one or more supplemental chapters (Think Like a Social Scientist, Think Like a Natural Scientist, Ethical Decision Making, The Logic of Declarative Statements).
FINAL EXAM WEEK		

Think Critically 2e in a Semester Course Format[3]

WEEKS	CHAPTERS	STUDENT LEARNING OBJECTIVES
1	Intro to Course / CH 1	• Articulate a working definition of critical thinking. • Explain why critical thinking is important in our daily lives. • Identify the characteristics of strong or weak thinking. • Defend the need for critical thinking in a free society.
2	CH 2	• Identify the core cognitive skills involved in critical thinking. • Describe the relationship of cognitive skills during the critical thinking process. • Describe, compare, and contrast inductive and deductive reasoning. • Identify and evaluate instances of critical thinking found in human conversation. • Describe the characteristics of a strong critical thinker. • Explain ways to cultivate the seven critical thinking habits of mind. • Contrast being a strong critical thinker and an ethical thinker. • Explain why strong critical thinking requires one to be both "willing" and "able."
3	CH 2 (cont.) & CH 3	• Identify the five steps of the IDEAS Critical Thinking Problem Solving and Decision Making Process. • Explain how to use the IDEAS process to think critically and solve problems that occur in the day-to-day lives of college students. • Recognize the potential application

[3] The instructor and students need access to the Internet during class time.

		of the IDEAS process to any decision making situation.
4	CH 4	• Explain how context and purpose affect the quality of an interpretation. • Apply five strategies to effectively resolve problematic vagueness and ambiguity. • Describe the central characteristics of a language community. • Explain why strong critical thinking, particularly judicious interpretation, is helpful when encountering a new language community.
5	CH 5	• Define the terms reason, claim, premise, conclusion, and argument. • Explain how reasons, conclusions, and arguments are related to one another. • Use visual maps to represent a person or group's reasons, arguments, and decisions.
6	CH6	• Define expertise as it relates to evaluating the credibility of the source of a claim. • Identify and apply 12 criteria to evaluate the trustworthiness of a source. • Explain how to evaluate the plausibility of a claim independently.
7	CH 7	• Name and explain the four presumptions (or presuppositions) that are made when people offer reasons to support their claims. • Apply four tests to determine whether an argument is worthy of acceptance. • Use the argument mapping techniques developed in Chapter 5 to facilitate the analysis and

		evaluation of arguments. • Describe and recognize common reasoning mistakes.
8	CH 8	• Evaluate the logical strength of *deductive* arguments. • Identify common fallacies that are encountered when evaluating deductive arguments.
9	CH 9	• Evaluate the logical strength of *inductive* arguments. • Identify common fallacies that are encountered when evaluating inductive arguments.
10	CH 10	• Describe the “two systems” approach to human decision making. • Explain the value of each system in the “two systems” approach. • Identify common cognitive heuristics when they are used in decision making. • Explain how heuristic thinking can help or hinder decision making.
11	CH 11	• Apply the concept of dominance structuring to explain how people can maintain a steadfast commitment to their decisions. • Explain the benefits and risks associated with the natural tendency toward dominance structuring. • Identify specific critical thinking skills and dispositions that can improve decision making. • Explain how critical thinking can be used to make better decisions.
12	CH 12	• Identify the three most fundamental patterns of human reasoning. • Recognize comparative reasoning. • Evaluate comparative reasoning.

		• Explain the uses, benefits, and risks of comparative reasoning.
13	CH 13	• Recognize ideological reasoning. • Evaluate ideological reasoning using the four tests of worthiness of an argument. • Explain the uses, benefits, and risks of ideological reasoning.
14	CH 14	• Describe the three central characteristics of empirical reasoning. • Describe the steps in conducting an empirical investigation. • Explain the uses, benefits, and risks of empirical reasoning.
15	CH 15	• Identify the critical thinking questions that effective writers ask. • Explain how effective writers organize and develop their presentations. • Evaluate the credibility of sources. • Evaluate the effectiveness of one's own and others' writing.
16	Supplemental Chapter(s)	In this final week of classes you can cover one or more supplemental chapters (Think Like a Social Scientist, Think Like a Natural Scientist, Ethical Decision Making, The Logic of Declarative Statements).
FINAL EXAM WEEK		

Creating a "Zone of Inquiry" in the Classroom

On the first day of class, most instructors take time to review the syllabus, assignments, and their expectations for student performance and participation. For you, this first day is essential for ensuring the success of this course.

When you meet your students for the first time, engage them in an activity meant to break the ice and get students comfortable with participating and interacting with one another. This is an ideal time to conduct one of the Daily Discussion Starters that you will find in this Instructor's Manual. Students will try to guess your style and expectations, so set the bar high on the first day. Encourage everyone to contribute to the conversation. Call on students if they are not raising their hands. Ask vocal students to nominate a classmate to offer a response.

Your goal on this first day and every day thereafter is to make students feel comfortable, welcome, respected, and safe so they will share their ideas and their reasoning. How can you maintain an open classroom climate where students are free to question all views on controversial issues, including the professor's views? Use some of the following techniques:

- ✓ Engage the students with multiple activities starting on the first day that require them to apply their critical thinking skills and dispositions. Set the expectation that active learning is going to be the *modus operandi* for this course. Share the Active Learning paradigm with your students so that they understand the teaching philosophy of the course.

- ✓ Encourage students to repeat back the comments made by others to show that they care about understanding their peers' perspectives. Model this for the students.

- ✓ Praise students for their contributions to the conversation to build their self-confidence in their critical thinking skills.

- ✓ Be the facilitator of the conversation, but not the driver. Ask questions and pause to let students think before responding. If there is silence, wait for students. Someone other than you should fill the uncomfortable silence. If you break the silence the first time, they will always wait for you in the future.

- ✓ Curb quickly any situation in which one or two students dominate the conversation or are always the first to speak. Ask students to reflect quietly before raising their hands. This will give everyone a chance to process the information that is presented.
- ✓ Encourage students to interpret, analyze, and respond to each other's comments and questions. You should not always be the one to answer students' questions. Engage the students as learners to find answers.
- ✓ Remind students that they are going to be challenged in this course by claims and arguments that might not be consistent with their personal view points or beliefs. Encourage them to always treat one another with complete respect and tolerance for alternative points of view.

By creating an active zone of inquiry, your classroom will be a dynamic setting where students can discover a new awareness of their thought processes. They will actively engage their critical thinking skills and test their ideas, stretching the boundaries of their critical thinking habits of mind. It cannot be said enough times that your students need an abundance of time to work through the activities and exercises that *Think Critically 2e* offers. If you are committed to teaching for thinking using this textbook as the vehicle, then your efforts will be rewarded when your students grow as critical thinkers.

Remember the central message of Think Critically 2e: To become stronger critical thinkers, students need to actively engage in thinking critically. Practice, practice, and more practice with feedback should be your goal for students

What if you never previously taught this way?

Conducting class sessions with a high level of activity and group conversation going on in the room might be new. You might wonder how you will conduct an effective class and maintain control while using the active learning approach.

Following are additional suggestions if active learning or teaching for thinking is new:

- To help ensure students stay on task, follow the detailed steps for each of the *Think Critically 2e* exercises that are contained in this Instructor's Manual.

- Write SLO statements for each day's lecture. Your daily learning objectives should reflect what you wish students to learn from that specific day's lecture and activities. Write the day's learning objectives on the board at the beginning of class. Talk to your students about them and discuss them as a class to be sure that students understand what learning you are targeting. At the end of the class, reflect as a class on whether or not the learning objectives were met. Use this conversation to gauge whether additional exercises from that chapter should be included in the next class session.

  Build your critical thinking vocabulary by using the examples of language from *Think Critically 2e* text (skills, habits of mind, and the key terms in each chapter) and use these words with precision. You may also wish to supplement them with other cognitive action verbs, such as those found on Bloom's Cognitive Taxonomy, if these words appear in your student learning objectives.

- Research suggests that active learning strategies are more successful than passive learning strategies in terms of students' retaining what they have learned and being able to transfer knowledge and skills to new contexts. Read about the active learning and critical thinking literature to develop your teaching tool bag.

- Work the exercises from the book *with* your students. Put yourself in the role of learner.

- Raise your awareness of examples of critical thinking from the world around you. Look for examples everywhere you go (print and electronic media, movies, TV, Internet, advertisements, books, magazines, radio, and so on). Bring examples to class to use as Daily Discussion Starters of supplemental mapping or evaluation activities.

- Most importantly, relax and enjoy this course! Your inquisitiveness and enthusiasm for critical thinking will come across and energize your students.

How to Use the *Think Critically 2e* Textbook

Think Critically 2e is unlike any textbook you have previously used. Each chapter of the text has sample assignments and evaluation criteria, such as, "Each week submit a written response to the Reflective Log questions in the text for the chapter covered that week." The Instructor's Manual provides descriptions of how to run the textbook examples and offers additional exercises to extend your options.

To maximize learning in this course, students will access to the Internet. Although you do not need to access the Internet during class time, the videos and URLs mentioned in the text and available at www.MyThinkingLab.com can be powerful instructional assets. Thus, it is ideal to conduct this course in a room that has desktop computers such as a technology lab or in a room with a mobile technology cart so students can access the Internet via laptops. If the ideal isn't available, access to the Internet through the instructor's podium would be highly desirable because that permits you to show the videos or visit the URLs. But, if even that level of technology is not available, do not worry because there is more than enough in *Think Critically 2e* and in this Instructor's Manual to more than fill your class time with interesting, engaging and powerfully instructive exercises and activities.

In the beginning of the term, you serve as the primary facilitator of course discussions and activities. Plan, however, to gradually increase students' involvement in the delivery of the curriculum. For example, after a few days of modeling the Daily Discussion Starter, have the students take responsibility for initiating a Daily Discussion topic tied to the theme of the chapter they are studying. After you have modeled effective brainstorming, select a student to facilitate a brainstorming or group-sharing session. Task students with identifying additional examples of reasoning, claims, arguments, and fallacies to incorporate into class discussion, or assign them the activity of generating quiz questions modeled after the activities you have been working from in class.

Think Critically 2e nurtures and develops stronger critical thinking skills and positive dispositions of your students. It should come as no surprise that the techniques you find in this textbook have direct applications and uses in other courses. Your students will praise the usefulness of this course in their daily lives, and it will likely become one of the most enjoyable classes you will teach.

Chapter 1
The Power of Critical Thinking

CHAPTER OVERVIEW

This first chapter offers students a conceptualization of critical thinking that includes both thinking skills and thinking dispositions. A definition of critical thinking as the process of purposeful, reflective judgment is offered and explained. A case is made for why critical thinking is important to individuals and to society as a whole. Finally, students are introduced to the *Critical Thinking Holistic Scoring Rubric* that can be used to evaluate critical thinking. Numerous examples and exercises are provided to achieve the chapter learning objectives.

CHAPTER LEARNING OBJECTIVES

After completing this chapter, students will be able to:

- Articulate a working definition of critical thinking.
- Explain why critical thinking is important in our daily lives.
- Identify the characteristics of strong or weak thinking.
- Defend the need for critical thinking in a free society.

DAILY DISCUSSION STARTERS

1. What comes to mind when you hear the words *critical thinking*?
   - Record responses on the board. Capture all ideas—no censuring!
   - Leave the ideas on the board, and then return to them at the end of the first class to see how the class's ideas correspond to the definition of critical thinking in Chapter 1.
2. Why is critical thinking an essential feature of a free society?
   - Guide the students toward identifying the social, political, and personal threats and risks that arise when critical thinking is discouraged, derailed, diverted, or distracted.
   - Connect this discussion to the concept of perception management.

Additional Daily Discussion Starters can be drawn from the end of chapter Exercises for Group Discussion in the textbook or suggested Lecture Extensions in this Instructor's Manual.

EXERCISES AND VIDEO CLIPS FROM THE TEXT

MyThinkingLab: George Carlin on "Critical Thinking"
Text Box: Positive Examples of Critical Thinking
MyThinkingLab: George Carlin and Navy Admiral Mike Mullen
MyThinkingLab: Debt Crisis Example of Poor Critical Thinking
Text Box: Group Discussion: Critical Thinking and Risk Taking
Exercise: Applying the *Holistic Critical Thinking Scoring Rubric* to the Students' Statements
Thinking Critically: Applying the *Holistic Critical Thinking Scoring Rubric*
End of Chapter Exercises: Reflective Log
End of Chapter Exercises: Explain What Is Wrong with Each
End of Chapter Exercises: Group Discussion —Imagine if Critical Thinking Were Illegal / Learning From Our Mistakes

MyThinkingLab: George Carlin on "Critical Thinking" (p. 4)

George Carlin's commentary provides an example of the point being made by the textbook authors: Individuals in positions of power might be disinclined to want the people around them or in their organizations to think critically because of the potential threat this might pose to their power, control, and position.

** Before showing this clip, tell students that comedian George Carlin might use language that some find offensive. **

1. Access the Carlin video clip from www.MyThinkingLab.com
2. Play the video clip in its entirety for your class.
3. Ask students to take 2–3 minutes to write their reactions to Carlin's message.
4. Ask students to turn to a neighbor and share their reactions.
5. Bring the class back together for a discussion. Start by asking for a few students to share their reactions with the class.
6. Ask the group the following questions:
    a. Carlin uses humor to convey a message. What point(s) is Carlin trying to make?
    b. Why would people in power want to distract, derail, or divert other people's thinking?
    c. What examples would support his argument?
    d. How would you evaluate Carlin's thinking in this video clip? Is it strong or weak, and why?
7. Be sure to ask students to provide explanations for their statements and conclusions.

Text Box: Positive Examples of Critical Thinking (p. 4)

Engage students in an analysis of these examples: What makes for a positive instance of critical thinking?

1. Ask students to read each of the examples in the text box (or read them aloud to the class).
2. Ask students: What similarities can you identify across these examples?
    Seek responses, such as all have cognitive actions; people doing something, deciding what to do, or believing; all have action verbs; behaviors performed to determine a decision or engage in good practice; or choose what to do next, and so on.
3. Ask students: What differences can you identify across these examples?
    Seek responses, such as all different contexts (work, play, sport, home, parenting, family, arts, politics, and so on); some examples depict single individuals engaged in critical thinking and others are examples of groups engaging in critical thinking; lots of different kinds of mental activity, and so on.
4. Ask students to identify the action verbs and phrases in each example that indicates the critical thinking activity. As students identify these verbs and phrases, list them on the board in the front of the room.
    EXAMPLE #1: A person trying to *interpret* an angry friend's needs, expressed through a rush of emotion and snide comments, to give that friend some help and support.

5. After the "thinking verbs" are listed on the board, point out to students that they are building their critical thinking vocabulary. Encourage the class to use the language of critical thinking in this course when talking about, or evaluating, thinking examples. Let them know that using the language of critical thinking is part of the practice needed to become better critical thinkers because it will draw their attention to incidences of critical thinking in their own and other people's speech. They will develop what is known as meta-cognitive awareness.
6. SUMMARY QUESTION: What makes these "positive" examples of critical thinking?
7. CHALLENGE QUESTION: What if the critical thinking process in any one of these examples doesn't go well or the prediction doesn't pan out? Does the situation no longer count as a positive example of critical thinking? Why or why not? (The point here is to get students to focus on critical thinking as a process that is not dependent upon a successful outcome or consequence. If the students do not readily appreciate that the outcome does not negate the instance of good thinking, ask them to reflect on experiences they have had personally where they know they have diligently thought critically but had to re-evaluate the situation after new evidence or a different outcome had come to light.)

MyThinkingLab: George Carlin and Navy Admiral Mike Mullen (p.4)

This exercise expands on the juxtaposition of the perspectives of Admiral Mullen and George Carlin by asking students to consider the words of Navy Admiral Mike Mullen, a high-ranking officer in the United States military, in light of the statement made by comedian George Carlin that high ranking or powerful people actively fear and shun critical thinking because of the threat a critical thinker can pose to one's power, control, and position. The purpose of this exercise is for students to analyze and draw inferences about the contradictory evidence of Carlin's commentary and Mullen's words of advice to the graduates.

1. Access www.MyThinkingLab.com to obtain the Carlin's "Dangers of Critical Thinking" video clip and the transcript of Admiral Mullen's commencement speech at National Defense University on June 11, 2009.
2. Play the Carlin video in its entirety for the class.
3. Have students read Mullen's commencement speech.
4. Direct students' attention to the sentence in Mullen's speech that is quoted on page 4 of the textbook.
5. Ask students: Mullen is a powerful man, yet he encourages the graduates to think critically and to question without fear. Why is Mullen himself not fearful of what might happen if these graduates heed his advice?
6. Ask students: What are we to make of the Admiral's words if we also believe Carlin's point about powerful people fearing critical thinking to be valid?

MyThinkingLab: Debt Crisis Example of Poor Critical Thinking (p.7)

The purpose of this exercise is to engage students in an evaluation of the consequences of poor critical thinking. It is not enough to only expose students to positive examples of strong critical thinking. Positive examples provide possible strategies to emulate but they don't help students analyze and avoid thinking missteps that are likely to be linked with negative outcomes. In order to develop one's thinking it is necessary to analyze and come to appreciate the consequences that can result from failing to engage in strong critical thinking.

1. Permit students to view the links on ThinkSpot.com for the HBO film *Too Big to Fall*. Assign the activity of viewing the film clips as out of class preparation for the day's lesson or arrange to view these film clips during class.

2. Prepare to document the class discussion by writing "Strong Critical Thinking" and "Poor Critical Thinking" in two locations on the board. Ask students to draw a line down their notebooks on a clean sheet and put the same headings at the top left and right sides of the page.
3. Say to students: We are going to analyze the following film clips for examples of strong and poor critical thinking. First we will identify examples and then we will evaluate which column to put them in. I will document your conclusions on the board and I'd like you to put them in your notes.
4. After you have analyzed the film clips ask students to discuss with their neighbor their interpretations of the consequences of the poor critical thinking on the world's economy.
5. Have each pair of students draft a ½ page summary, synthesizing the class analysis and their small group interpretation exercise.

Text Box: Group Discussion: Critical Thinking and Risk Taking (p. 9)

The purpose of these group discussion topics is to engage students in identifying and elaborating upon the best reasons for why particular groups of people are more likely to engage in, or be discouraged from, certain types of risk taking. The two topics, first a question about why annual rescues of hikers in the Grand Canyon are most likely to be young, healthy men, and the other about the consequences of parents actively discouraging the risk taking behavior of their children, are meant to encourage students to consider multiple reasons, anticipate the consequences of these reasons, evaluate the relative strength of these reasons, and ultimately identify the best reasons and explanations for each question.

- Have students work in small groups (no larger than 4-5 individuals) to discuss one or both of these critical thinking and risk taking questions.
- After 10 minutes of small group discussion ask each group to present their conclusions to the whole class.
- Engage the larger group in an examination of the reasons and explanations each group presented. What are the similarities across the groups? What are the differences? Guide the conversation so it does not become a debate.
- Close this exercise by reinforcing the point that this activity was not meant to serve as a debate of the pros and cons of particular perspectives on each question, but rather to promote students' skill in identifying the best reasons on both sides of a question regardless of what their personal beliefs or experiences may be on the topic.

Exercise: Applying the Holistic Critical Thinking Scoring Rubric to the Students' Statements (p. 9)

The purpose of this exercise is to become familiar with using a scoring rubric to evaluate examples of critical thinking. Engaging students in the evaluation of critical thinking is a valuable step in nurturing them as thinkers. *The Holistic Critical Thinking Scoring Rubric* (HCTSR) encourages the scorer to use critical thinking skills of analysis, interpretation, explanation, and evaluation in the application of the rubric standards of good reasoning.

1. Ask students: What is a scoring rubric and for what do you use it?
   Students today have typically had a good deal of experience with scoring rubrics in their K–12 education. General responses should include a tool for grading papers, a method for subjective evaluation, criteria for defining an assignment or for making judgments about student work, scoring technique for when there is no right or wrong answer, description of what features are required for strong performance on an assignment, and perhaps even a tool that enables two or more people to draw comparable conclusions about subjective information.
2. Summarize students' responses and explain that rubrics help focus us on the features we are trying to evaluate. They help prevent against being persuaded or unduly influenced by our own feelings and reactions about the topic being reviewed.
3. Review each of the four levels of the HCTSR (p. 11).
4. Ask students: What is the difference of each level?
5. Ask students: How are levels 1 and 2 different from levels 3 and 4?
6. Practice using the HCTSR with the students' statements in the textbook.
   a. The textbook authors mention that the response from Student #1 corresponds to a "1" on the rubric, Student #2 reflects a "2," Student #3 is a "3," and Student #4 is scored as a "4."
   b. What evidence confirms the claims made by the authors?
7. Have students offer one or two examples for how each student statement fits to the level claimed by the authors. Students must refer directly to the criteria appearing at a given level of the HCTSR. Be sure to insist that the examples are justified with explanation in terms of the critical thinking language that appears on the rubric.
8. Actively discourage students from applying personal criteria to the evaluation process. Examples of personal criteria include using personal feelings of agreement or disagreement with the statement being evaluated as a justification for a rubric score, offering personally generated counterarguments to justify a rubric score, or augmenting a statement with inferentially derived arguments as a justification for a rubric score.

Thinking Critically: Applying the Holistic Critical Thinking Scoring Rubric (p.15)

These exercises provide additional practice with the HCTSR. Access the *Kansas City Star* editorial on restricting teacher-student interactions on social networking sites and the StLtoday.com editorial on the U.S. Supreme Court order for California to reduce its state prison population from www.MyThinkingLab.com. Though these are separate exercises, they can be conducted in a similar fashion.

***Kansas City Star* editorial on restricting teacher-student interactions on social networking sites**

1. Permit students to view the Kansas City Star editorial as art of a class session, or ask them to read the editorial as part of a homework assignment.
2. Use the HCTSR to evaluate the author's thinking and argument in the written piece. Explain that they must assign the editorial a score that is a whole number (1–4). Decimals or fractions are not permitted when using the HCTSR. If this exercise is given as a homework assignment, explain to students that they must come to the next class session prepared to compare and explain their rubric score.
3. In class, have students share their rubric score with a partner, in a small group, or with the class as a whole. Chart how many individuals scored the interview at each level of the rubric. Ask for student volunteers to explain why they gave a particular score and ask them to provide evidence for why they drew that conclusion.

4. After several students give their explanations, ask whether any students would like to change their rubric score. Give the class 3–5 minutes to review the rubric criteria. Chart again the distribution of scores. Ask individuals who have changed their evaluation to explain why they feel differently about their rating of the editorial. What influenced their decision to re-evaluate the critical thinking exhibited?
5. If you are using a course management system that permits posts on a bulletin board, consider using the system to host an asynchronous discussion of students' rubric scores and explanations. Encourage students to comment whether they have felt persuaded to reconsider their evaluation in light of the reasoning displayed by their classmates.

The StLtoday.com Editorial: Reducing the State Prison Population in California

1. Give students an opportunity to read the *StLtoday.com* editorial on how Missouri and Illinois should learn from the U.S. Supreme Court's order to California to reduce its state prison population if it cannot properly incarcerate these individuals.
2. Use the HCTSR to evaluate the author's thinking and argument in the written piece. Explain that they must assign the editorial a score that is a whole number (1–4). Decimals or fractions are not permitted when using the HCTSR. If this exercise is given as a homework assignment, explain to students that they must come to the next class session prepared to compare and explain their rubric score.
3. In class, have students share their rubric score with a partner, in a small group, or with the class as a whole. Chart how many individuals scored the interview at each level of the rubric. Ask for student volunteers to explain why they gave a particular score and ask them to provide evidence for why they drew that conclusion.
4. After several students give their explanations, ask whether any students would like to change their rubric score. Give the class 3–5 minutes to review the rubric criteria. Chart again the distribution of scores. Ask individuals who have changed their evaluation to explain why they feel differently about their rating of the editorial. What influenced their decision to re-evaluate the critical thinking exhibited?
5. If you are using a course management system that permits posts on a bulletin board, consider using the system to host an asynchronous discussion of students' rubric scores and explanations. Encourage students to comment whether they have felt persuaded to reconsider their evaluation in light of the reasoning displayed by their classmates.

Calibrating Rubric Scores: Inter-Rater Reliability

Use this final exercise with the Critical Thinking Holistic Scoring Rubric to demonstrate to students how to achieve inter-rater reliability through the calibration of scores. In the previous two exercises, students have already engaged in the comparison of scores, the explanation of their evaluations, and the act of reconsidering their initial conclusions. Now they practice with a sequence of evaluation tasks that are based on performance to reach agreement of interpretation.

1. Identify two letters to the editor and two editorials from the campus newspaper.
2. In groups of four, score the two letters to the editor.
3. After each individual has completed his or her scoring, have the members of the group compare their ratings. If there is disagreement, each member of the group should provide evidence and explanation for his or her score. Come to a group consensus on the score (in whole numbers) for these two letters to the editor.

4. Now score one of the editorials. After each individual has completed the scoring, have the members of the group compare their ratings. If there is disagreement, each member of the group should provide evidence and explanation for his or her score. Come to a group consensus on the score (in whole numbers) for the first of the two editorials. Ask members of the group to take a moment to reflect on whether they were any closer to agreement after their independent ratings than they were during the first round. This is evidence that they are increasingly closer to one another in their understanding of the critical thinking criteria and the use of the rubric.
5. Now have each individual in the group score the final editorial. After each individual has completed his or her scoring, have the members of the group compare their ratings. If there is disagreement, each member of the group should provide evidence and explanation for their score. Come to a group consensus on the score (in whole numbers) for the second of the two editorials.
6. Call the class together and ask the groups to share their experiences in this calibration exercise.
7. CHALLENGE QUESTION: What is the purpose of trying to achieve inter-rater reliability? When would it matter that people share a common interpretation of the criteria that indicate strong or weak thinking?

End of Chapter Exercises: Reflective Log (p. 17)

The purpose of these reflective log exercises is for students to document their own thinking and to engage in meta-cognitive self-reflection about the quality of their thinking endeavors. There are reflective log exercises throughout the book. Every chapter has at least one.

To maximize the usefulness of these reflective log entries, the instructor is encouraged to develop a mechanism for students to maintain their entries. This mechanism should permit easy access over time. Suggestions include hard-copy lab books or composition notebooks, ePortfolios or paper portfolios, course management software systems that permit students to upload documents for storage and easy access, thumb drives that students are required to bring to class each session, an on-campus server or student accessible shared drive, and so on.

Explain to students that the reflective logs are to be maintained throughout the term. To increase students' motivation to put effort into the reflective log activity, consider making the completion of the logs a component of your grading plan.

End of Chapter Exercises: Explain What Is Wrong with Each (P. 17)

Some of the most fruitful opportunities for increasing one's appreciation of strong critical thinking come from being exposed to incidences of weak thinking. In this exercise, students are asked to explain why the examples are indicative of weak, poor, flawed, fallacious, uncritical, or erroneous thinking.

1. Use the statements in the end of chapter Exercise as a "problem of the day" either at the beginning or end of class.
2. Ask students to offer verbal explanations for what is wrong with each statement as part of a whole group discussion, or ask them to respond in a written 5-minute quick write that can be collected as a method for checking students' understanding of the themes from Chapter 1.
3. EXTENDING THE LESSON: Have students make up their own examples using the format and style of these exercise statements. Use these student-generated examples (or create your own examples) as part of a quiz or section text.

End of Chapter Exercises: Group Discussion —Imagine if CT Were Illegal / Learning From Our Mistakes (p. 17)

The Group Discussion questions at the end of Chapter 1 can be used by you or your students as a Daily Discussion Starter. They can also be used as a 5-minute quick write prompt or a journal reflection prompt.

EXTENSIONS: SUGGESTED LECTURE, EXERCISES, AND ASSIGNMENTS

Questions to Pose as Discussion, In-Class Exercises, or Out-of-Class Writing Prompts

1. Perception management and the manipulation of voters.

   Identify examples where political advertisements make outrageous claims of connection between an affirmative or negative voting decision and a socially feared outcome (for example, current examples include the passage of gay marriage legislation being linked to unmonitored and uncensored promotion of homosexuality in elementary schools; other examples include immigration or health-care reform legislation, or historical examples related to desegregation or suffrage).

   Discuss these examples by asking students to evaluate the veracity of the argument in light of evidence for and against the claim being made. If no evidence is available, ask students to predict what evidence could be gathered that might help the voter make an informed decision. Use this exercise to introduce the concept of perception management. Engage students in a discussion of why perception management is successful in influencing voter behavior.

2. Identify a video clip from the films mentioned in the text (*Wag the Dog* and *Syriana*) or from a movie or television show that you feel is a good example of critical thinking or perception management.
   a. Show the scene to the class.
   b. Ask students: What's going on in this scene? What is motivating the speaker? Is there critical thinking (or manipulation) taking place? If so, what is the purpose or goal? Is the control of information being used in this situation to manage perception?
   c. If possible, consider places to pause the video to ask questions such as the previous ones or to ask students to predict the next event that will occur or the direction the dialogue will take as the scene unfolds.

3. On page 7, the textbook authors provide a series of analogies to help characterize critical thinking.
   a. Select one analogy and ask students to explain what is meant by the comparison. They should provide examples to support their explanation.
   b. Consider asking students to do this as a 5-minute quick write assignment in class. Put each analogy on a separate card or handout, and distribute them equally among the class.

4. Engage students in a discussion of comedian George Carlin's hypothetical question: What if there were no hypothetical questions? The purpose of this exercise is to recognize the purpose of asking hypothetical questions as part of the critical thinking process.
   a. Put the quotation on the board.

b. Ask students: Why do people ask hypothetical questions?
c. Ask students: What would the world be like if there were no more hypothetical questions? What would be different?
d. Count to 10 silently to yourself, which enables students to think about the question you have asked. It takes the human brain approximately 10 seconds to process new information and to formulate a thoughtful verbal reaction or response.
e. Through class discussion, elicit responses that assist students in recognizing that hypothetical questions facilitate one's ability to envision possible scenarios, anticipate consequences, or make predictions about the future if a particular set of events or actions were to occur. It is a critical part of the systematic analysis and evaluation of information.

CHALLENGE ACTIVITY: A friend of yours is particularly disinclined to ask hypothetical questions. In fact, every time you ask a question that starts with "what if" or "I wonder," your friend rolls his or her eyes and pretends to gag. One day you decide to confront your friend about his or her bad attitude and he or she says, "Why would one bother asking questions like that? It's not going to change anything, and you'll just waste your mental energy for no good reason." In groups of 3 to 5, come up with a scenario where asking the hypothetical "what if" or "I wonder" question seems like a waste of mental energy. It must be a novel scenario that is *not* already part of daily conversations of the modern media (for example, you cannot choose unemployment rates, public education, global warming, universal health care, and so on). Come up with an argument for why you should be encouraging the hypothetical questioning about your scenario.

5. CHECKING FOR UNDERSTANDING: Positive examples of critical thinking
Have each student come up with two positive examples of critical thinking that are different from the ones provided in the textbook. For each example, the student should explain what makes it positive. Check that students are describing a positive incidence of the thinking process rather than an example of a positive outcome that might have involved some thinking. They should be encouraged to use the language of critical thinking in their examples.

Please refer to the *THINK Critically* Web site for additional exercises and assignments.

ACCESSING RESOURCES for *THINK Critically*

Students can access chapter summaries, exercises, and video files of the complete chapter at www.MyThinkingLab.com.

For access to the instructor supplements, simply go to http://www.pearsonhighered.com/educator and search for *THINK Critically*. Click on the book cover and select "Resources." Download the Instructor's Manual or Chapter PowerPoints for *THINK Critically.* Follow the on-screen instructions to register (or log in if you already have a Pearson user name and password). After you have registered and your status as an instructor is verified, you will receive an e-mail with a login name and password. Use your login name and password to download the instructor resources.

For technical support for any of your Pearson products, you and your students can contact http://247.pearsoned.com.