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Incorporating Critical Thinking Skills Into the Language Arts Curriculum, Particularly in the Field of Detective Fiction

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**INCORPORATING CRITICAL THINKING SKILLS INTO
THE LANGUAGE ARTS CURRICULUM, PARTICULARLY
IN THE FIELD OF DETECTIVE FICTION**

Charles E. Bright, B. S. in Education

An Abstract Presented to the Faculty of the Graduate
School of Lindenwood College in Partial
Fulfillment of the Requirements for the
Degree of Master of Science

1997

ABSTRACT

In this age of accelerated change and continuing complexity, there is a widely-recognized need to incorporate critical thinking skills into all aspects of everyday life and not simply as an optional philosophy class at the post-secondary level of American education.

Chapter One of this culminating project investigates the historical roots of critical thinking, with a brief investigation into the history of how education in America (with slight digressions such as Alcott/Emerson's Temple School and John Dewey's Chicago experiments) has historically failed to foster the development of critical thinking skills in America's students by its centuries old tradition of emphasising rote memorization, passive learning, and social indoctrination.

Chapter Two discusses how the realization of the importance of critical thinking skills has affected teacher education programs and has rekindled debates regarding the content versus process approach to including critical thinking skills in the curriculum. This chapter also investigates the current renaissance regarding "wait-time" and the importance of cooperative learning in the classroom.

Echoing Ralph Waldo Emerson's sentiments regarding education, Chapter Three discusses techniques to foster creative and critical reading skills in the high school student as well as critical thinking skills. Included in this chapter are lateral thinking puzzles, word games, and exercises to stimulate critical thinking.

Chapter Four investigates the application of critical thinking exercises into a discussion of one of the most popular literary genres, detective fiction. This chapter also provides a "transcript" of the actual implementation of this approach in a Detective Fiction class at Saint Francis Borgia Regional High School in Washington, Missouri.

Chapter Five reiterates the guiding principles of the Center for Critical Thinking and Moral Critique and how they apply to the inclusion of critical thinking skills into the language arts curriculum, specifically in the field of detective fiction.

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Degree of Master of Science

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Dedicated to Olive M. Peterson Bright Wallace

(just because...)

Table of Contents

I. Definitions and Directions for Critical Thinking.....	1
II. Renaissance.....	15
III. Critical Reading.....	28
IV. Whodunit?.....	45
V. Review of Exercises and Reading-Based Projects.....	92
Works Cited.....	100
Vita Aucturis.....	107

Illustration

The Lunchroom Murder.....55

Chapter I

DEFINITIONS AND DIRECTIONS FOR CRITICAL THINKING

"Employers today report that today's jobs demand higher-order thinking skills of workers. To help students make the transition to work, schools must take an educational approach that enables students to think critically" (Thomas and Smoot 34 - 38).

A 1988 report by the U. S. Departments of Labor, Education, and Commerce titled "Building A Quality Workforce: Final Manuscript" summarized the workplace needs of employers. This government report underscored the fact that employers felt that they were "frequently unable to recruit employees with specific and desirable abilities" ("Critical Thinking" 1 - 14). According to the report, American business, as it enters the 21st century, will need employees with the ability to:

- 1) Learn to be flexible and respond to change quickly.
- 2) Deal with complexity---learn and perform multiple tasks, analyze, and deal with a wide variety of options.
- 3) Identify problems, perceive alternative approaches, and select the best approach to the problem.
- 4) Operate independently after a brief but intensive orientation period or after an initial training period.
- 5) Work cooperatively with people of different personalities, races, and sexes, and across different authority levels and organizational divisions, and;
- 6) Be punctual and dependable, and show pride and enthusiasm in performing well ("Critical Thinking" 1).

In short, America will need people who can think critically. "Educators have long known that learning to think was crucial for students' professional and personal success. Joining this consensus, employers, business leaders, policy-makers, accrediting agencies, and professional associations have identified critical thinking as an essential college level educational outcome" (Facione 1).

However, why wait for the college years to expose our students to critical thinking skills?

What better training ground for America's much-needed critically-thinking employees than the controlled environment of the high school English classroom (particularly as a learning unit where non-college bound students can be introduced to one of the most popular genres in world literature today: mystery and detective fiction)?

What is critical thinking?

The National Council for the Teaching of English Committee on Critical Thinking and the Language Arts defines critical thinking as a "process which stresses an attitude of suspended judgment, incorporates logical inquiry and problem solving, and leads to an evaluative decision or action" (Tama 1).

Michael Scriven, director of the National Council for Excellence in Critical Thinking, defines critical thinking as "the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and evaluating information gathered from or generated by observation, experience, reflection, reasoning, or communication, as a guide to belief and action" (1 - 2).

Robert Ennis suggests that "critical thinking is reasonable, reflective thinking that is focused on deciding what to believe or do" (Tama 1).

Other scholars have described critical thinking as "a parallel process by which individuals analyze given information in a contextually specific situation and create new ideas, concepts, or constructs based on their analysis" (Fulton et al 1 - 3).

Critical thinking seems to be the ability to weigh evidence fairly, examine arguments objectively, and construct rational bases for one's beliefs. Efforts to define, teach and measure critical thinking skills have intensified throughout the last decade (most notably: Kurfiss in 1988; Norris and Ennis in 1989; and Jones in 1993).

In 1990, under the sponsorship of the American Philosophical Association, a cross-disciplinary panel completed a two-year project which characterized critical thinking as purposeful, self-regulatory judgment which uses a core set of cognitive skills (analysis, interpretation, inference, explanation, evaluation, and self-regulation) to make a judgment and to monitor and improve the quality of that judgment (Facione et al 2).

However, it seems that one should be wary of simple definitions for the phrase "critical thinking."

As Dr. Richard Paul pointed out, critical thinking can be defined in any number of different ways consistent with each other so "we should not put a lot of weight on any one definition" ("Questions and Answers" 1). Indeed, as Columbia University's Stephen D. Brookfield maintained, the definitions and theories which one encounters when discussing such inter-related topics as critical thinking, critical analysis, critical awareness, critical consciousness, and

critical reflection are "exhortatory, heady and often conveniently vague" (Brookfield 32).

Dr. Peter A. Facione, Dean of the College of Arts and Sciences at Santa Clara State University and founder of the California Academic Press, responded to the question **with** a question (in true critical thinking fashion) when asked for a definition of critical thinking. "You don't really want a definition plopped on the page for you to memorize, do you? That would be silly, almost counterproductive" (Facione et al 1).

Quite simply, critical thinking seems to be thinking about your thinking while you're thinking in order to think better ("Critical Thinking" 1). We can define critical thinking "as the art of taking charge of one's own mind" ("Our Concept" 1).

Historically, the intellectual roots of critical thinking are traceable back to the patient questioning of Socrates, the philosopher who roamed the streets of ancient Greece 2,500 years ago, asking probing questions of the populace and forcing people to clarify and explain their thinking. During this time, the original Socratic questioner (who asked others to lead an examined life and to justify their confident claims to knowledge) was not a popular member of society, and his teaching methods eventually led to his death. Or, as one of the students in Richard Lederer's class allegedly wrote in an essay, "Socrates walked around giving Greek people advice. They killed him for it by giving him an overdose of wedlock" (Lederer 1). Socrates established the fact that one cannot depend upon those in 'authority' to have sound knowledge and insight, and that these authoritative individuals may have power and high

position but may be deeply confused and highly irrational in their thinking strategies.

In Socratic questioning and learning, the questioner's focus is on asking questions and not metamorphosing into the "Shell Answer Man" during the discussion, doling out quick answers without forcing people to examine the underlying conditions and assumptions which guide their lives (Fulton 2) . This forces the questioned individual to think and respond to questioning in a disciplined and intellectually responsible manner. In the case of Socrates, the questioned individuals didn't like it.

The Socratic questioner acts as the logical equivalent of the inner voice which the mind hears when it develops critical thinking abilities. Adapted into a classroom setting, the students' responses in the class are like the many thoughts flashing through the class's collective mind, and it is up to the teacher (or Socratic questioner) to deal with each "thought" clearly and fairly.

As the centuries rolled by, a number of intellectuals addressed the Socratic method of questioning as a way to induce individuals to reason well and willingly: Aristotle, with his concern for logic, rhetoric, and warranted assertibility; the North Africans and Romans in their preparation of jurists and lawyers; the medieval and Renaissance scholars with their focus on logical argumentation; Thomas Aquinas with his habit of considering and answering all criticisms of his ideas as a necessary stage in developing them; and the philosophers who wrote during the Age of Reason. Throughout history, there have been critical thinkers who realized the value of Socratic questioning and advocated its acceptance into all streams of everyday life (Facione et al 2). Some of these great historical critical thinkers have included Erasmus, Sir

Thomas More, Sir Francis Bacon, Descartes, Robert Boyle, Thomas Hobbes, John Locke, Sir Isaac Newton, Machiavelli, and John Locke ("A Brief History" 1 - 3).

In 1852, American educator John Henry Newman noted that "knowledge is not a mere extrinsic or accidental advantage...which may be got up from a book, and easily forgotten again...which we can borrow for the occasion, and carry about in our hand. (It is) something intellectual...which reasons upon what it sees...the action of a formative power...making the objects of our knowledge subjectively our own" (Paul What Every Person Needs 39).

In the nineteenth century, William Graham Sumner published a ground-breaking study of the foundations of sociology and anthropology in which he documented the tendency of the human mind to think sociocentrically and the parallel tendency for schools to serve the uncritical function of social indoctrination: "Schools make persons all on one pattern, orthodoxy. School education, unless it is regulated by the best knowledge and good sense, will produce men and women who are all of one pattern, as if turned on a lathe" ("A Brief History" 3). At the same time, Sumner recognized the deep need for critical thinking in life and education: "the critical habit of thought, if usual in a society will pervade all its mores, because it is a way of taking up the problems of life. People educated in it cannot be stampeded by stump orators and are never deceived by dithyrambic oratory. They are slow to believe. They can wait for evidence and weigh evidence, uninfluenced by the emphasis and confidence with which assertions are made on one side or the other. Education in the critical faculty is the only education of which it can be truly said that it makes good citizens" (Paul What Every Person Needs 39). Sumner concluded

his statements with the observation that "the critical faculty is a product of education and training. It is a mental habit and power. It is a prime condition of human welfare that men and women should be trained in it. It is our only guarantee against delusion, deception, superstition, and misapprehensions of ourselves and our earthly circumstances. Education is good just so far as it produces well-developed critical faculty" ("A Brief History" 3).

Sumner brings up an interesting connection between being a good critical thinker and being a good citizen, an idea which has been echoed by many published studies in the 1980's and 1990's. Indeed, "maintaining the right of free choice itself may depend on the ability to think clearly" (Tama 1). As recent studies have indicated, critical thinking skills are effective tools for achieving a clear understanding about one's feelings in every subject under the sun.

"As consumers, we sometimes buy things impulsively and uncritically, without stopping to determine whether we really need what we are inclined to buy or whether we can afford it or whether it is good for our health or whether the price is competitive. As parents, we often respond to our children impulsively and uncritically, without stopping to determine whether our actions are consistent with how we want to act as parents or whether we are contributing to their self esteem or whether we are discouraging them from thinking or from taking responsibilities for their own behavior" ("Our Concept" 1).

The report (cited above), goes on to state that Americans of all ages have been lulled into a sense of complacent acceptance of their positions in life, and that critical thinking skills are sadly lacking in the areas of: citizenship, where

we vote impulsively and uncritically without taking the time to familiarize ourselves with the issues or investigating the flowery words, flattery, and empty promises with which politicians manipulate an uncritically-thinking populace; friendship, where we often fight over infantile disputes and associate with people who sometimes bring out the worst in us; marriage, where too often we think only of our own desires and points of view and uncritically ignore the wants, desires, and needs of our spouses; health, where as patients we accept what the doctor says, blindly following the "doctor's orders" and not questioning our own attitudes and habits concerning food and exercise; and education, where we still teach as we have been taught without considering the challenge which we can offer our students ("Our Concept" 1).

In the past decade, critical thinking how-to manuals have been published (some of which use what the scholars label pseudo-critical thinking skills) on such subjects as defending Fundamentalist Christian thought, proving atheism, helping one take charge of one's own physical, spiritual, and emotional health/money matters/media viewing habits/choice of candidates for political office (*ad infinitum*).

But what of critical thinking skills and their inclusion in American public education?

Unfortunately, the history of education in the United States seems to be predicated on stifling critical thought in the classroom. Public schools (ironically called "free schools" by the colonial powers-that-be) were established in Massachusetts as early as 1647 to teach children to read and write and to combat that old deluder, Satan. The best-seller of 17th century America was Michael Wigglesworth's Day of Doom, a detailed description of

the terrifying fate of condemned sinners. To question this fate was heresy. In 1671, governor Sir William Berkeley of Virginia could say with pride that "there are no free schools, nor printing in Virginia, for learning has brought disobedience, and heresy...into the world, and printing has divulged them...God keep us from both" (Paul What Every Person Needs 40). In Plymouth Colony, the education of children was mandated in 1671 because children and servants were in danger of growing barbarous, rude and stubborn, and hence were becoming pests to the prevailing theocracy. Here, the emphasis in education was on "proper" integration into the prevailing colonial society (proper and acceptable socialization) rather than on cultivating critical thinking skills or stimulating personal intellectual growth. In the first decades of American education, all questioning in the classroom began and ended with the Latin phrase, *Nil desperandum, Christo duce* (Don't despair, Christ leads us). This sense of divine mission or God-given mandate regarding education was hardly the environment in which students could sharpen their analytical reasoning skills or critically question the lesson, and this atmosphere prevailed in American education for more than a century (Paul What Every Person Needs 39 - 42). The New England Primer, the only textbook used in the colonies for nearly two centuries, inextricably welded officially approved (safe) educational thought with required fundamental religious study. The rhyming couplet on the book's first page, "In Adam's Fall, We Sinned All," taught the letter A to young colonists and indoctrinated them into believing the message without questioning or thinking. To question the material being taught in the classroom was regarded as heresy, and there were severe punishments (both in this life and the next) for those who disobeyed.

In the 1800's, American schools rarely taught material beyond the three "R's," with a smattering of prevailing catechism and patriotic history thrown in. This material was to be memorized by the student, accepted without question, and dutifully recited at the proper time. Teachers, who were usually unemployed people who could read, write and cipher, taught America's children as they had been taught during the previous generation: didactically. At no point along the way were prospective teachers required to demonstrate their ability to lead a discussion Socratically, so that their students would learn to explore evidence, note the assumptions upon which their beliefs were based, and demonstrate their ability to think analytically or critically. The emphasis in 19th century American education, except in isolated experimental cases (such as in Bronson Alcott's and Ralph Waldo Emerson's Temple School) was on rote learning and memorized recitation, with no concern as to whether or not students were actually learning to think on their own. As Horace Mann pointed out in his Second Report to the Massachusetts Board of Education in 1838, "more than 11/12ths of all the children in the reading classes do not understand the meanings of the words they read; and the ideas and feelings intended by the author to be conveyed to, and excited in, the reader's mind, still rest in the author's intention, never having yet reached the place of their destination" (Paul What Every Person Needs 40 - 41).

Consideration of the 4th "R" in mainstream public American education, reasoning, would have to wait until the 20th century.

The first and foremost educational philosopher of the 20th century, John Dewey, defined critical thinking as reflective thought, where the teacher takes time to allow the student to suspend judgment, to maintain a healthy

skepticism and to exercise an open mind before taking any action. Dewey advocated the idea that "if we were compelled to make a choice between these personal attributes and knowledge about the principles of logical reasoning together with some degree of technical skill in manipulating special logical processes, we should decide for the former" (Dewey 34).

According to Dewey, students must be taught to examine, poke, question, and reflect on what they have learned. Skepticism, questioning, and reflection are essential to the process and students should examine a problem, find a solution, think about why they were or were not successful in their endeavors, and learn from those successes or failures. Dewey's ideas formed the foundation for the inclusion of "radical" new ideas in American public education, and inspired Edward Glaser to pursue making critical thinking a part of American life and American public education.

Based on the works of Socrates, John Dewey and everyone in between, Edward Glaser (and colleague, Goodwin Watson) published An Experiment in the Development of Critical Thinking in 1940 and produced the critical-thinking assessment instrument known as the Watson-Glaser Critical Thinking Appraisal. This instrument, which is still used more than half a century later, clarified the five skills necessary to critical thinking: drawing inferences, recognizing assumptions, drawing conclusions, interpreting data, and evaluating arguments.

There is a growing consensus in the assessment community that critical thinking, problem solving, and higher order communication must be given a new primacy in academic evaluation. "The enthusiasm with which North America has come to embrace critical thinking as a central outcome for higher

education manifests itself in university goal statements, accreditation standards, and government policy. Hardly a college or university in the nation would fail to identify the development of critical thinking as a vital outcome of its core curriculum" (Facione et al 2). Regional and professional accrediting associations have begun to require student assessment measures of critical thinking as a curricular outcome: The National League for Nursing, 1990; The Western Association of Schools and Colleges, 1990; and the North Central Association of Schools, 1992.

California seems to have led the way in emphasizing mastery in critical thinking skills as applied to American public education. In 1980, California Chancellor of Higher Education Glenn Dumke signed Executive Order 338, whereby the 19-campus California State University educational system instituted a unique graduation requirement; as of 1981, the 300,000 students enrolled in California's institutes of higher learning needed to demonstrate an ability to think critically and to achieve an understanding of the relationship of language to logic, leading to the ability to analyze, criticize and advocate ideas, to reason inductively and deductively, and to reach factual or judgmental conclusions based on sound inferences drawn from unambiguous statements of knowledge or belief in order to graduate ("Critical Thinking" 3).

Even as America enters the 21st century, most of the nation's foremost critical thinking information dissemination centers are located in California. These include The Center for Critical Thinking and Moral Critique, the Foundation for Critical Thinking, the National Council for Excellence in Critical Thinking, and the International Center for the Assessment of Higher Order Thinking.

In fact, California's innovative and progressive ideas formed the cornerstone for the nation's Educational Goals 2000 program. Borrowing from California's Executive Order 338, President George Bush, in concert with the governors of all 50 states (including then Arkansas Governor Bill Clinton) articulated five national educational goals. Goal 5 stated that adult Americans will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship. To achieve this, "the proportion of college graduates who demonstrate an advanced ability to think critically, communicate effectively, and solve problems will increase substantially" (U.S. Department of Education, 1990). With the recent passage of the "Goals 2000: Educate America Act," the United States Congress established these as national education goals.

Goal Three states that "by the year 2000, all students will leave grades 4, 8, and 12 having demonstrated competency in challenging subject matter including English, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography, and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our Nation's modern economy," and that "the percentage of students who demonstrate the ability to reason, solve problems, apply knowledge, and write and communicate effectively will increase substantially" ("Goals for Education" 2).

The recent research of Daniel P. Keating and many other scholars suggests that the aptitude for critical thinking and for competent decision making is achieved or achievable by early to middle adolescence, indicating that students

are capable of acquiring and developing various skills in critical thinking at all levels of their education (Keating 1 - 13).

A convenient place to expose high school students to critical thinking skills is in the language arts classroom, in a teaching unit where the students can match wits with three of the most popular and greatest fictional critical thinkers of all time: Monsieur C. Auguste Dupin (the first detective in the history of detective literature, who made his 1841 debut in Edgar Allan Poe's "The Murders in the Rue Morgue"); the inimitable Sherlock Holmes (who exercised his little grey cells in four novels and 56 short stories written by Sir Arthur Conan Doyle); and Frederick Dannay and Manfred B. Lee's detective sleuth, Ellery Queen (known as America's Sherlock Holmes, who first appeared in The Roman Hat Mystery in 1929).

In this how-to manual for high school language arts teachers who want to incorporate a brief unit on "incorporating critical thinking skills into a study of detective fiction," we will investigate Poe's "Murders in the Rue Morgue," Doyle's "The Adventure of the Speckled Band," and Queen's "The Adventure of the Tell-Tale Bottle."

Chapter II

RENAISSANCE: TEACHER PREPARATION, "WAIT-TIME," AND COOPERATIVE LEARNING

"We need critical thinking in the classroom because we cannot simply order students to think. Students do not come in with intellectual standards, geared up for action. They do not understand how and why they think as they do, nor how to direct, redirect, or assess their thinking. They do not naturally or spontaneously think critically or creatively. They are not accustomed to figuring things out or reasoning through the course they study" ("Questions and Answers" 1).

How does the national trend of including critical thinking skills as an integrated part of the secondary school curriculum impact the day-to-day operations of the classroom (particularly a language arts class geared for non-college bound students)?

First of all, it means that "teacher training" has changed. In the 1990's, academic coursework at many of America's post-secondary educational institutions includes classes in critical thinking skills as an element of every student's college career, regardless of academic major or degree. Those students training to become tomorrow's teachers often encounter critical thinking studies as an important (and sometimes required) element of their college education, and not merely as an optional elective in the field of philosophy. Contemporary research indicates that schools need to continue improving teacher training in essential critical thinking skills: colleges must teach cognitive skills to preservice teachers before training them to teach these skills in the classroom (Ashton 2), and schools of education must integrate critical thinking skills into all aspects of teacher preparation in order to train

future teachers to be models of effective thinking strategies for their students (Walsh and Paul 49).

Established high school teachers (particularly those who enjoy the complacency of possessing Missouri life-time teaching certificates in secondary education) need to break out of the traditional mold of teaching students simply to memorize facts and then evaluating student performance with multiple choice tests or true/false quizzes. As J. J. Gallagher pointed out in Teaching the Gifted Child, a trail-blazing teaching textbook published in 1975, "teachers need to realize that the facts which they teach students today will inevitably be replaced by the discoveries of tomorrow" (2).

In the same vein (but twenty years later), Dr. Richard Paul indicated that "the fundamental characteristic of the world students enter is accelerating change, a world in which information is multiplying even as it is swiftly becoming obsolete and out of date, a world in which ideas are continually restructured, retested, and rethought, where one cannot survive with simply one way of thinking, where one must continually adapt one's accuracy and meticulousness, a world in which job skills must continually be upgraded and perfected, even transformed. We have never had to face such a world before. Education has never before had to prepare students for such dynamic flux, unpredictability and complexity, for such ferment, tumult, and disarray" ("Questions and Answers" 5).

Incorporating critical thinking training for students into everyday lesson plans on a regular basis is not an easy task for the teacher or the student. "In a world of shallow values, instant gratification and quick fixes, critical thinking offers (students) what is commonly unpopular: substance and true intellectual

discipline. Critical thinking asks much from (our teachers), our students, and our colleagues including rigorous self-reflection and open-mindedness---the keys to change in education and society" ("Questions and Answers" 1).

While scholars and educational researchers agree on the importance of including critical thinking skills in all levels of education, controversy still remains. Should critical thinking be taught as an independent course (the process approach) or within established courses (the content approach)? This controversy was precipitated by a recommendation from the Rockefeller Commission on the Humanities that critical thinking be included in the U. S. Office of Education's definition of basic skills in 1980. In 1981, when the College Board identified critical thinking skills as one of the six basic skills needed for college, the debates about "why Johnny can't think" and "how to help Johnny think" grew more heated (Educational Testing Service 8; Ennis 28).

Those favoring the process method maintain that, like reading and writing, critical thinking is an enabling discipline and deserves separate instruction (Lipman Philosophy Goes to School 143.) Lipman and his colleagues argue that an independent course would prevent students from confining critical thinking to specific subject matter, thereby inhibiting its development (Philosophy in the Classroom 211). Other researchers agree, saying that critical thinking as a separate course would avoid repetition of introductory principles in each subject, and, in fact, would encourage the application of cognitive skills to other disciplines (Ennis 29).

Advocates of the more widely-accepted content approach argue that "critical thinking is (not) something additional to content, but

rather...something integral to it" ("Summer 1996 Critical Thinking Pre-Conference Outreach" 1). They argue that at every level and in all subjects, students need to learn how to ask precise questions, how to define contexts and purposes, how to pursue relevant information and how to analyze key concepts. In addition, in every class, students need to derive sound inferences from information, generate good reasons for beliefs and actions, recognize questionable assumptions in themselves and others, trace important implications and think empathetically within different points of view ("The 16th Annual Conference" 1). Other supporting research shows that skills taught in isolation do little more than prepare students for tests of isolated skills, and that in every course students should be taught to think logically, to analyze and compare, and to question and evaluate (Spache and Spache; Carr 69 - 73). Other researchers maintain that critical thinking cannot be divorced from content; and insist that thinking is, in fact a way of learning content (Raths et al). Most proponents of the content method echo Dr. Richard Paul's belief that "critical thinking, in its exemplary form, is based on universal intellectual values that transcend subject matter divisions" ("Defining Critical Thinking" 1).

There are some difficulties encountered if a teacher chooses to adopt the content method of instilling critical thinking skills into specific curricula. This method requires that teachers have extensive knowledge in their own discipline, and an understanding of its similarities and differences to other academic subjects. Only then can teachers instruct students how to apply these critical thinking cognitive skills in their specific subject area, and when and how to make contextual links with other courses. Proponents of the content method maintain, for example, that in both world history and American

Literature, students must be able to infer motivation, understand sequences, and trace cause and effect relationships; and that, after all, both Woodworking 101 and advanced geometry require students to attain skill in measuring, estimating, and sharpening their visual imagery perception. No discipline can claim exemption from many of the mental processes that the advocates of isolated instruction in thinking skills see as generic (Chambers 5 - 6).

While research indicates that this approach actually enhances content domain learning, it also imposes the burden of redesigning the way courses are taught and retraining teachers to use the method (Pauker 27).

A vast majority of the literature written by educational philosophers, administrators, and teachers supports inclusion of critical thinking skills into established curricular offerings at all levels of education. However, perhaps the solution to the process/content controversy was offered by B. Presseisen, who suggested that consideration of the advantages and disadvantages of each method leads one to conclude that the solution lies not exclusively in either method, but in a combination of the two. "Such a unified approach to critical thinking would provide a framework for instruction in any field" (Presseisen 7 - 8).

Regardless of the curricular area, teachers need to appreciate two current trends (or actually, revivals of thought) in education which specifically pertain to improving critical thinking skills in the high school classroom, and which seem to promise the best results for both students and teachers.

One trend is the appreciation for the appropriate use of wait-time in the classroom, and the other is a renewed interest (almost a renaissance, according to some scholars) in John Dewey's concept of cooperative learning as an

effective educational tool...both of which can be effectively integrated into a new approach to the study and discussion of detective fiction in a language arts course designed for the non-college bound high school student.

Mary Budd Rowe is credited with "inventing" the concept of wait-time as an educational variable (Stahl Using Think Time and Wait Time 1). In a landmark paper which she presented at the National Association for Research in Science Teaching in 1972, she indicated that critical thinking seldom involves snap judgments, and that, therefore, posing questions and allowing adequate time before soliciting responses helps students understand that they are expected to deliberate and ponder. Using this process, students soon realize that their immediate responses are not always the best responses.

Ms. Rowe reported that, in the average classroom, the periods of silence which followed teacher questions and students' completed responses rarely lasted more than 1.5 seconds. She discovered, however, that when these periods of silence lasted at least 3 seconds, many positive things happened to the students' and the teachers' behaviors and attitudes. Further experiments and research substantiated her hypothesis regarding the benefits of "wait-time" (Casteel and Stahl; Rowe 38 - 43; Stahl Using Think Time; Tobin 69 - 95). These and other studies showed that if periods of uninterrupted silence of three seconds or more occurred in the classroom, the following improvements in student behavior were observed:

- * The length and correctness of the students' responses increased.
- * The number of their "I don't know" and no answer responses decreased.
- * The number of volunteered, appropriate answers by larger numbers of students greatly increased.

- * The scores of students on academic achievement tests tended to increase.

Surprisingly, the research also indicated that several remarkable and noticeable positive changes in teacher behavior occurred if the uninterrupted period of silence was observed:

- *Teachers' questioning strategies tended to be more varied and flexible.
- *Teachers decreased the quantity and increased the quality and variety of their questions.
- *Teachers asked additional questions that required more complex information processing and higher-level thinking on the part of their students.

In 1994, Robert J. Stahl, currently a professor in the Division of Curriculum and Instruction at Arizona State University, adapted Ms. Rowe's concept of "wait-time" and constructed his own concept of "think-time," which he defined as "a distinct period of uninterrupted silence by the teacher and all students so that they both can complete appropriate information processing tasks, feelings, oral responses, and actions" (Using Think Time and Wait Time 1).

Dr. Stahl's research indicated that three seconds is used as a minimum time period because it represents a significant breakthrough or threshold point. As he explained, "the concern here is not that 2.9 seconds is bad, while 3 seconds is good, and 5.3 seconds of silence is even better. The concern is to provide the period of time that will most effectively assist nearly every student to complete the cognitive tasks needed in the particular situation" (Using Think Time and Wait Time 2 - 4).

Dr. Stahl summarized the prevailing research and delineated eight separate categories or periods of silence which must be considered when a teacher

attempts to use "think-time" as a tool to promote critical thinking skills in the classroom.

1) Post-Teacher Question Wait Time---Ms. Rowe's initial research indicated that a typical teacher paused, on the average, between .7 and 1.4 seconds after his/her questions before continuing to talk or permitting a student to respond. When teachers perceived a student as being slow or unable to answer, this period of time frequently lasted less than .7 seconds. Post-Teacher Question Wait Time occurs when a period of 3 or more seconds of uninterrupted silence follows a teacher's question, so that students have sufficient uninterrupted time to first consider and then respond to the query. To be most effective, this period of silence needs to follow a clear and well-constructed question with the cues students need to construct adequate answers.

2) Within-Student's Response Pause-Time---This particular category of "think-time" occurs when a student pauses or hesitates during a previously started response for up to 3 seconds of uninterrupted silence, before continuing his/her answer. By definition, no one except the student making the initial statement is allowed to interrupt this period of silence. According to Dr. Stahl, the prevailing practice is for teachers to interrupt or cut students off from completing their responses, especially when the pauses are longer than 0.5 seconds.

3) Post-Student's Response Time---This 3 or more seconds of uninterrupted silence occurs after a student completes a response and while other students are considering offering their own insights, questions, reactions, or answers. This silence allows students to think about what has been said and to decide whether they want to say something on their own.

4) Student Pause-Time---This occurs during any student's response and is a reiteration of "Within-Student's Response Pause-Time."

5) Teacher Pause-Time---According to Professor Stahl, Teacher Pause-Time should occur in a variety of places during the class period, when the teacher uses 3 or more seconds of uninterrupted silence to deliberately consider what just took place in the classroom, what the present situation is, and what his/her next statement/question/response/or behavior could or should be to keep the students on task.

6) Within-Teacher Presentation Pause-Time---This occurs during lecture presentations or other lengthy information input periods, when teachers deliberately stop the flow of information and give students 3 or more seconds to process the just-presented information. These pauses allow time for students to consolidate their thinking, with no request of them to follow up with a public response, giving students uninterrupted time to consider the information in "bite-sized" chunks rather than as an information input marathon.

7) Student Task-Completion Work-Time---This occurs when uninterrupted silence is provided for students to remain on an academic task which requires their undivided attention (3 seconds or much longer, depending upon the assignment).

8) Impact Pause-Time---Impact pause-time occurs when the most dramatic way to focus attention at a given time in the classroom is to provide a period of uninterrupted silence. According to research, this can create a feeling of anticipation or expectation (perhaps even drama and suspense, an ideal environment in a class focusing on mystery and detective fiction) in the classroom and may continue for less than three seconds or up through several minutes depending upon the time needed for what Dr. Stahl called "targeted cognitive or affective impacts" (Using Think and Wait Time 2 - 4).

Dr. Stahl summarized his findings by explaining that "the 3 second period of uninterrupted silence is a minimal amount of time, unless the teacher has sound reasons to reduce this time. The teacher should deliberately and consistently wait in silence of 3 - 5 seconds or longer at particular times; further, the teacher should ensure that all students also preserve the disturbance-free silence so that both the students and the teacher can consider and process relevant information and act accordingly. When these behaviors occur, the teacher can claim to be skilled at using think-time. The skillful use of think-time contributes significantly to improved teaching and learning in the classroom" (Using Think Time and Wait Time 3).

In addition to a continuing appreciation for "think-time" as a tool for increasing student opportunities for the enhancement of critical thinking skills,

there is renewed interest in the concept of cooperative learning in the classroom. In the past decade, more than 375 studies have been conducted in America's schools concerning the importance of cooperative learning, and the results were overwhelmingly positive. Students completing cooperative learning group tasks tended to have higher academic test scores, higher self-esteem, increased critical thinking competencies, greater liking for the subject, lower student attrition, greater numbers of positive social skills, fewer stereotypes of individuals of other races or ethnic groups, and greater comprehension of the content and skills they are studying (Brightman 3).

Ironically, the importance of cooperative learning for young children in American education was addressed by the 19th century educational reformer, John Dewey, who stressed the active exchange of ideas in the classroom (rather than traditional passive learning) in a speech to the parents of his Dewey School in 1897. At that time, John Dewey pointed out that cooperative problem-solving enhances childrens' cognitive development and learning, particularly when children share a goal and have differing perspectives on the best way to attain it (Mayhew and Edwards).

In the 1920's and 1930's Piaget also investigated the effects of collaboration between peers on cognitive development. Piaget maintained that opportunities for becoming less egocentric are more common when children discuss things with each other because then they must face the fact that not everyone has the same perspective on a particular situation. To this day, Piagetian scholars stress that cognitive conflict---a difference in perspective that leads to a discussion of each partner's opinion---is necessary for a student's intellectual development (Tudge and Caruso 1 - 2).

Recent research has revealed that promoting interaction among students as they learn is a hallmark for the teaching of critical thinking skills, and that students seem to achieve more when they learn in a group setting (Beyer 270 - 276; Johnson, Johnson, and Holubec; Slavin 71 - 82; Stahl and VanSickle).

Sue Ann Kendall suggested that teachers can encourage children to interact, share their perspectives during cooperative play, and enhance critical thinking skills by planning activities in which students have a shared goal, ensuring that the goal is intrinsically interesting, making it possible for children to achieve their goals through their own actions, and seeing to it that the results of the child's actions are visible and immediate (Kendall 46 - 52). "When children explore new possibilities jointly, their thinking is not constrained by an expert who knows better, but rather is limited only by the boundaries of their mutual imaginations. When teachers present problems that children at differing developmental levels can work on together, encourage children's efforts to share perspectives, and help children arrive at a common objective, cooperative problem-solving becomes a valuable part of the curriculum" (Damon 331 - 343).

To accomplish this, even the physical structure of the classroom must be changed. The standard classroom setting of "teacher at the lectern/students in the desks (aligned neatly into alphabetical order)" has become so ingrained into the 20th century way of American education that standard seating charts are mass-produced and incorporated into every teacher's grade and lesson plan books. Needless to say, this "standard classroom setup" seems to perpetuate the atmosphere in America's schools which stifles the inclusion of critical thinking into the curriculum.

Students should share the stage with the teacher so that all can see and interact with each other to minimize the deeply-habituated passive and receptive and docile mode many students adopt when facing the teacher. By the way, as Dr. Richard Paul pointed out, "it is not for nothing that the meaning of the word 'docile' has gone from its original meaning of 'teachable' to its present, ironic, meaning of 'passive, lacking initiative, and easily managed'" (Paul x). Before breaking the students into cooperative groups, teachers should clearly state directions and instructions which describe in clear and precise terms "what students are to do, in what order, with what materials, and...what students are to generate as evidence of their mastery of targeted content and skills" (Stahl and VanSickle 2). Then, the students should be allowed to move their desks so that they can break into groups of four or five students, and face each other for direct eye-to-eye contact and face-to-face academic conversations using "12 inch voices." Stahl suggests mixing students heterogeneously according to academic abilities, and then on the basis of ethnic backgrounds, race, and gender. According to Stahl and VanSickle, students should not be allowed to form their own groups based on friendship or cliques (2).

It is worth moving desks, scratching the tile floor, and enduring the withering gazes of custodians to facilitate learning as students break into their groups, because a classroom environment which is student-centered fosters active participation in the learning process; and, furthermore, the atmosphere in such a classroom invites every student to believe that he or she (through positive interdependence) has an equal chance of learning the content and that the students will sink or swim together (Tudge and Caruso).

Specific and carefully planned activities in the study of detective fiction can combine both the proven aspects of "think-time" and cooperative learning, and (when coupled with the latest research in critical reading exercises) can lead to an increase in a student's overall critical thinking abilities, as will be shown in the next chapters.

Chapter III

CRITICAL READING: RALPH WALDO EMERSON'S 'MIND BRACED BY LABOR AND INVENTION'

"There is then *creative reading* as well as *creative writing*. When the mind is braced by labor and invention, the page of whatever book we read becomes luminous with manifold allusion. Every sentence is doubly significant, and the sense of our author is as broad as the world"---Ralph Waldo Emerson in The American Scholar 1837 (qtd. in Albright 1).

My, how things have...oops, *should* change.

As Horace Mann stated in his second report to the Massachusetts Board of Education (cited in Chapter One), students more than 150 years ago experienced difficulty in comprehending what they had read. Reports from researchers and educators as America enters the 21st century indicate that little has changed in academics when it comes to the subject of teaching students to actively and constructively become engaged in their reading *while* reading, which is the generally accepted definition of the phrase *critical reading*. Kathryn S. Carr's research indicated that when students question, confirm, and judge what they read throughout the reading process they are thinking critically, and Ms. Carr further states that critical reading occurs when a student learns to evaluate, to draw inferences, and to arrive at conclusions based on evidence supplied by an author (69 - 73). Dr. Richard Paul, the internationally recognized authority on critical thinking, the Director of the Center for Critical Thinking, and the author/educator/researcher upon whom this writer has depended for a 1990's slant on the topic of incorporating critical thinking skills into the secondary curriculum, defined critical reading as "an

active, intellectually engaged process in which the reader participates in an inner dialogue with the writer" (Paul 461).

An impetus for the re-evaluation of standard teaching methods of reading was the National Assessment of Education Progress (NAEP) Report in 1981, which revealed that 85 percent of all 13-year-olds could correctly complete a multiple choice check on reading comprehension but only 15 percent could write an acceptable sentence summarizing the paragraph. In part, the assessment indicated that "student responses to assessment items requiring explanations of criteria, analysis of (a) text or defense of a judgment or point of view were in general disappointing" (NAEP 2). Learners were not able to reconstruct the structure and meaning of ideas expressed by others and their reading instruction reflected the lowest level of thinking---it lacked critical analysis. Clearly, today's students are not only unable to summarize material which they have read, they are rarely encouraged to support an evaluative opinion of what they have read (Collins 1).

While much academic coursework and educational research focuses on incorporating critical thinking skills into *composition* exercises and the critical reading of *textbooks* (usually at the college level), little research has addressed the specific need for integrating critical thinking skills into the *reading* skills of high-school age students as they read *literary* works.

In 1988, M. Wilson suggested that teachers re-think the way they approach reading in the classroom and look critically at their own teaching/thinking processes, regardless of curricular area or academic coursework taught ("Critical Thinking" 1). She cautioned against using skills lessons that are repackaged in the name of critical thinking but which are only busy-work

worksheets under a new name, and pointed out that teaching students to read, write and think critically is a dramatic shift from what has generally taken place in most classrooms. "A strong case can be made that literature---properly reunified with rhetoric and composition---is the single academic discipline that can come closest to encompassing the full range of mental traits currently considered to compose critical thinking" ("Critical Reading in Literary Studies" 2).

Again, standing on the shoulders of giants (in much the same manner that *today's* researchers and educational "movers and shakers" seem to echo the century-old recommendations of John Dewey, Horace Mann, and Ralph Waldo Emerson), there is some preliminary research which advocates using literature as a method for improving students' critical reading skills: L. L. Flynn indicated that children are capable of solving problems at all ages and need to be encouraged to do so at every grade level, suggesting that fairy tales could be used for the very young children ("Using Fairy Tales" 23 - 42). Ms. Flynn also touched upon the higher levels of critical thinking skills (analysis, synthesis, and evaluation) when she noted that when we ask students to analyze literature, we expect them to clarify information by examining the component parts, to synthesize by combining relevant parts into a coherent whole, and to evaluate by questioning the meaning which the author was trying to convey to the reader ("Developing Critical Reading Skills" 664 - 668). T. G. Anton echoed Flynn's research and documented similar observations in 1990 for elementary school children ("Classic Encounters" 37 - 39).

Unfortunately, most of the suggested solutions for improving critical reading skills in our students are not applicable to the typical high school classroom.

For example, research indicates that one of the most effective methods of encouraging students to read critically is to require that students annotate directly on the page while they read, underlining key words, writing questions or comments in the margins, bracketing important sections of the text, and making note of those particular sections of text which the student finds interesting, objectionable, or thought-provoking for future reference and in-class discussion ("Critical Reading Strategies" 1).

Unfortunately, these methods aren't possible in the typical high school classroom, given the prevailing educational and administrative mindset of lengthening the "useful life" of taxpayer-paid-for textbooks by requiring teachers to check out books to students at the beginning of the term and requiring that the same books be collected at the end of the term in a comparable (read *unused?*) condition. For those who aren't acquainted with the time-honored process of textbook dispersal, it goes like this...and the process is repeated in countless classrooms across America in early September and late May: as the book is handed to the student, the teacher records the student's name and student number, along with the condition and number of the book (noting title, author, year published, and date of textbook dispersal) on the office-approved inventory sheet...a copy of which is to stay with the teacher, while the original will go to the school secretary to be placed (alphabetically by teacher name) in a special folder in a special file cabinet in the main office to which only the secretary has access. If the student agrees to the teacher's interpretation as to the overall condition of the book at P.O.D. (point of dispersal), the student initials his/her acceptance on both the office-approved sheet and the special documentation file form stamped on the

inside of the book's front cover. The student's acceptance of the process (his/her initials indicate tacit approval), requires the student to turn in that particular book to that particular teacher at the end of the term in the same condition in which the book had been distributed at the beginning of the term. Upon P.O.R. (point of return) of the book at the end of the term, teachers peruse the previously-distributed special guidelines for book return (provided by the administration) assessing fines to be imposed upon the student for excessive dog ears on the corners, unnatural weathering or usage or cover-spotting, torn or mutilated pages, and any pencil and ink marks in the text (up to 5 cents can be charged for each pencil mark and 25 cents for each ink mark). Needless to say, this is hardly the academic environment in which to promote students' critical reading skills, and smacks of some of the earlier difficulties encountered by historical educators who wanted to change the system in spite of the status quo. However, it does keep high school secretaries busy for a couple of days at the beginning and end of each term. Some teachers in secondary education (mainly in private schools) are requiring students to purchase their own literature books for class with the sole purpose of the student's annotating in the text and promoting critical reading skills (even in parochial schools where "We've Never Done It This Way Before" is engraved...in Latin, of course...over the main entry door into the school).

As already mentioned, little research exists regarding the incorporation of critical reading skills using literature into the secondary language arts curriculum. However, certain critical reading strategies which are being implemented at various universities are applicable to the study of literature at the high school level, and the author owes a debt to all sources cited in the first

three chapters for his own adaptation of critical thinking and critical reading strategies adapted for use in the secondary language arts curriculum, particularly in the field of detective fiction.

First of all, for critical reading to occur, teachers must create an atmosphere which fosters inquiry. Students must be encouraged to question, to make predictions, and to organize their ideas (Collins 2).

These critical reading strategies (applied to general reading assignments) "will not make the critical reading process an easy one, (but) it can make reading much more satisfying and productive and thus help (the student) handle difficult material well and with confidence" ("Critical Reading Strategies" 1):

1. Previewing, to learn about a text before really reading it. While some researchers advise having students read a text through once to get a basic grasp of content before launching into an intensive critical reading, current educational practices in most high school classes would indicate that this will be an uphill fight ("Critical Reading Toward Critical Writing" 1). Teachers can set the stage using a learning tactic called active pre-reading (and promoted as predictive reading strategy by Russell G. Stauffer in his Directing the Reading-Thinking Process) as they help their students get a sense of what the text is about and how it is organized before asking the students to read it closely. For example, is the piece of literature written in the form of poetry, prose, essay, or autobiography? During which century does it appear to be written and what is the apparent nationality and sex and social class of the author? Is the piece heavily footnoted with long involved translations of foreign words and phrases geared for contemporary American audiences? Is

the piece overloaded with ponderous introductory or explanatory material? This pre-reading strategy involves seeing what a student can learn about the piece from the headnotes or other introductory material and then skimming the material to get a brief overview of the piece's content and organization.

2. Contextualizing, to place a text in its historical, biographical, and cultural context. It is necessary for the student (and the teacher) to realize that when someone reads a piece of literature, the reader interprets it through the lens of that individual reader's own experience. The reader's understanding of the words on the page and their significance is formed by what that reader has come to know and value from living in a particular time and place. Literature texts are all written in the past and sometimes in a radically different time and place from the reader's own experience. To read critically, the reader needs to contextualize, to recognize the differences between contemporary values and attitudes and those represented in the text. In the study of detective fiction, a useful technique is to assign the students to bring in a "piece of information" about the author, the story, the historical era during which the author lived and wrote, or any associated contextual information which will be shared with the class during our next meeting. For example, when directing the students on "how-to" contextualize, I take them up to the Internet computer in our library, type in "Poe" and "Murders," and print out the first 10 hits. These 10 hits (out of 10,264 relevant documents found on one search network) included: The Edgar Allan Poe NHS Park Brochure, the Poe Historic Site Index Page, a site which compares Poe's writings with other mystery and science fiction authors, a discussion of his magazine publishing days, a short biography (with sketch and larger portrait), and the Poe Virtual Library where you can check out Poe

bibliographies, biographies, theme clothing, comics, criticisms, discographies and films. Students are then asked to investigate (contextually) one aspect of the author/work/or era, and present their material (orally) to the class during the next class meeting.

This leads to many fascinating student-initiated in-class conversations (given the proper learning environment with teacher-directed Socratic questioning). For example, "America's T-Shirt Catalog---Edgar Allan Poe" hit #8 initiated a lively discussion involving an investigation into past and present popular cultural icons, Poe's short and troubled life (poverty, unhappy early family life, fights with his foster family, alcoholism, and depression) and its relationship to his writing (and similar stories involving today's writers/poets/musicians), fan clubs, whether Poe influenced modern horror and science fiction, and other topics which change with every class...and which challenge each student in a different way to become what educational psychologist Dr. Linda Edler called the *beginning* thinker, where "students accept the challenge or they become more entrenched in the unreflective, uncritical stage" (Critical Thinking Resources and Events Catalog, 7).

3. Questioning, to understand and remember the main points of the text by asking questions and attempting to find out the answers about the content of the piece. In a strategy borrowed from David Bleich's Readings and Feelings: An Introduction to Subjective Criticism, students write down questions as they read the text to focus on a main idea, and most research suggests that the student should write a question for every paragraph or brief section of the piece read.

4. Reflecting, to challenge beliefs and values. The students have the opportunity to examine personal responses during their readings, by notating "challenges (to their) attitudes, unconsciously held beliefs, or positions on current issues" as they read ("Critical Reading Strategies" 2).

5. Outlining and summarizing, to identify the main ideas and have the student restate the author's words into the student's own words. Outlining reveals the basic structure of the text and summarizing synthesizes a selection's main argument/information in brief. According to researchers, such as Valerie Hardcastle, of Virginia Tech's Department of Philosophy, "the key to both outlining and summarizing is being able to distinguish between the main ideas and the supporting ideas and examples (with) the main ideas forming the backbone. Summarizing begins with outlining, but instead of merely listing the ideas, a summary recomposes them into a new text...and requires creative synthesis. Putting ideas together again---in (a student's own) words and in a condensed form---shows how reading critically can lead to deeper understanding of any text" ("Critical Reading Strategies" 2).

6. Evaluating an argument, to test the logic of a text as well as its credibility and emotional impact.

7. Comparing and contrasting, to explore likenesses and differences between texts to understand them better.

Let's begin at the beginning, not with these seven strategies being adapted to the study of integrating critical thinking skills into a study of the detective story, but with a simple paragraph which formed the basis of an early experiment in critical reading (which was explained in detail in Dr. John Bransford's IDEAL: A Guide for Improving Thinking, Learning, and

Creativity). I've found that this particular exercise is an effective ice-breaker on the first day of classes to give the students a preview of my class in detective fiction.

Two train stations are 50 miles apart. At 1 P.M. on a rainy Sunday afternoon, a train pulls out from each of the stations and the trains start toward one another. Just as the trains pull out from the stations a hawk flies into the air in front of each train and flies ahead to the front of the second train. When the hawk reaches the second train, it turns around and flies toward the first train. The hawk continues in this way until the trains meet. Assume that both trains travel at the speed of 25 miles per hour and that the hawk flies at a constant speed of 100 miles per hour. How many miles will the hawk have flown when the trains meet?

According to the experiment which Professor Bransford performed, most of the students looked at the problem and thought that, since it looked like a math word problem, it would be difficult to solve and would involve sophisticated math skills and problem-solving abilities. Most students worried that they would look stupid if asked to deliver their answers aloud in class, and the study proved that these negative pre-conceived attitudes interfered with the students' successful solution of the deceptively simple problem (Bransford 7). And, as psychologist Albert Ellis noted in R. Corsini's Current Psychotherapies, such self-defeating student attitudes frequently involved whining (167 - 206).

Solution: *Since the two train stations are 50 miles apart and the trains are traveling toward one another, each train will travel 25 miles before they meet. Both trains are traveling at the rate of 25 miles per hour, so it will take them one hour to meet. How fast does the bird fly? Since the bird flies at 100 miles per hour, it will fly 100 miles before the two trains meet.*

After students "discover" how to solve a simple paragraph problem by critically reading and discussing the problem aloud with their peers, I proceed

to offer similar "opportunities for excellence and achievement" to the class (following the tactical and structural recommendations of Dr. Richard Paul, Dr. Linda Elder, The Center for Critical Thinking and Moral Critique, and the Foundation for Critical Thinking at Sonoma State University). Some of these specific recommendations, which I will implement throughout the entire course, include:

- 1) Letting the students know what they're in for by spelling out as completely as possible what my philosophy of education is, how I am going to structure the class and why, why the students will be required to participate and think their way through various aspects of the class, why standard methods of rote memorization (while having some educational value) will not work in the class of detective fiction, and what strategies I have in store for them to combat the strategies they use for passing classes without much *thinking* being required of them.

- 2) Frequently breaking the class into small heterogenous groups, giving the groups specific tasks and specific time limits, calling on particular groups afterward to report back to the class on what part of their task they completed, what problems occurred, and how they tackled those problems.

- 3) Designing material so that students grasp more and think more by listening to me speak less.

- 4) Not being a mother robin by chewing up the material for the students and putting it into their beaks "pre-chewed."

- 5) Thinking aloud in front of my students. Letting them hear me thinking and puzzling my way slowly through a problem at the level of a good student and not as what Dr. Richard Paul referred to as a speedy professional, where

"if your thinking is too advanced or proceeds too quickly, they will not be able to internalize it" ("Tactical and Structural Recommendations" 1).

6) By questioning the students Socratically and by probing the various dimensions of their thinking on a regular basis. As one of the videos from The Center for Critical Thinking points out, "feeding students endless content to remember is akin to repeatedly stepping on the brakes in a vehicle that is already at rest" ("Socratic Video Series" 1).

7) Letting them know that critical thinking can be fun by forgetting to indoctrinate them (for the moment) in the formal "book-learning" rhetoric and rote memorization of information which they usually feel they need to regurgitate with correct labels at the proper evaluative time in order to get a passing grade in most classes. Let the students believe that things such as "critical thinking and reading and literature" are fun (because you, the teacher, think they are fun) without burdening them with obscure educational philosophy, fancy abstract terms and theories, extensive footnotes and bibliographies.

Other critical reading "puzzlers" follow, all in preparation for the real task at hand in the class...a face-to-face confrontation with the greatest critical thinkers of all time: Edgar Allan Poe's C. Auguste Dupin; Sir Arthur Conan Doyle's Sherlock Holmes; and America's Sherlock Holmes, Ellery Queen. Fortunately for teachers, there are many similar books featuring "puzzlers" which are available for incorporation into the classroom. Those which follow are from one of the best, Paul Sloane's Lateral Thinking Puzzlers.

Easy Puzzlers

- 1) Five pieces of barbecue charcoal, a carrot, and a scarf are lying on the front lawn. Nobody placed them on the lawn, but there is a perfectly logical reason for their being there. What is it?
- 2) There were two Americans waiting at the entrance to the British Museum. One of them was the father of the other one's son. How could this be so?
- 3) A man lives on the tenth floor of a building. Every day, he takes the elevator to the first floor to go to work or to go shopping. When he returns, he always takes the elevator to the seventh floor and then walks the remaining flights of stairs to his apartment on the tenth floor. Why does he do this?

Moderate Puzzlers

- 1) Anthony and Cleopatra are lying dead on the floor in an Egyptian villa. Nearby is a broken bowl. There are no marks on their bodies and they were not poisoned. Not a person was in the villa when they died. How did they die?
- 2) The day before yesterday, Freda was 17. Next year she will be 20. How can this be so?
- 3) At a family reunion, it was found the following relationships existed between the people present: Father, Mother, Son, Daughter, Uncle, Aunt, Brother, Sister, Cousin, Nephew, Niece. However, there were only four people there. How could this be so?
- 4) What is it that gets wetter as it dries?
- 5) What is it that the man who makes it does not need; the man who buys it does not use it himself; and the man who uses it does so without knowing?
- 6) What was the first man-made object to travel faster than the speed of sound? (The speed of sound is 1100 feet per second)

Historical Puzzlers

- 1) In 1902, in the French West Indies, Mr. Cyparis was in prison awaiting trial for drunkenness. He was detained longer than he expected, was neglected, and was left without food and water. Yet when he was released, he was grateful to have been in prison. Why should that be so?
- 2) Ben Jonson was a great English poet and playwright who lived from 1572 - 1637. Why was he buried in a sitting position?

Difficult Puzzlers

1) A man is lying dead in a field. Next to him is an unopened package. There is no other creature in the field. How did he die?

2) During the second World War, there was a footbridge over a ravine between Germany and Switzerland. It was guarded by a German sentry. His orders were to shoot anyone trying to escape over the bridge and to turn back anyone who did not have a signed authorization to cross. The sentry was on the German side of the bridge. He sat in a sentry post and he came out every three minutes to survey the bridge.

There was a woman who desperately needed to escape from Germany to Switzerland. She could not possibly get a pass. She knew that she could sneak past the sentry while he was in the sentry post, but it would take between five and six minutes to cross the bridge. There was no place to hide on or under the bridge, so the guard would be easily able to shoot her if he saw her on the bridge escaping to Switzerland. How did she escape across that bridge?

3) Why are 1996 pennies worth more than 1983 pennies?

And now, a murder mystery...

1) A hotel detective was walking along the corridor of a large hotel one day. Suddenly, he heard a woman's voice cry out "For God's sake, John, don't shoot me!" Then there was a shot. He ran to the room where the shot came from and burst in. In one corner of the room, lay a woman who had been shot through the heart. In the middle of the floor was the gun that had been used to shoot her. On the other side of the room stood a postman, a lawyer, and an accountant. The detective looked at them for a moment and then went up to

the postman, grabbed him, and said "I am arresting you for the murder of that woman."

It was, in fact, the postman who had murdered the woman, but how did the hotel detective know? Never before had he seen any of the people in the room.

Fiendish Puzzlers

1) A man walked into a bar and asked the barman for a glass of water. They had never met before. The barman pulled a gun from under the counter and pointed it at the man. The man said "Thank you" and walked out. How could this be so?

2) A man who wanted a drink walked into a bar. Before he could say a word, he was knocked unconscious. Why?

Be ready for some groans and lively discussion when the solutions are announced to the class...but isn't that what education is supposed to be all about?

Solutions:

Easy Puzzlers: 1) *A snowman melted on a front lawn.* 2) *They were husband and wife.* 3) *The man is a dwarf (or vertically-challenged in this PC age). He can reach the button in the elevator for the first floor, but he cannot reach the button for the tenth floor. The seventh floor button is the highest he can reach.*

Moderate Puzzlers: 1) *Anthony and Cleopatra are goldfish. They died when their bowl was knocked over by a rather clumsy guard dog.* 2) *The statement was made on January the first. Freda's birthday is on December 31st. She was 17 the day before yesterday. She was 18 yesterday. She will be 19 this year and 20 next year.* 3) *There was a brother and a sister. The brother's son was there and so was the sister's daughter. From this, it follows*

that the son and daughter were cousins, and all the other relationships are quite straightforward. 4) A towel. 5) A coffin. 6) A whip.

Historical Puzzlers: 1) Monsieur M. Cyparis was the sole survivor, out of 30,000 people, of the volcanic eruption of Mont Pelee, which destroyed St. Pierre, capital of Martinique in the West Indies on May 8th, 1902. He had been locked in a special underground jail cell. All of the other people in this once-prosperous town were killed by lava, fire, or poisonous gases. 2) Ben Jonson, second only to Shakespeare in his eminence as a poet at that time, was buried in the Poets' Corner in Westminster Abbey. The plot that was allocated to him was so small that he had to be buried in a sitting position in order to fit in it.

Difficult Puzzlers: 1) The man had jumped from a plane, but his parachute had failed to open. It was the unopened package by his side. 2) The woman waited until the sentry went into his hut. She then sneaked onto the bridge and walked towards the Swiss border. She walked for nearly three minutes, then she turned around and started to walk back towards Germany. The guard came out and saw her. When she reached him he saw that she had no authority to enter Germany, and he therefore ordered her to go back—to Switzerland. 3) Why are 20 pennies worth more than 15 pennies? Because there are five more of them...the same holds true for this problem. 1996 pennies are worth more than 1983 pennies.

And now a murder mystery: The lawyer and the accountant were women. The postman was therefore the only person who could have been called John.

Fiendish Puzzlers: 1) The man had the hiccups. The barman recognized this from his speech and drew the gun to give the man a shock. It worked and

cured the hiccups, so the man was grateful and he no longer needed the water.

2) *It was an iron bar.*

"Once upon a time, teachers taught literature as a body of content to be mastered. The old paradigm was simple: teachers assigned literature; teachers and students read the assignment; then teachers told students what they had read" (Swope and Thompson 75).

Although the old paradigm may have possessed some merit, it frequently made literature a threat to students, implying that they could not trust their own judgment about what they had read. The traditional lecture-discussion of Moby Dick, for example, too easily became a collection of the teacher's random thoughts, more accurately titled "What I Think Herman Melville Meant When He Wrote..."

Through a careful incorporation of critical thinking skills into the secondary language arts and literature curriculum, things could change. Students can learn about literature can learn an efficient way to take control of their own critical thinking processes.

Things must change or other American educators will experience what teacher Noland A. Wallace experienced in his geometry class and published in "Tales Out of School" in the March, 1977 edition of Reader's Digest Magazine:

"I had a student in my geometry class read aloud a textbook passage that contained an important point. When he finished, I asked him to explain what he had just read. 'Sorry, Mr. Wallace,' he said. 'I wasn't listening.'"

Chapter IV

WHODUNIT?

"For me, as for many others, the reading of detective stories is an addiction, like tobacco or alcohol"---W. H. Auden in "The Guilty Vicarage" (qtd. in Winks 15).

"Why do we read this stuff? The answer comes easily. Mystery fiction is the greatest escape literature of all time. Reading should be for pleasure. You may say that we read for knowledge, but that, too, should be a pleasure"---E. T. Guymon, Jr., the dean of American collectors of mystery books and memorabilia (qtd. in Ball 361).

In this chapter, the focus is on the introduction and application of critical thinking skills into a study of detective literature. While nearly two dozen stories are read and analyzed during the semester course, Detective Fiction, this chapter will present three short teaching units (occupying two or three class periods each) concerning Edgar Allan Poe's "The Murders in the Rue Morgue," Sir Arthur Conan Doyle's "The Adventure of the Speckled Band," and Ellery Queen's "The Adventure of the Tell-Tale Bottle."

But first, a brief history of the detective story and an introduction to the major writers in the genre and literary criticism in the field of mystery fiction.

According to Elliot L. Gilbert, the first literary account of a murder mystery occurs in Genesis 4:8, where Cain slays Abel and all of the elements of mystery fiction appear for the first time in print: a killer; a victim; a reasonable motive; an implied weapon; and a logical suspect to whom all of the evidence points (viii). The only detail which disqualifies this particular homicide from the

distinction of being the first detective story in literary history is the absence of a detective.

Granted, Mr. Gilbert concedes, there is an investigator of sorts (God), One who skillfully takes advantage of the prime suspect's self-consciousness and confusion to expose his guilt. Incidentally, these same skills had been exhibited earlier in the same text where the Investigator was walking through the Garden of Eden, missed Adam, and called out "Where art thou?" (and we all know how that turned out!) And, true, there is a line of aggressive questioning in the Abel homicide (a Biblical third-degree) and a direct accusation of the prime suspect, Cain, to whom all of the superficial evidence points. But "the strongest argument against considering God a detective in these Biblical accounts is that, given His omniscience, He necessarily knows all of the answers to His questions before He asks them and is therefore not really detecting anything" (Gilbert vii - viii).

The title of "World's First Detective Hero" belongs to Monsieur C. Auguste Dupin, the brainchild of the nineteenth-century American writer of Gothic horror stories, Edgar Allan Poe. "Poe's was a first-rate but guilt-haunted mind painfully at odds with the realities of pre-Civil-War America. Dupin is a declassed aristocrat, as Poe's heroes tend to be, an obvious equivalent for the artist-intellectual who has lost his place in society and his foothold in tradition. In his creation of Dupin, Poe was surely compensating for his failure to become what his extraordinary mental powers seemed to fit him for" (Macdonald, qtd. in Winks 179). Inspector Dupin and his unnamed narrator/assistant (his "Watson") made their debut in what is universally

accepted as the world's first detective story, "The Murders in the Rue Morgue."

On April 18, 1841, "The Murders in the Rue Morgue" appeared in Graham's Lady's and Gentlemen's Magazine, a popular periodical of which Poe was then editor. In this landmark story, Poe anticipated and introduced nearly every element employed by mystery fiction writers since that time, forming a complete catalog of the genre's principal techniques and devices. These elements include: the eccentric private detective with a genius for applying pure inductive and deductive reasoning to human behavior; the less acute friend (a thick-headed Boswell) who narrates the story; an extraordinary crime (in the case of the Poe story, a locked room double homicide); the open display of clues which gives the reader a chance to solve the puzzle before the detective does; various red herrings (misleading clues); a wrongly accused and arrested suspect; a visit by the detective to the scene of the crime and the subsequent battle of wits with representatives of the police department (who are never quite as astute as our detective hero); and a final summary scene where the solution (which needs to be both surprising and satisfactory) is revealed (Gilbert xiv).

According to Dorothy L. Sayers, the creator of popular detective Lord Peter Wimsey and a mystery writer revered by many critics as one of *les grandes dames* of detective fiction's Golden Age, Poe "achieved the fusion of (the) two distinct literary genres (of pure detection and pure horror) in 'The Murders of the Rue Morgue' and created what we call the story of mystery which Poe called his tales of ratiocination. In this particular story also are enunciated for the first time those two great aphorisms of detective science: first, that when

you have eliminated all the impossibilities, then, whatever remains, however improbable, must be the truth; and, secondly, that the more outre a case may appear, the easier it is to solve. Indeed, take it all around, 'The Murders in the Rue Morgue' constitutes in itself almost a complete manual of detective theory and practice" (Sayers 9 - 44).

Regardless, the number of scholars and literary critics who have chosen to subject detective fiction to the kind of close analysis customary for more serious fiction is very small. Robin W. Winks (Professor of History and Master of Berkeley College at Yale University, author of several books including The Historian as Detective, and editor of one of the only literary criticisms of detective fiction, Twentieth Century Views of Detective Fiction) observed that "for every person who argues that detective fiction is the diet of the noblest minds, there is another who finds it wasteful of time and degrading to the intellect. Detection fiction is seldom submitted to the scrutiny of a Leavis (or a Harold Bloom), perhaps because such critics feel it could not withstand such an intense light, perhaps because they would be accused of slumming were they to take it seriously, perhaps because they have simply never thought to do so" (Winks 1 - 12). Nonetheless, there have been some remarkable bodies of detective fiction literary criticism published, which are dear to the heart of those who, like Auden, are addicted to the detective story. These include: Carolyn Wells's The Technique of the Mystery Story, in 1913; Dorothy Sayers's Great Stories of Detection, Mystery and Horror, in 1928; Howard Haycraft's Murder for Pleasure in 1941 and The Art of the Mystery Story in 1946; John Ball's The Mystery Story in 1976; and, Ellery Queen's The Queen's Quorum in several editions. However, most people agreed with the

statement made by the noted literary critic, Joseph Wood Krutch, who suggested that "the detective story, so I once assumed, was read only by weary statesmen on the one hand and by the barely literate on the other" (Krutch, qtd. in Winks 41).

This, in spite of the fact that more than 50,000 detective tales have been published and "for more than half a century, the American reading public has chosen the mystery story, in its numerous guises and disguises, as its favorite form of fiction. Relatively few stories have achieved fame, and perhaps even fewer stand out as literary achievements. Nonetheless, it is no longer possible to ignore the enormous impact which this form of creativity has had on public tastes since that day in 1841 when Edgar Allan Poe launched the genre with his 'Murders in the Rue Morgue'" (McElroy, qtd. in Gilbert vi).

Edgar Allan Poe's "The Murders in the Rue Morgue" is a logical starting point for the study of detective fiction, and a good starting point for sharpening students' critical reading and thinking skills in an invigorating and controlled environment.

According to a recent study by Dr. Richard Paul and Linda Elder of California's Center and Foundation for Critical Thinking in Santa Rosa, there are two essential dimensions of thinking which students need to master in order to learn how to upgrade their thinking. These dimensions can easily be incorporated as an introduction into the study of detective fiction. Students need to be able to identify the parts of their thinking and they need to be able to assess their use of these parts of thinking. While there are many standards appropriate to the assessment of thinking as it might occur in various contexts, some standards are virtually universal and applicable to all thinking. These

elements include clarity, precision, accuracy, relevance, depth, breadth, and logic. How well students are reasoning depends on how well they apply these universal standards to the elements of their thinking.

According to Drs. Paul and Elder, students must realize that:

- 1) All reasoning has a purpose.
- 2) All reasoning is an attempt to figure something out, to settle some question, or to solve some problem.
- 3) All reasoning is based on assumptions.
- 4) All reasoning is done from some point of view (the frame of reference).
- 5) All reasoning is based on data, information, and evidence (the empirical dimension of reasoning).
- 6) All reasoning is expressed through, and shaped by concepts and ideas (the conceptual dimension of reasoning).
- 7) All reasoning contains inferences or interpretations by which we draw conclusions and give meaning to data.
- 8) All reasoning leads somewhere or has implications and consequences ("Helping Students Assess Their Thinking" 1 - 2).

For students investigating "The Murders in the Rue Morgue" (and eighteen other classical detective stories during the course of the semester), the purpose of the reasoning process is simple...they get to play the role of detective and match wits with Edgar Allan Poe and Inspector C. Auguste Dupin (and others) in an effort to solve all sorts of heinous crimes. Students also grasp an academic purpose behind the exercises, in that they will gain a better

understanding of Poe's complicated classic short story which is written in the multi-syllabic Arabesque style of writing, which, while being popular in nineteenth-century American literature, remains somewhat difficult for twentieth-century high school students to understand. They also realize that as an added benefit to this greater understanding of the story, they will get a better grade in the course because of their active, rather than passive, participation in the classroom activities...and that they will be expected to think in this class, and not simply read a story written by some dead guy while the teacher reads the funny papers, drinks coffee, and dreams of June, July, and August.

What do students have to figure out as we investigate "The Murders in the Rue Morgue?"

Whodunit!

Or, to be more precise in the case of this particular story, *Whatdunit*.

A good introduction for students to this "You Are There at the Scene of the Crime" approach to detective literature (and the brief group training experience cited as an essential element for "Building a Quality Workforce," already cited in Chapter One) is the Crime and Puzzlement series of 24

Solve-Them-Yourself picture mysteries, which were created by Lawrence Treat in the 1930's. These exercises advance the "critical reading" puzzles introduced in Chapter Three, add a visual element which many students find enjoyable, and make students forget that they are going to have to think to do well in the class and in their adult lives. After all, a teacher should always be aware of Sir Joshua Reynolds's observation that "there is no expedient to

which a man (read *student*) will not resort to avoid the real labor of thinking" (qtd. in Barrett 1).

We now join Mr. Bright's Detective Fiction class, during one of our first class meetings.

First of all, I explain to the students that, even though this is a language arts literature elective, they are now to assume the roles of homicide investigators, which will be their point of view for future literary pursuits in the course. I explain to them that as part of the coursework designed to hone their observation and deductive logic skills, they will be shown an overhead transparency of a crime scene sketch and will then be asked to record what they notice in the crime scene depictions while concentrating on "just the facts, ma'am." This gives them the "point of view" mentioned in the studies from the Center for Critical Thinking and Moral Critique. I also mention that the authors of all forms of literature which they will encounter in their lives have "points of view" which shade what they write, and that students should be aware of the author's "point of view" (or purpose) while studying or reading.

As investigators during the semester, the students will record (on a regular basis) their observations, questions, and thoughts in their notebooks for future sharing with the rest of the class, all based on Dr. Richard Paul and Dr. Linda Edler's essential dimensions (or cognitive elements) of critical thinking. These observations will: be based on presented data, information, and evidence; be expressed through and shaped by the students' concepts and ideas; and be an integral part of the thinking process which will lead them to logical conclusions. This procedure puts a pencil in their hands and an idea in their minds: If they don't do their jobs, a killer will go free to kill again (the

implications and consequences listed in the guidelines). They are reminded that criminology in real life "is not an exact science, and so the cases (from Crime and Puzzlement) deal with probabilities rather than clear-cut certainties, which is the way the police work" (Treat viii).

Immediately prior to showing the first crime scene transparency to the students, they are given the following preliminary instructions which will be used when dealing with all crime scene depictions from Mr. Treat's Crime and Puzzlement book.

1) Take a look at the illustration and note any observations which you can make, based on the premise of being the "first officer at the scene of the crime." Then, put down your pencil.

2) Read the narrative, as it supplies you with vital clues which you will need in your further investigations.

3) Listen to any questions which the teacher asks. These are designed to assist you in your "critical-thinking" approach as you work your way through the crime. Remember the concept of wait-time which has already been discussed with you.

4) Examine the picture more closely as you listen to the questions.

5) Grab your pencil again and jot down your observations, comments, or questions in your notebook for future reference.

Then, I show the students the transparency and, after reminding them that the best weapons a detective possesses are a pen and a piece of paper, we investigate the scene of the crime.

A student (usually a hyperactive student, such as Freddie Fidget, who *hates* to keep in his seat) records the brainstorm on the chalkboard as the students

vocalize their preliminary observations about the crime scene. At this point, no student is allowed to comment about any other student's "stupid ideas." No judgment calls will be tolerated by any student about any other student's observations and there will be no expressions of disapproval from one's peers. At this point in the investigation it is important that all students feel free to share their personal observations in a non-threatening and cooperative learning environment.

As a side note regarding curriculum design and the incorporation of such a course into the secondary school's language arts curriculum, Detective Fiction class is presently an untracked (any student admitted regardless of academic achievements or standardized test scores) required senior level course at the author's place of employment. During the 1996 school year, in the same class, I enjoyed the presence of the class valedictorian, the salutatorian, the three students who finished 125th, 126th, and 127th in their class of 127, students on the five-year plan, and a handful of walking Clearasil commercials who will, in spite of my best attempts, spend their adult lives working in the field of lawn care maintenance or asking people "if they'd like to have fries with that." This situation, and a recent conversion in my school to the eight-block schedule with 85 minute classes, has forced me to develop activities such as these which can interest, entertain, and instruct students regardless of that individual student's level of enthusiasm, classroom achievement or academic ability.

Crime Scene Number One, "The Lunchroom Murder," is reproduced on the following page. This gives the students the data, information, and evidence with which they are expected to solve the crime, the murder of a small-time racketeer named Five-Fingered Fannin.

THE LUNCHROOM MURDER



"On an otherwise uneventful Thursday, police heard a shot in Ernie's Lunchroom, rushed inside, and they found this scene. They identified the body as that of Five-Fingered Fannin, a racketeer. Ernie, who had no helper, had only one fact to tell: The murderer had leaned against the wall while firing at point-blank range. The imprint of his hand is in clear view.

From these facts and an examination of the scene, can you tell who killed Fannin" (Treat 21)?

Students point out the facts after they have discovered them using the process described by the NCTE Committee on Critical Thinking and Language Arts as "a period of suspended judgment which incorporates logical inquiry and problem solving, and leads to an evaluative decision" (Tama 1).

1) "It appears that Ernie was mopping the floor before the murder happened." At this time, I ask Larry Logic how he knows this and he responds, "Ernie, who was mopping the floor because he had no helper, walked back to the cash register. But his footsteps, marked with a 'Y' in the illustration, run into the kitchen. Probably because he saw somebody shoot that Fannin guy."

2) "There is money in the cash register, so robbery is not a motive." At this time, I ask the student to remember this when we investigate "The Murders in the Rue Morgue" as it is an integral part of the plot.

3) "Four people were in the lunchroom, other than Ernie, at the time of the murder. They are 'A,' 'B,' 'C,' and 'D.'" This prompts another student to remark that "'A' probably came into the lunchroom after the other three since his food is barely touched and the other three meals appear to be eaten already."

4) "'B,' 'C,' and 'D,' knew each other." At this point, I shout out "How did you know that?" because we've just had a critical thinking breakthrough. The student, Paula Precious, has made an assumption based upon presented evidence, expressed it in clear terms, and her findings will lead to the eventual solution of the crime. She explains that "the checks for 'B,' 'C,' and 'D,' add up to the total bill shown on the cash register, so one of them probably got stuck paying for three dinners. Maybe the killer?" she asks.

5) "Diner 'A' ran out the kitchen door when the murder happened. Look at the footsteps marked with a 'Z.'"

5A) "We're having chicken soup in the cafeteria today," pipes up Melvin Muddlemind. This represents a minor step backwards, but every class has a Melvin Muddlemind and I would be writing fiction if I eliminated his character or his comments.

6) "Nobody had soup because there aren't any bowls on the table. Just coffee cups, and plates, and silverware."

7) "Whose footprints are 'X'?" asks Jerry the Jock, oblivious to the difference between the brainstorming of ideas and blurting out questions which he hopes someone will answer for him so that he can copy them down.

8) "The killer's footprints are 'X!'" the class shouts.

9) "And the killer is 'C,'" says Mikey Mensa the Scholar Bowl Team poster child.

His statement stops the class cold.

"You're right, but how do you know that?" I ask. The class turns and stares in awe at Mikey.

"Well, we can assume certain things..."

At this point, I turn the class over to the students, where they work together to discover how the correct solution was reached, using their critical thinking skills (without calling them critical thinking skills, because this isn't a dull class in educational theory, it's fun).

By the way, we know that the killer was 'C' because he's the only left-handed diner in the place. Note the position of his coffee mug, the silverware, and the napkin. They were used by a left-handed person. The killer was left-handed because a killer would fire a gun with his good hand, and he would brace himself against the wall of the diner with his right hand, hence the right hand print on the wall.

With some classes, it's expedient to ask questions for the students to consider when investigating Mr. Treat's Crime and Puzzlement scenarios. These questions can guide students to proper critical thinking techniques and prepare them for the literary investigations which follow. For "The Lunchroom Murder," questions have included:

- 1) What had Ernie been doing recently and what evidence is there to support that assumption?
- 2) How many customers had recently been in the restaurant? How do you know that?
- 3) Does Ernie appear to be the victim of a hold-up?
- 4) Do you think any of the diners knew each other? Why or why not?
- 5) Did 'A' enter the restaurant before or after the others? How do you know that?
- 6) How many people appear to have been in the lunchroom at the moment when Fannin was shot?

7) Would footsteps be seen in the illustration if they had not traversed the wet spots on the floor of the lunchroom?

8) Which are Ernie's footsteps?

9) By what means did Ernie leave the lunchroom? Did he walk or did he run?

10) Did Ernie ring up the \$8.75 tab on the cash register before the murder?

11) Where was Ernie at the moment of the shooting?

12) Which footsteps belong to 'A'?

13) How did 'A' leave the lunchroom?

14) Whose footsteps are 'X'?

15) Did the murderer fire the gun with his right or left hand?

16) Who killed Fannin? Was it 'A,' 'B,' 'C,' 'D,' or Ernie?

After a brief summary and student-directed discussion and evaluation of their personal thinking skills involved in the solution of "The Lunchroom Murder," the class is ready to move into a critical investigation of Poe's "The Murders in the Rue Morgue." (Note: By the end of the semester, students invariably improve their "detective abilities" so much that many are able to solve the picture cases from Mr. Treat's series of crimes without any verbal communication or questioning at all.)

The focus of our investigation into "The Murders in the Rue Morgue" is on the first four paragraphs of the short story, which I read aloud to the class while they follow in their texts.

EXTRAORDINARY MURDERS---This morning, about three o'clock, the inhabitants of the Quartier St. Roch were roused from sleep by a succession of terrific shrieks, issuing, apparently, from the fourth story of a house in the Rue Morgue, known to be in the sole occupancy of one Madame L'Espanaye, and her daughter, Mademoiselle Camille L'Espanaye. After some delay, occasioned by a fruitless attempt to procure admission in the usual manner, the gateway was broken in with a crowbar, and eight or ten of the neighbors entered, accompanied by two gendarmes. By this time the cries had ceased; but, as the party rushed up the first flight of stairs, two or more rough voices, in angry contention, were distinguished, and seemed to proceed from the upper part of the house. As the second landing was reached, these sounds, also, had ceased, and every thing remained perfectly quiet. The party arriving at a large back chamber in the fourth story (the door of which, being found locked, with the key inside, was forced open), a spectacle presented itself which struck every one present not less with horror than with astonishment.

The apartment was in the wildest disorder---the furniture broken and thrown about in all directions. There was only one bedstead; and from this the bed had been removed, and thrown into the middle of the floor. On a chair lay a razor, besmeared with blood. On the hearth were two or three long and thick tresses of gray human hair, also dabbled with blood, and seeming to have been pulled out by the roots. Upon the floor were found four Napoleons, an ear-ring of topaz, three large silver spoons, three smaller of metal d'Alger, and two bags containing nearly four thousand francs in gold. The drawers of a bureau, which stood in one corner, were open, and had been, apparently, rifled,

although many articles still remained in them. A small iron safe was discovered under the bed (not under the bedstead). It was open, with the key still in the door. It had no contents beyond a few old letters, and other papers of little consequence.

Of Madame L'Esplanade no traces were here seen; but an unusual quantity of soot being observed in the fireplace, a search was made in the chimney, and (horrible to relate!) the corpse of the daughter, head downward, was dragged therefrom; it having been thus forced up the narrow aperture for a considerable distance. The body was quite warm. Upon examining it, many excoriations were perceived, no doubt occasioned by the violence with which it had been thrust up and disengaged. Upon the face were many severe scratches, and, upon the throat, dark bruises, and deep indentations of finger nails, as if the deceased had been throttled to death.

After a thorough investigation of every portion of the house without farther discovery, the party made its way into a small paved yard in the rear of the building, where lay the corpse of the old lady, with her throat so entirely cut that, upon an attempt to raise her, the head fell off. The body, as well as the head, was fearfully mutilated--the former so much so as scarcely to retain any semblance of humanity.

To this horrible mystery there is not as yet, we believe, the slightest clue (Poe 18 - 20).

Students invariably yell "gross!" at the description of the decapitated old woman, and Mikey Mensa is kind enough to point out to the class that "that's the reason Poe didn't care much for the saccharine sweetness of Longfellow

and the Fireside Poets. Like we talked about in American Literature class last year."

Utilizing the tactics already mentioned in Chapters One, Two, and Three, the class breaks into four cooperative teams. I appoint a "volunteer row Chief of Detectives" to be the spokesperson, and assign a paragraph to each group. Then, I turn the "paragraph investigation squads" loose with a specific time deadline for a sharing of observations, questions, insights, and comments about their assigned paragraphs. During this time period (fifteen minutes), I'm able to walk around the room, listening and pondering what the students are discussing (and ensuring that the "wait-time" principles enumerated by Mary Budd Rowe in 1972, expanded upon by Dr. Robert J. Stahl in 1994, and explained in Chapter Two of this paper, are being followed by all members of the group).

Of course, there are the usual interruptions during the brainstorming session.

"What's a gendarme?" asks Billy Bob Beaumont, a fifth-generation farm boy from across the river, who pronounces it *jeen-dar-mee*.

I introduce Billy Bob to Mr. Webster's big red book on the little black bookstand, and he reports to the "paragraph one row captain" that it's a French street cop.

"What are the four Napoleons mentioned in the second paragraph?" asks Ariel.

I give her the same response about the dictionary. She minces to the front of the classroom, looks up the word *Napoleon* in the dictionary and reports to the "paragraph two row captain" that it's some dead French guy, an emperor.

"My Gosh, there were two dead ladies and four dead emperors in the apartment? And the cops didn't notice!"

At this point, I suggest that there may be more definitions for the word *Napoleon* and suggest that she should be a 'good little detective' and take a closer look. She dutifully peruses the dictionary and returns with the news that it's a cream-filled French puff pastry. I ask her, "Why would there be four cream-filled puff pastries on the floor of a double homicide?"

A revelation of Biblical proportions enters her mind and a gleam comes to her eyes. "Maybe it's a clue!" she shouts happily. "And I found it! I'll bet the dead ladies were hungry and fought over the pastries. Maybe the old woman was starving her daughter so that she wouldn't get fat. So she could stuff her up the chimney. Or maybe the murderer was going to eat them."

"The ladies?"

"No, silly. The pastries, the Napoleons," she continues. "This proves that the killer has a sweet tooth and killed them for their pastries."

At this point, Ariel's intellectual equal (a boy nicknamed Prince Charles) shouts out that "if the killer touched 'em, there's fingerprints on 'em!"

"Don't be stupid," Ariel counters. "You can't get fingerprints off a piece of French puff pastry."

"Matlock could."

After warning Ariel about making judgment calls about other people's ideas, the "paragraph two row captain" looks up at me with a look in her eyes which pleads, "put me in another row." I remind her that part of the educational process which prepares our students to become critically-thinking citizens for America's 21st century, requires that students be flexible, respond to change

quickly, deal with complexity and keep on task, and work with people of different personalities, races, sexes, and ability levels.

The "paragraph two row captain" states that she'll remember to thank me later. "There's another definition for Napoleon, isn't there?" she asks. I point to the dictionary, and eventually, the students discover that a Napoleon is a coin worth about 20 francs.

"But wait," announces the Scholar Bowl Quiz Kid. "That's not much money considering that Poe says there were 4,000 francs in gold found in the two bags found in the room."

"So robbery's not a motive," announces the girl who noticed the money in the cash register at Ernie's Lunchroom.

Mr. Bright's Detective Fiction class is back on track.

After fifteen minutes (or however long it takes me to grab another cup of coffee from the teacher's lounge), we're ready for the row reports.

I reread the last sentence aloud to the class. "To this horrible mystery, there is not as yet, we believe, the slightest clue."

"That," I announce, "is a gauntlet thrown down at your feet by that magnificent madman, Mr. Poe. Now it's up to all of you to stop monkeying around and figure out whodunit."

Row One/First Paragraph Report (*italics indicate the critical thinking "little leaps" voiced by squad members which show that the students are taking charge of their own thinking by analyzing, interpreting, inferring, explaining, and evaluating information*):

- 1) The time was 3 A.M.

2) A number of people in the neighborhood were awakened by shrieks from the fourth floor of the L'Esplanade house.

3) Eight neighbors and two French cops had to force their way onto the premises with a crowbar. (*"Aha! The front gate was locked."*)

4) The screams stopped as they entered the gateway, but two or more rough voices continued as they ran up the first flight of stairs. (*"The killer or killers were still on the premises at that time even though the ladies had been killed."*)

5) The rough voices ceased as the group made their way up the second flight of stairs. Everything was then quiet. (*"The killers had left the premises by that time."*)

6) Nothing was in any room except for the back chamber on the fourth floor. (*"That sounds kind of weird to me. Maybe the ladies were crazy." "Or reclusive like Emily Dickinson."*)

7) The door had to be forced open because it was locked. (*"The killer or killers escaped from the house by some means other than the steps and the front door." "Or maybe they were hiding somewhere in the house." "Regardless, the people didn't see the killers leave the building, and if it turns out that they had escaped, doesn't it sound logical that they didn't escape through the front door?"*)

8) The shouts were described as being terrific shrieks by Mr. Poe. (*"Somebody, probably one of the two women, was in trouble or in pain." "Trouble, nothing. They were being killed!" "Wouldn't you scream if you were being strangled or having your throat slit?"*)

Row Two/Second Paragraph Report:

1) Furniture was broken and thrown about in all directions. (*"A violent struggle took place. Maybe the violence had something to do with the screams." "You mean the violence caused the screams." "Maybe the screams caused the violence."*)

2) The bed was thrown on the floor and there was only one bedstead. (*"You mean the ladies slept together? Maybe they were lesbians." "Poe couldn't have written about lesbianism in the 1800's, it wasn't invented yet." "Poe wouldn't have been able to publish anything about lesbianism in the 1800's. It wouldn't have been allowed." "Maybe the killers were looking for something." "Anyway, it's another indication of the violence used in the double murders."*)

3) A bloody razor is on the chair. (*At this point, the students realize that the bloody razor is probably the murder weapon used in the killing of the old woman whose head was severed from her body, and that it is not one of the "Epilady" leg-shaving razors or a Braun floating head electric razor. "It's probably a straight razor like my Grandpa used. It flips out and it's the sharpest thing I ever saw." "The killer must have been really strong to cut off somebody's head with a razor. There's bones in the way." "Do you know that from experience?"*)

4) Two or three long tresses of gray human hair, dabbled with blood, were found on the hearth.

5) These tresses of hair were apparently pulled out by the roots. (*"What's a tress?" "It's like a braid of hair, like a ponytail or pigtail, according to the dictionary." "Wait a minute. It's hard to pull out even a*

couple of strands of hair from a head. Can you imagine how hard it would be to yank these out by the roots?" asks a pony-tailed girl. "The hair-pulling probably accounted for the screams." "The old woman would scream if her hair was being pulled out by the roots and the young woman would scream if she saw such a thing, so the killer strangled her to shut her up.")

6) The safe was empty except for a few old letters and papers.

7) The drawers of a bureau were apparently rifled.

8) Money, jewelry, and other valuables were still in the locked room.

("Robbery wasn't a motive in the murder of the two women.")

Row Three/Third Paragraph Report:

1) A lot of soot was found in the fireplace. *("This caused the onlookers to search the chimney where they found the body of the young dead girl.")*

2) The daughter's body was upside down in the chimney, and was forced up the narrow opening for what Poe called a considerable distance. *("The killers were really strong." "How could anybody be strong enough to pull tresses of hair out by the roots, pick up a young woman and flip her over, and stuff her upside down in a chimney so far that they had trouble getting her out?" "Maybe they were on drugs?" "Maybe they were crazy." "Maybe they were circus strong men or professional wrestlers." "But why stick her up a chimney?" "Maybe the killer was trying to prevent someone from discovering her body?")*

3) The body of the young woman was still warm. *("The young woman had been killed recently, and since it was probably after the mother's death,*

the killers made a quick getaway to avoid being seen by the neighbors as they rushed into the house.")

4) Excoriations were perceived on the body. (*"What's an excoriation?" "Hello, Mr. Webster." "Abrasions, cuts, or chafing where the skin is peeled off the flesh. Yuck." "More violence. Big time violence."*)

5) Many severe scratches were seen on the face and dark bruises appeared on the throat of the dead girl. (*"More violence and lots of strength." "Almost inhuman."*)

6) Fingernail indentations were on the throat. (*"The young girl was strangled, and the killer was a man because of his strength." "Only humans have fingernails." "Animals have claws." Occasionally, a student will point out that "monkeys have fingernails, too, and that there are some mighty big monkeys in this world. You ever been to the St. Louis Zoo to see Phil the Gorilla?"*)

Row Four/Fourth Paragraph Report:

1) The old woman was found in a small paved yard in the rear of the building. (*"She must have been thrown out the window." "That's probably how the killers escaped, too."*)

There are many other aspects of Poe's "The Murders in the Rue Morgue" which lend themselves well to excursions into the realm of critical reading. Inspector Dupin's subsequent visit to the scene of the crime and the information he provides about the window, the shutters, a broken nail and a lightning rod are several of these (Poe 31 -33).

Another involves the testimonies of the witnesses concerning the two voices which were heard in angry contention at the time of the murders. The testimony appears in the story immediately after the account of the extraordinary murders (Poe 28 - 30). Individual students can be assigned to read the individual testimonies (that is, become an expert on the testimonies using critical thinking skills) and report to the class what they discover about their witness's testimony (after a warning that these are witnesses and not necessarily suspects). As a side note regarding homework in my class of Detective Fiction: students realize that if they are assigned to accomplish a certain task, such as the investigation of an individual testimony for an in-class report, they are expected to produce that report at the next meeting (both orally and in print format). This fulfills a daily homework grade for that student until every student in the class has been assigned to complete a similar task. While I haven't found any past research on the subject to validate this approach to literary studies and homework, two decades of students have unanimously endorsed this approach over the eternally prevalent instructions from the teacher that "everybody should read the story and write out their answers to questions one through ten at the end of the story, in complete sentences." My approach cuts down on paperwork for the teacher, cuts down on busywork for the students (which they appreciate), sharpens their verbal communication skills while making them assume responsibility for an individualized project, and leads to interesting classroom discussions and even an opportunity for students to over-achieve. In the past, some students have role-played their testimonies in front of the class, drawn pictures, made

posters, and some have even written poems based on their assignments and individual research.

There are eleven witnesses to the double homicide in "The Murders in the Rue Morgue": Pauline Dubourg; Pierre Moreau; Isidore Muset; Henri Duval; --- Odenheimer; Jules Mignaud; Adolphe LeBon; William Bird; Alfonzo Garco; Paul Dumas; and Alexander Etienne.

Students report and someone records the salient points of testimony on the blackboard, a student who had no written homework assignment. This sharpens the recorder's critical listening skills while demanding higher level thinking skills through outlining and summarizing. At the end of the exercise, the entire class is invited to evaluate the arguments (testimonies) and to compare and contrast one testimony with another.

Pauline Dubourg, the laundress---testified that the women lived only in the fourth story of the house, seemed to be on good terms with each other, and had lots of money in the apartment.

Pierre Moreau, the tobacconist---declared that the women had been living in their house alone for six years, had money, and lived a secluded life on the fourth floor of the house with very few visitors. He also stated that the windows of the house were always closed, with the exception of the back room's large windows which overlooked the patio.

Isidore Muset, the gendarme---was called to the scene early in the morning and stated that the screams seemed to be of someone in great agony. He distinctly heard two voices in loud and angry contention after the screams ceased. The first voice, a gruff one, was that of a Frenchman, because he understood French words the owner of the voice used. The other voice was

much shriller and very strange. He couldn't tell if the strange second voice was that of a man or a woman, but he believed that the language of the second voice was Spanish.

Henri Duval, a neighbor---corroborated M. Muset's testimony in general, but thinks that the shrill voice sounded like that of an Italian (although not personally acquainted with the Italian language). It was definitely not that of a Frenchman. Duval stated that he could not be sure if the brief and unequal sounds of the second voice were those of a man or a woman, but was certain that the voice did not belong to either of the dead victims.

---Odenheimer, a restaurateur---doesn't speak French, but corroborated the previous testimonies through an interpreter. However, he was certain that the second shrill voice belonged to a Frenchman.

Jules Mignaud, the banker---sent a clerk to the home with lots of money, 4,000 pounds, from an account which the old woman had established eight years previously.

Adolphe LeBon---delivered the money from the bank.

William Bird, the tailor---noted that the gruff voice was French (as he recognized some of the words), but the loud shrill voice was not the voice of an Englishman. Bird thought that it sounded German, but he himself does not understand the German language. He thought that it could be a frantic woman's voice because of the shrill nature of it. He agreed with the previous witnesses that the time between the hearing of the voices in contention and the breaking down of the bedroom door was between three and five minutes.

Alfonzo Garco, the undertaker---testified that he is a resident of Spain and that he heard the angry voices in contention. He testified that the gruff

voice was that of a Frenchman as he recognized the words 'sacre' and 'Mon Dieu.' He thought that the second voice was that of a Russian, although he speaks Italian and has never conversed with a Russian. Also testified that the body of the young woman was so firmly entrenched that it took four or five people to withdraw her corpse from the chimney.

Paul Dumas, the physician---deposed that he was called to view the bodies at daybreak. The body of the young woman was mutilated and the throat was greatly chafed. Poe wrote that no woman could have inflicted the blows with any weapon. The tongue had been partially bitten through. The throat of the old woman had been cut with some very sharp instrument, causing the head to be separated from the body.

Alexander Etienne, the surgeon---corroborated the testimony of M. Dumas, the physician.

Student discussion of the testimonies has produced some of the following comments:

"Because of the testimonies, the reader knows that there is something strange about the description of the owners' voices. I mean, every witness appears to have heard French voices out of the first speaker's mouth, the gruff voice. But nobody could tell for sure what language the shrill voice was speaking."

"Guesses as to the language of the second voice were made of Italian, Spanish, French, and German, but no witness spoke the languages which he thought he heard. For example, the German-speaking man, Herr Odenheimer, thought that the shrill voice was French, but he had to have an interpreter

during his questioning. And, if it was French, why didn't the French-speaking folks recognize it as being French?"

As the students read through the story, they are requested to make observations about the plot line. Other comments which the students have made during the reading of Poe's "The Murders in the Rue Morgue" (which were delivered orally in class) include:

"The police arrested the clerk, Le Bon, because he was the last person to see the two women alive. That was after he delivered the 4,000 francs to them. This just shows you how stupid the cops were. Nothing was stolen from the joint, but the cops still think that the bank clerk suddenly went crazy, sliced off a woman's head with a straight razor, stuffed a young lady up into a chimney, and leaped out of a fourth-floor window without taking any of the money. Go figure."

"The killers didn't get out the front door or out the front gate. They had to get out the locked windows at the back of the house. One of the testimonies swore that the back windows had been seen opened, but the cops thought they were locked and nailed shut because they looked like they were locked and nailed shut. I knew there had to be something screwy about the windows. That was the only way the killers could have escaped."

"The doctor's report indicates that no woman could have inflicted the blows with any weapon. The police think that it's either Le Bon who went crazy or a guy who escaped from a lunatic asylum, so we know that's the wrong solution or there wouldn't be eight more pages of story after the cop's report."

"Poe didn't like cops, did he? I mean, he has Dupin say that 'the facility with which I have arrived at the solution of this mystery is in direct ratio of its insolubility in the eyes of the police.'"

"Poe didn't like women. Here, two more women get brutally murdered. If they're not being buried alive, or hit in the head with a hatchet, they're being murdered with a straight razor or stuffed up a chimney."

"Dupin, the detective, made the same observations and came to the same conclusions we did the other day. No one was discovered upstairs...no means of egress without the notice of the parties ascending...the frightful mutilations of the two bodies."

"That was a real dirty trick that Poe pulled on us by keeping information from us as we were reading the story. The bit about the animal hair that Dupin took from the old lady's hand that the cops didn't notice. Not to mention Dupin's discovery of the piece of ribbon at the foot of the lightning rod, which Dupin deduced could only belong to a French sailor on a Maltese sailing vessel who might own an orangutan. Give me a break. That's as bad as the stupid mind-reading act Dupin pulled at the beginning of the story which Poe threw in there to make us realize how smart he was."

The class wraps up their discussion of the "The Murders in the Rue Morgue" with a student-directed summation of the story and an evaluation of the critical thinking process as it applies to understanding the first locked room mystery in the history of detective literature. At this point, students inevitably indicate that their "mode of thinking" has changed. They solved *whodunit* as part of a team and feel pretty good about themselves...particularly when they feel that they have matched wits with that eccentric genius, Edgar Allan Poe.

As the class is about to embark upon a similar exercise regarding cryptography and Poe's classic story, "The Gold Bug," there's always one student who sums up the experience with "The Murders in the Rue Morgue" in a memorable way.

"I knew it was a big monkey who did the killing right from the beginning of the story. Look at page 26 of our textbook."

There, on page 26, is an Aubrey Beardsley illustration of a bejewelled eight-foot tall orangutan carting a dead young girl towards a fireplace.

Perhaps the editors of our textbook should consider critical thinking skills when they choose illustrations for their stories.

By the end of this introduction to the study of detective literature (which occupies two or three 85-minute class periods), the students have been exposed to the basic specific desirable abilities America needs as the country enters the 21st century (as enumerated by the U. S. Departments of Labor, Education, and Commerce, and listed in Chapter One), and they will have been exposed to the concepts and challenges of critical thinking (roughly described as the intellectually disciplined process of actively and skillfully analyzing, synthesizing, and evaluating information gathered from observation...and then arriving at logical conclusions based on the evidence presented). Even after the brief Edgar Allan Poe unit, students often comment that they are "studying" literature in a different way than they've ever been asked to study before. When questioned, they seem to echo Dr. Richard Paul's definition of critical thinking, that they are finally thinking about their thinking while they are thinking (a definition cited in Chapter One).

Edgar Allan Poe invented it, but Sir Arthur Conan Doyle made the detective story popular with his creation, Sherlock Holmes, and his sidekick, Dr. John Watson. The Holmes and Watson partnership has been likened more than once as a companion pair to Don Quixote and Sancho Panza, "a contrast and concert capable of occupying our imaginations apart from the tales in which the two figure" (Barzun, qtd. in Winks 153).

"So, with Sherlock Holmes, the ball---the original nucleus deposited by Edgar Allan Poe nearly forty years earlier---was at last set rolling. As it went, it swelled into a vast mass---it set off others---it became a spate---a torrent---an avalanche of mystery fiction. It is impossible to keep track of all the detective stories produced today" (Sayers 9 - 44).

The effect of the appearance of Sherlock Holmes on the reading public was electric. "Conan Doyle took up the Poe formula and galvanized it into life and popularity. He cut out the elaborate psychological introductions, or restated them in crisp dialogue. He brought into prominence what Poe had only lightly touched upon---the deduction of staggering conclusions from trifling indications in the Dumas-Cooper-Gaboriau manner. He was sparkling, surprising, and short" (Winks 70).

As W. H. Auden explained, the "job of detective is to restore the state of grace in which the aesthetic and the ethical are as one. Since the murderer who caused their disjunction is the aesthetically defiant individual, his opponent, the detective, must be either the official representative of the ethical or the exceptional individual who is himself in a state of grace. Holmes is the exceptional individual who is in a state of grace because he is a genius in whom scientific curiosity is raised to the status of a heroic passion. He is erudite but

his knowledge is absolutely specialized, he is in all matters outside his field as helpless as a child, and he pays the price for his scientific detachment by being the victim of melancholia which attacks him whenever he is unoccupied with a case. He is a completely satisfactory detective" (qtd. in Winks 21).

Holmes made his debut appearance in A Study in Scarlet in 1887 and was "flung like a bombshell into the field of detective fiction" (Sayers, qtd. in Winks 69). Since then, international organizations such as the Baker Street Irregulars have been dedicated to studying the Canon, the 660,382 authentic words concerning the life and times of Sherlock Holmes, the Great Detective, penned by Sir Arthur Conan Doyle (Ball 13). Though many later sleuths may seem "eminently unSherlockian in appearance, methods, and personality, they all exhibit the primary qualities of the Great Detective" (Grella, qtd. in Winks 90).

One of the most popular Sherlock Holmes stories is "The Adventure of the Speckled Band," which was published in The Strand magazine in February of 1892. "If you ask the ordinary reader which of the Sherlock Holmes stories he likes best, the chances are that he will say: 'The Speckled Band.' The vision of the snake coming down the bell pull is the utmost thrill he expects from detection" (Barzun, qtd. in Winks 151).

But, oops. We're getting ahead of ourselves.

Contextualizing by the students indicates that many of them have heard about Sherlock Holmes from having read some of his stories in other classes and on their own, some have seen the old black-and-white Basil Rathbone and Nigel Bruce movies on AMC, and two students have parents who "are addicted to that PBS series with Jeremy Brett."

Contextualizing using the internet reveals that the words "Sherlock Holmes" bring up more than 2,000 100 percent hits on one search engine, including a Sherlockian homepage at <http://watserv1.uwaterloo.ca/~credmond/sh.html>, a Usenet newsgroup at alt.fan.holmes, a mailing list at HOUNDS-L, and listings for such sites as ClueLass (a mystery newsletter), Genre Fiction---Mystery and Suspense, The Mysterious Homepage, the Mystery Zone, Tangled-Web, and 221-B Baker Street. Because of the plethora of information on the world's most famous consulting detective, it's worth an entire day to let students chat about all of the material which they find and bring in about Sherlock Holmes and his creator, Sir Arthur Conan Doyle. As a point of interest, many of these simple statements turned into fascinating individualized projects, not just for Detective Fiction class, but across the curriculum.

"It says here that more people from all over the world recognize the Holmes profile over that of Mickey Mouse."

"Holmes is the fictional character more often portrayed in the history of movies than any other. More than 200 films from 1900 - 1994. More than Dracula."

"It says here that William Gillette, who wrote the play Sherlock Holmes, invented the deerstalker cap as a costume accessory and picked the weird pipe as a stage bit because it was the only one he could balance in his mouth while he was delivering the lines."

"You can write to Sherlock Holmes at 221-B Baker Street in London and you'll get a response from his personal secretary. I'm going to ask Holmes to help me find my fountain pen." Incidentally, the student did so and received a nice note on Baker Street letterhead, signed by Mr. Holmes's personal

secretary, and informing her that Holmes has retired to his estate in Northern England and cannot accept any more cases.

"Holmes was addicted to cocaine and morphine, did you know that? Why do you think Doyle incorporated that element into the Canon?"

Before the discussion of "The Adventure of the Speckled Band," I assign some students to specifically investigate Victorian England's connection with India, as it is an integral part of the story's plot line. I ask others to investigate the derivation of the word, 'gypsy,' as gypsies are important red herrings in the story. Students are usually surprised to discover that the word gypsy is a racist term to describe an Egyptian (at the time, stereotyped as thieves and robbers...as in "he gypped me in that deal."). After their experiences with the Poe unit, students seem a little more eager to pursue their "learning" (and critical thinking skills) in detective literature.

Then, we get into the story itself by viewing the BBC video of "The Adventure of the Speckled Band," with strategic stopping points for discussion along the way.

Perhaps as a result of their experiences with the Poe unit, students invariably solve this adventure before the end of the video (which occupies two full class periods) by using their critical thinking skills, turning up and mulling over evidence, and reaching a satisfactory, surprising, and complicated conclusion: the killer of Helen Stoner was not a gypsy wearing a speckled band and was not a spotted leopard (an Indian animal which the stepfather, Dr. Grimesby Roylott, was wont to have around) and was not a gaily colored scarf which was used to strangle the victims.

The story begins with Helen Stoner contacting Holmes about her fears.

During the course of the video, students notice details which they notate in their journals and share with the class in the manner applied to Poe's story earlier, usually at fifteen minute intervals which correspond to the normal commercial breaks on a television show.

1) Dr. Roylott is the stepfather who keeps his dead wife's money only as long as the twin girls, Helen and Julia, remain unmarried and live on the premises of the family's estate at Stoke Moran. Then he will be destitute. (*"That's a great motive for murder."*)

2) Dr. Roylott is an extremely violent man during the emotionally stifling and proper era known as Victorian England. He explodes into "violence of temper approaching to mania," according to Doyle (Gilbert 146). Indeed, he later threatens Sherlock Holmes in an impressive show of violence by bending a fire iron in half as a warning of what will happen to Holmes if he doesn't butt out of the investigation. Holmes bends the fire iron almost back into shape.

3) Dr. Roylott allows wandering gypsies to roam his property at will and sometimes runs off with them for weeks on end. (*"He's a wild man."*)

4) Dr. Roylott has a penchant for Indian animals, including a cheetah and a ferocious baboon, and lets them roam the property at will. (*"Who knows what other animals might be on the property?"*)

5) Several days before her wedding, Julia comes to Helen's room saying how frightened she is. She keeps hearing a low whistling sound in the middle of the night which is followed by a clanging sound, a metallic thud as if a mass of metal fell.

6) That evening, Julia dies.

At this point, I stop the tape and distribute to the students Mr. Doyle's description of the death of Julia Stoner, which we will investigate in much the same manner as we investigated Poe's paragraphs concerning the extraordinary murders of Madame and Mademoiselle L'Esplanaye.

Suddenly, amid the hubbub of the gale, there burst forth the wild scream of a terrified woman. I knew that it was my sister's voice. I sprang from my bed, wrapped a shawl round me, and rushed into the corridor. As I opened my door I seemed to hear a low whistle, such as my sister described, and a few moments later a clanging sound, as if a mass of metal had fallen. As I ran down the passage my sister's door was unlocked, and revolved slowly upon its hinges. I stared at it horror-stricken, not knowing what was about to issue from it. By the light of the corridor-lamp I saw my sister appear at the opening, her face blanched with terror, her hands groping for help, her whole figure swaying to and fro like that of a drunkard. I ran to her and threw my arms round her, but at that moment her knees seemed to give way and she fell to the ground.

She writhed as one who is in terrible pain, and her limbs were dreadfully convulsed. At first I thought that she had not recognized me, but as I bent over her, she suddenly shrieked out, in a voice which I shall never forget: 'Oh, my God! Helen! It was the band! The speckled band!' There was something else which she would fain have said, and she stabbed with her finger into the air in the direction of the doctor's room, but a fresh convulsion seized her and choked her words. I rushed out, calling loudly for my step-father, and I met him hastening from his room in his dressing-gown. When he reached my sister's side she was unconscious, and though he poured brandy down her throat

and sent for medical help from the village, all efforts were in vain, for she slowly sank and died without having recovered her consciousness. Such was the dreadful end of my beloved sister" (Doyle, qtd. in Schwartz 148 - 149).

Students record their findings, most of which center on the students' dislike for Dr. Roylott, the ominous low whistle and the metallic clang, Julia's convulsions, dying spasms, and method of death, the stabbing of the finger in the direction of the doctor's room, and Julia's last words about the speckled band. Occasionally, they remark about similarities of Sir Arthur Conan Doyle's story and those of Edgar Allan Poe, such as the setting, the gloomy atmosphere, and the horrific crime. In other words, they are starting to make connections, seeing similarities in this particular literary genre, and noticing and investigating the words with which an author communicates his or her thoughts. To paraphrase Emerson's observation about critical reading mentioned in Chapter Three, the students are realizing that, with their new outlook on thinking, an author's words can become luminous with manifold allusion and that every sentence can become doubly significant...and that the study of literature can be intellectually challenging, stimulating, and fun.

"Was your sister dressed?"

"No, she was in her night-dress. In her right hand was found the charred stump of a match, and in her left a match-box."

"And what conclusions did the coroner come to?"

He investigated the case with great care, for Dr. Roylott's conduct had long been notorious in the county, but was

unable to find any satisfactory cause of death. My evidence showed that the door had been fastened upon the inner side, and the windows were blocked by old-fashioned shutters with broad iron bars, which were secured every night. The walls were carefully sounded, and were shown to be quite solid all round, and the flooring was also thoroughly examined, with the same result. The chimney is wide, but is barred up by four large staples. It is certain, therefore, that my sister was quite alone when she met her end. Besides, there were no marks of violence upon her."

"How about poison?"

The doctors examined her for it, but without success."

"What do you think that this unfortunate lady died of, then?"

"It is my belief that she died of pure fear and nervous shock, though what it was that frightened her I cannot imagine" (Doyle, qtd. in Schwartz 149).

During the watching of the video, it is revealed that soon Helen Stoner is to be married to a Mr. Armitage. When Dr. Roylott hears about it, he orders Helen to start sleeping in Julia's old room, giving her the excuse that he needs to have workmen repair the foundation in her room.

And, last night, Helen relates to Sherlock Holmes that she heard the same whistle and the metallic sound as she heard on the night of her sister's death. These circumstances precipitated her visit to 221-B Baker Street and a plea for assistance from the world's first and foremost consulting detective.

While Dr. Roylott is away from the estate, Holmes, Watson, and Miss Stoner investigate Julia's death chamber. Holmes notices an unused and non-functioning bell pull next to the bed which is supposedly connected to the housekeeper's rooms. Watson yanks on the bell pull and nothing happens.

Holmes notices the newly installed ventilation ductwork which directly connects Dr. Roylott's room with Julia Stoner's room and remarks that the bed is permanently attached to the floor and cannot be moved. There are "dummy bell ropes and ventilators which do not ventilate" (Doyle, qtd. in Schwartz 156).

A visit to Dr. Roylott's room next door reveals a little bowl of milk, a leash with a small noose at the end, and strange scratch marks and foot impressions on a chair's cushion which Holmes investigates with great diligence.

Our heroes, Holmes and his beloved inferior, Watson, set up an elaborate plan by which Ms. Stoner can signal them and leave the death room. Then, that evening, they sneak into her room, spring into action, and solve the case. When Holmes hears the low whistle, he turns up a gas light, makes a few swishes in the air with his cane, and sends the killer back from whence it came...Dr. Roylott's room.

The killer? A swamp adder, the most deadly snake in India, which Dr. Roylott trained to go down the ventilation ductwork, descend the bell-rope, do its dirty work, and return to its room for a treat of milk when it hears him whistle. The metallic clang was the sound of the snake's cage door being slammed, where Dr. Roylott would await another night to perpetrate murder on his other step-daughter. After being dispatched by Sherlock Holmes, the frightened snake bites Dr. Roylott, who dies within seconds. Another case solved by the first and greatest consulting detective in literary history.

As part of the course of study in detective fiction, students are continually bombarded with mind games, logic games, word puzzles, and other exercises which are designed to stimulate their "little grey cells," a term used by Agatha

Christie's Belgian detective, Hercule Poirot, to describe his critical thinking process (with which he solved innumerable cases for Queen and country). By the end of this semester course, students invariably comment on their "new" abilities *to read a piece of literature and to know and understand more about it and its context and everything* (a quote from a course evaluation by a senior last semester).

The title of "America's Sherlock Holmes" goes to Ellery Queen, the gentleman detective whose apartment on West 87th Street, New York, is as well known as Sherlock Holmes's flat in Baker Street, London ("Queen" 1). Ellery Queen, actually a collaborative team composed of two writers, Frederic Dannay and Manfred B. Lee, was the author of twenty-nine novels (four novels under the pseudonym of Barnaby Ross), five books of short stories, two books of radio stories, eight juvenile mysteries, and two volumes of detective bibliography. Dannay and Lee, under the sobriquet of Ellery Queen, also functioned as the editor of many books of short stories written by others as well as being the editors of the popular Ellery Queen's Mystery Magazine. Manfred Lee died in 1971 and Frederic Dannay died in 1982, but not before enabling Ellery Queen to become "the single most influential figure in American detective circles" (Gilbert 262).

The collaboration between the two cousins, Lee and Dannay (known as Manny and Danny to their many fans), commenced in 1929 when they entered a detective story contest sponsored by McClure's Magazine, and won it with The Roman Hat Mystery, a mystery novel which enjoyed immediate popular success. This was an obvious pointer, and Dannay and Lee gave up the

business careers which they had planned and turned to writing, becoming the proud parents of "the logical successor to Sherlock Holmes" ("Queen" 4).

"Queen is King when it comes to air-tight mysteries that combine in his inimitable and cunning way those elements of ingenuity, surprise, and original setting that make possible deductive solutions that are always fair to the reader and strictly in accordance with the science of streamlined murder" ("Queen" 5).

"The Adventure of the Telltale Bottle," first published in Ellery Queen's short story anthology, Calendar of Crime (January 1952), is one of the more popular Ellery Queen stories and is an adventure which lends itself well to the incorporation of critical thinking skills into the language arts curriculum. In true Ellery Queen fashion, this story combines elements of murder, humor, intrigue, and extraordinary deduction.

During their study of this story, students are asked to keep track of all of the characters, summarize the plot after each short section, keep track of all settings and locations, and notate questions which come up in their minds as they read the story.

The season is Thanksgiving, and Ellery Queen, his father and "Watson" (NYPD Homicide Investigator Richard Queen), and Ellery's love interest, Nikki Porter, are distributing food baskets to the needy families on New York's lower East Side. One of the food basket recipients, Mother Carey, has apparently moved from her tiny apartment on Orchard Street and has left no forwarding address. Nikki remembers that Mother Carey mentioned that she was a scrubwoman who cleaned floors at Fouchet's Restaurant, so Ellery suggests that they go to the restaurant to find out her new address and to enjoy

a fine French meal (for which Clothilde, the cashier, attempts to overcharge them).

During the meal, Ellery impulsively orders a bottle of expensive and rare Chateau d'Yquem wine from Pierre, the waiter, who informs him that Fouchet's doesn't stock such an expensive wine in the cellar. As Ellery's party is preparing to leave, Pierre surreptitiously drops a napkin into Ellery's lap. Ellery waits to open it until they are in a taxicab outside the restaurant. The napkin contains a large quantity of powdery substance, a white crystalline powder: cocaine.

Ellery and Nikki drop off their last food basket at Mother Carey's new apartment on Henry Street. While they're in the taxicab, they discuss Pierre's drug-drop at Fouchet's and the cigar smoker they deduced was now living with Mother Carey at her larger apartment. The cab driver joins in their spirited discussion.

Later that night, Ellery chats with his father, the police inspector, and learns that Fouchet's Restaurant was mixed up in a drug-peddling incident three years earlier. Frank Carey, a waiter, was implicated in the felony and was eventually jailed for the crime, all the while pleading his innocence and insisting that he was framed. Before entering prison, he promised to escape jail, return to Fouchet's, and gather evidence which will clear his name.

Students are quick to point out that evidence from the story suggests that Mr. Carey is hiding out in Mother Carey's new apartment, which is why she needed the larger apartment. It is also discovered that Mr. Carey has recently made good on his promise and has escaped. Ellery and Nikki go over to Mother Carey's apartment and deduce that Mr. Carey isn't in the apartment

right now because he's gone over to Fouchet's to search for evidence. Ellery tells his father to go arrest Pierre at Fouchet's for drug peddling, while he continues to investigate Mother Carey's enlarged premises and interrogate her for information about her errant husband.

It takes a few leading questions to prompt the students to discover some irregularities about the drug drop which will lead to the eventual solution of the case. I write a question on the blackboard: "What was suspicious about the drug drop at Fouchet's?" Students are asked to reread the section of the story which takes place at Fouchet's Restaurant, reflect on the story, and write down one observation for imminent sharing with the class.

Students reflect, write down their statements with background evidence from the story, and point out:

"It says here that when Ellery asked for the wine, the dreary look on the waiter's face remarkably vanished. That proves there's something significant about Ellery's wine request."

"Pierre said they don't have that expensive of a wine in their cellars."

"The story says that Pierre gave the impression that something significant happened when Ellery asked for the wine."

"That's it! Chateau d'Yquem is a code word for a drug drop and Pierre's implicated in it big time."

"But Ellery never paid for the cocaine."

"Clothilde tried to overcharge Ellery ten bucks at the restaurant. Maybe she---"

"Ten bucks for what the story calls a huge amount of cocaine?"

"That means that Clothilde is a red herring."

"Which means that there's somebody behind Pierre who is using him for the passer, the boss."

"How do you know that?"

"Ellery never paid for the cocaine and had never been at the restaurant before. Why would Pierre drop a bag of cocaine onto the lap of a total stranger and not get money? He must have believed that Ellery had already paid for the cocaine before he came into the restaurant."

At this moment in the story, Sergeant Velie (the dumb cop element which Poe invented in "The Murders in the Rue Morgue") arrives at the Carey apartment and explains what happened when they went to arrest Pierre:

We watch him (Carey) unlock the door, go in, and wham! he damn' near falls over this Pierre. So the feeble-minded old cluck bends down and takes the knife out of Pierre's chest and stands there in a trance lookin' at it (Queen, qtd. in Schwartz 150).

So, Pierre is dead and Frank Carey's at the scene of the crime holding the murder weapon in his hand. Ellery and the police summon Mr. Fouchet and Clothilde to the restaurant where they are interrogated. Students are asked to record their thoughts about the testimonies of these two individuals.

"Carey didn't do it. And can you imagine what he's going through right now? He says he was framed for drug peddling, and now he's a suspect in a murder."

"Mr. Fouchet isn't involved. He was cleared the first time and still owes lots of money to the bank."

"Clothilde wasn't involved in the drug thing. She had a lot of money in her savings account because she overcharged customers."

Then it's time to hit them with the big question. "So, who killed Pierre and who is the mastermind behind the drug-selling ring at Fouchet's? Who was present when Ellery was talking about Pierre dropping off the drugs? Who was present when Ellery and Nikki talked about Mother Carey's recent move into her new digs on Henry Street? Who overheard Ellery mention to Nikki that the cops were going to bust Pierre that night? Who could have made it over to Fouchet's immediately after discovering that Ellery had told his father to go and arrest Pierre?"

"The cab driver!"

After we discuss the story, we go back through the story and make a note of the clues from the story which would point to the cab-driver as the killer.

Meaningful discussions, worthwhile in-class exercises, helpful study guides, and opportunities for students to sharpen their individual critical thinking skills while making them responsible for specific learning tasks, contribute to the success of this critically-thinking approach to a literary study of detective fiction at the secondary level. All of the work during this one semester course in detective fiction leads to a culminating project as a "final examination," during which they will be asked to demonstrate their abilities to think critically on a subject of personal interest. While requiring a bit more of the "personal touch" than most teachers wish to inject into final examinations, this individualized approach gives the students an opportunity to investigate something which they *wish* to investigate (even in the final May days of their

high school careers when most of America's seniors have shut down)...and leads to a more enjoyable experience for the teacher.

Chapter V

REVIEW OF EXERCISES AND INDEPENDENT CRITICAL THINKING PROJECTS BASED ON READINGS

"Because thinking and language are closely linked, teachers of English have always held that one of their main duties is to teach students *how* to think. Thinking skills, involved in the study of all disciplines, are inherent in the reading, writing, speaking, listening, and observing involved in the study of English. The ability to analyze, classify, compare, formulate hypotheses, make inferences, and draw conclusions is essential to the reasoning processes of all adults. The capacity to solve problems, both rationally and intuitively, is a way to help students cope successfully with the experience of learning within the school setting and outside"---Barrett, qtd. in Activities to Promote Critical Thinking ix).

"Critical thinking is essential if we are to get to the root of our problems and develop reasonable solutions. After all, the quality of everything we do is determined by the quality of our thinking"---Dr. Richard Paul (Critical Thinking Resources and Events Catalog 1997 2).

Critical thinking activities and exercises such as those delineated in the first four chapters of this paper not only provide an intellectually stimulating environment for students to advance their literary studies, they further the founding principles of the National Council for Excellence in Critical Thinking. These principles suggest that:

- 1) To achieve knowledge in any domain, it is essential to think critically.
- 2) Instruction in all subject domains should result in the progressive disciplining of the mind with respect to that capacity and disposition to think critically within that domain. Hence, instruction in science should lead to

disciplined scientific thinking; instruction in mathematics should lead to disciplined mathematical thinking; and so forth.

3) Disciplined thinking with respect to any subject involves the capacity on the part of the thinker to recognize, analyze, and assess the basic elements of thought: the purpose or goal of the thinking; the problem or question at issue; the frame of reference or points of view involved; assumptions made; central concepts and ideas at work; principles or theories used; evidence, data, or reasons advanced, claims made and conclusions drawn; inferences, reasoning, and lines of formulated thought; and implications and consequences involved.

4) Critical reading, writing, speaking, and listening are academically essential modes of learning.

5) The earlier that children develop sensitivity to the standards of sound thought and reasoning, the more likely they will develop desirable intellectual habits and become open-minded persons responsive to reasonable persuasion.

6) Education---in contrast to training, socialization, and indoctrination---implies a person conducive to critical thought and judgment ("Notice to Session Proposers").

The textbook most frequently in used in high school and college detective fiction classes is Saul Schwartz's The Detective Story. This book, while dated and somewhat sanitized for classroom purposes, includes mystery stories by Edgar Allan Poe, Sir Arthur Conan Doyle, Ellery Queen, and a broad spectrum of international writers through the 1980's including G. K. Chesterton, Jacques Futrelle, Rex Stout, Agatha Christie, Mary Roberts Rinehart, Dorothy L.

Sayers, Bret Harte, William Brittain, Hugh Pentecost, James Yaffe, and John Ball. Most of the stories in the book enjoy more than "historical significance," and contain certain elements of intrigue, humor, suspense, outrage, and various felonious crimes which are designed to appeal to high school students and can offer an opportunity for the advancement of higher levels of critical thinking skills. Also included in the text are suggested activity exercises and literary criticism from many of the sources already cited in this applied culminating project.

After initial training in critical thinking techniques, students have shown themselves ready to develop individualized classroom projects based on their own readings and personal interests as they read through the stories. "Only those who can think *through* content truly learn it. Content dies when one tries to mechanically learn it. Content has to take root in the thinking of students and, when properly learned, transform the way they think. Hence, when students study a subject in a critical way they take possession of a new mode of thinking which, so internalized, generates new thought, understandings, and beliefs. Their thinking, now driven by a set of new questions, becomes an instrument of insight and a new point of view" ("Critical Thinking" 5). This takes students to the next level of learning, where they take control of their thinking and are asked to develop their own ideas of a culminating project based on their experiences with the Detective Fiction course.

As part of their course requirements, students in my Detective Fiction class are requested to prepare an in-class individualized project, in addition to the standard multiple-guess, true/false/or short answer

easy-to-grade-but-insulting-to-the intellect final examination presently required by my administration. By the end of eighteen weeks of study in the field of detective fiction, students are able to regurgitate information gleaned from class lectures and readings, to match detective heroes with their Watsons, and to remember essential plot elements and characters from significant stories at the end of the course, but shouldn't there be something more?

The following individualized projects (based on one story out of eighteen covered) are offered as examples of the type of "further learning projects" which are expected of students in my detective fiction class, as part of our work in class and a "big grade" on their report cards.

In Detective Fiction class, the students read and investigate Edgar Allan Poe's "The Gold Bug" as part of their regular coursework. In this story, Mr. Legrand and his assistant, an illiterate hireling named Jupe, discover a piece of parchment covered with an invisible ink map and a cyphertext which will lead to Captain Kidd's treasure. Mr. Legrand is eventually able to decipher the code on the map and discover the treasure.

Based on this one reading assignment, students have devised projects which have been presented in class at the end of the semester. These have included cases where:

- 1) The student investigated secret codes and presented a paper where he focused on the historical and military aspects of cryptography, prepared a poster of Germany's top-secret Enigma machine with an explanation of how it worked, and enthralled the class for twenty minutes with video clips from a PBS documentary and several hands-on codebreaking exercises (including a variation on the hangman game which I later appropriated for my classroom

use). This, when coupled with a journal demonstrating the student's progress through the project from inception to in-class presentation, showed the student's ability to research, to evaluate, and to analyze. In this case, the student needed to understand what material should go into a project of this type, how it could be presented most effectively in class, and how this project *proves* that the student has increased his knowledge of the topic.

2) Another student took a liking to cryptography and investigated Sir Arthur Conan Doyle's "The Adventure of the Dancing Men," where little dancing stick figures form an integral part of the plot. This showed that the student had taken the initiative to perform research on "cryptography" stories in the field of detective fiction. For this student's project, she made herself an expert on the Doyle story and prepared and presented a paper chronicling her solving of the case before Sherlock Holmes and Watson solved it (including a comparison-contrast paper which considered Doyle's story and Poe's story). "I found myself wondering if Doyle read Poe's stories and wondering if there was a critically recognized and traceable connection between the two," she wrote in her journal. "There was an interesting connection, and I found myself having to focus my research and stay on the topic. There didn't seem to be whole lot of information on my subject, even on Internet, so I hope that I did OK. I spent more time on this project than on anything I did in high school and enjoyed it more." Incidentally, her project provided a solid illustration of Dr. Peter Facione's core cognitive skills in critical thinking already cited in Chapter One (analysis, interpretation, inference, explanation, evaluation, and self-regulation).

3) Another student performed experiments with different materials and hypothesized about their abilities for use as invisible ink. (Lemon juice and bleach seemed to be the most effective).

4) Another student picked random paragraphs from each of the stories in the textbook and tested whether Poe's hypothesis about the frequency of letter distribution still held true 150 years later. This involved a rather lengthy study of etymology and the origin of words.

5) A student of Native-American descent began his project by investigating the Navaho code-breakers who served in the U.S. military forces during World War Two. Back in the 1940's, in order to prevent the Japanese from being able to crack the American code, the U. S. Army enlisted speakers of an obscure Native American dialect to serve as radiomen with different military outfits. After much discussion with this student, the idea evolved into a fascinating individualized project where the student investigated the "slant" of reporting (or lack of it) on minority Americans who greatly impacted our history. "Why did I have to wait until fifty years later to even hear about these contributions?" the student wrote in his journal. "I can understand keeping it quiet during the war, but do you realize that none of these heroes has ever been awarded any sort of recognition or medal?"

6) A "non-fiction" minded student investigated and compared the biographical accounts of Edgar Allan Poe's life and death. She investigated differing contemporary accounts and identified the motives and probable prejudices behind each author's reporting. "This seems to be why there are so many misconceptions about Mr. Poe even today. Everybody seemed to have some sort of an axe to grind, some folks hated him because of his genius, and

others didn't like the fact that he drank. And did you ever see what his literary executor wrote about Poe after he died? For thirty years, people accepted the lies Griswold wrote as being the truth!"

The possibilities for such projects are endless and can specifically be designed around a student's individual interests and abilities. This final project requires that the students meet the criteria already cited as being a necessary component of America's workers as they enter the 21st century workplace or pursue further studies. At this point, students are required to prove that they can: operate independently after the brief orientation period (which was the study of detective literature); perceive alternative approaches and select the best approach to the problem (pick a topic of individual interest based on their study of detective literature, refine it, and present it after deciding the best method of presenting their research which is based on extensive student-to-teacher discussions of possible formats for the final product); and be punctual and dependable (no late work accepted in the class, regardless of proposed excuse) while showing pride and enthusiasm in performing well.

By the way, you should see the looks on most of their faces when they present their final projects in class on their last day as a high school student...they don't dread the "final exam" in detective literature. As a matter of fact, a vast majority of them eagerly anticipate showing their stuff to the "authority figure" and their peers. Of course, there is always room for improvement...and there are many challenges to face in this age of quick fix, spoonfeeding of information, and computer-generated matching tests.

"Whereas society commonly promotes values laden with superficial, immediate benefits, critical thinking cultivates substance and true intellectual discipline. Critical thinking asks much from us, our students, and our colleagues. Nothing of real value ever comes easily; a rich intellectual environment---alive with curious and determined students---is possible only with critical thinking at the foundation of the educational process" (Critical Thinking Resources and Events Catalog 1997 2).

"It is now generally considered that the art of thinking critically is a major missing link in education today. It is also generally recognized that the ability to think critically becomes more and more important to success in life as the pace of change continues to accelerate and as complexity and interdependence continue to intensify. It is also generally conceded that some major changes in instruction will have to take place to shift the overarching emphasis of instruction from rote memorization to effective critical thinking as the primary tool of learning" ("Critical Thinking" 1).

The types of major changes proposed in this paper can help shift the misplaced emphasis on rote learning so prevalent in American education today to a more student-centered and individualized learning experience. The results of such changes can bring about positive results in increasing our students' abilities to think critically as America enters the 21st century.

"Join us as we strive to make critical thinking a core social value and a key organizing concept for all educational reform" (Critical Thinking Resources and Events Catalog 1997 2).

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