

Chapter 1 : Our Conception of Critical Thinking

Intended to help teachers both improve students' text comprehension and better understand the teaching-learning process involved, this book focuses on comprehension and concept development as the central core of an effective educational program.

We consider the context; take in the thoughts, emotions, and intentions of the people; and when needed use that information to determine how we respond. How we think about people affects how we behave, which in turn affects how others respond to us, which in turn affects our internal and external emotional responses. But for many individuals this process is anything but natural. Individuals with social learning challenges may find it extremely difficult to think about what others are thinking and to use their social competencies in the exact moment they are needed. In fact, many people who score high on IQ and standardized tests do not intuitively learn the basics or the nuances of social communication and interaction. Our mission is to help people develop social competencies to better connect with others and experience greater well-being. We provide treatment frameworks and strategies that encourage individuals to focus their social attention, interpret the social context, and socially problem solve to figure out how to respond. The Social Thinking Methodology is based on research that includes but is not limited to the exploration of social-emotional development, neuroscience, communication science, emotions, anxiety, and depression. However, a subset of our work is being adopted into the mainstream classroom to encourage explicit social-emotional learning for all students. College freshman who took a class exploring core Social Thinking concepts consistently said in reviews that all students should take the class as a mandatory part of their education! The methodology is also designed to guide parents and professionals toward better understanding of the social-emotional and social communicative process, to help them become more astute teachers of this information. Professionals and parents are using this information in schools, homes, communities, and work settings. Consider these 19 concepts when using our Social Thinking Methodology: Social thinking is the user-friendly term for social cognition. For typically developing individuals, our ability to think socially develops from birth, much like our motor skills develop and help us learn to walk. A milestone of infancy is joint attention. This occurs when babies naturally follow the gaze of another person. This is the building block for many parts of social communication, including play, cooperation, sharing an imagination, and working as part of a group. Once this milestone is reached, complex communication develops rapidly. Being able to play effectively with peers in the early years provides the foundation for sitting and learning in a classroom as well as having back-and-forth conversations. From a developmental perspective, interactive play encourages problem solving and teamwork. Students with social learning challenges do not intuitively learn social information the way other children do. Instead, they have to be taught how to think socially to help them develop their social competencies. Individuals taught with the Social Thinking Methodology learn a four-step process guiding them to socially attend, interpret, problem solve, and respond to social information, and to use their evolving social competencies across contexts, whether they are in a classroom, on a playground, at home, or in the community. This is a language-based learning approach. Social skills are not to be memorized; social competencies evolve across our lifetime. As infants, we begin by using our eyes to be aware of our caregivers and then of other people. Our thoughts and emotions are strongly connected; we teach about this connection using our Social-Emotional Chain Reaction. We think about people all the time, even when we have no plans to interact with them; we refer to this as sharing space. As part of our humanity, we are on a daily quest to manage how people perceive us. We usually want people to avoid having weird or uncomfortable thoughts about us. To encourage people to have more neutral or pleasant thoughts and emotions about us, we consider how they may perceive us and adapt our behavior in hopes they consider us in the manner we intend. Most of the core Social Thinking treatment frameworks and strategies focus on how we as people, regardless of culture, share space and interact with others. There are subtle shifts in our social behaviors across cultures. When we focus on the nuance of social communication, we find that social expectations evolve across our life. For example, how we apologize to another person shifts dramatically from 5 to 10 years old and then takes on a different form in our teenage and

adult years. Our brain thinks socially, even when alone in our homes. Even reading novels requires thinking socially. Our ability to think socially is at the root of our academic world, which requires us to think about the motives and intentions of people we read about in literature and history. A student has to consider the perspectives of their classmates and teacher to be considered a contributing member of the class. Our social competencies are just as critical in adulthood as they are earlier in life. To hold a job , we have to adapt our social behavior based on the perceived thoughts and feelings of the people with whom we work and live. This applies when using digital communication as well! The Social Thinking Methodology helps to take abstract, implied social information and teach it explicitly in a step-by-step manner. Our core treatment frameworks provide individuals a top-level view of key social information, for example:

Chapter 2 : Concepts, Strategies, and Skills

*Reading Thinking and Concept Development: Strategies for the Classroom [Theodore L. Harris, Eric J. Cooper] on calendrierdelascience.com *FREE* shipping on qualifying offers. Book by Harris, Theodore L.*

Based on the above, generate essential questions that the students will investigate. It promotes and invites deeper understanding of a concept. The selected overarching concept should be broad based so that it inspires curiosity and interest over time, and be applicable to several disciplines. We used the content suggested in the Programs of Study as a vehicle to investigate the enduring understandings. Use the following process to guide as an introductory discussion about harmony. Discuss the questions and record ideas on large sheets of paper for sharing with the class. Each section of this process should include a class discussion. The suggested questions below are for guidance only. Generate ideas about harmony and write down all responses. What words come to mind when you think about harmony? What kinds of things are harmonious? What is it about them that are harmonious? How do you know when something is harmonious? Categorize the ideas that were written down, put them into groups, and give each group a title. This allows students to search for interrelatedness, to organize material, and to explain reasoning. How could you categorize these ideas into groups? Do all of your ideas about harmony fall into groups? Do some belong in more than one group? What could you call each group? How else might you group your ideas? What are some of the characteristics of harmony, based on the ideas you wrote? Generate a list of things that are not harmonious. What are some things that are not harmonious? What evidence or proof do you have that these things are not harmonious? How might you group the things that are not harmonious? What can you call each of these groups? Make generalizations about harmony. A generalization is something that is always or almost always true. What can you say about harmony that is always or almost always true. Use your examples and categories to guide your thinking and write several statements which are generalizations about harmony. After students share their generalizations about harmony, introduce the following list and have students compare it to their own set. Explain that the list below is the core set of generalizations that will allow us to explore adequately the depth of the concept throughout our investigations. Through the disciplines, investigate the generalizations to develop a deep understanding of the concepts of harmony and discord. Harmony is linked to time Harmony may be positive or negative Harmony may be perceived as orderly or random Harmony and discord are everywhere Harmony may happen naturally or be caused deliberately Investigate how these generalizations apply or do not apply to: Specific concepts found in the Programs of Study Readings.

Chapter 3 : Creativity, Thinking Skills, Critical Thinking, Problem solving, Decision making, innovation

Auto Suggestions are available once you type at least 3 letters. Use up arrow (for mozilla firefox browser alt+up arrow) and down arrow (for mozilla firefox browser alt+down arrow) to review and enter to select.

Finding labels for ideas already understood Mastering new ideas Students will be able to: Examine examples of a concept for differences and similarities. Find and identify examples of a concept. Metacognitive Objective Students will be able to: Reflect upon their thinking processes when using this skill and examine its effectiveness. Skill Steps Examine examples of a concept for their attributes. Notice differences without dwelling on them. Record similarities that apply to all examples. Summarize the critical characteristics of the concept. Label teacher selected items as examples and non-examples of the concept. Demonstrate understanding by finding other examples and non-examples. Metacognitive Step Reflect upon the thinking process used when performing this skill and examine its effectiveness: How might you do it differently the next time? Vocabulary Attributes - features that describe and delineate a concept. Concept - an idea with a specific set of attributes or characteristics. Concept label - a word or phrase used to refer to examples of a concept. Critical attributes - features that are critical to the definition of the concept. Debrief - review and evaluate process, using both cognitive and affective domains to achieve closure of the thinking activity. Possible Procedure for Teaching the Skill Have students examine examples: Ask students to identify critical attributes. Have students summarize the similarities in a statement "These are all Ask students to label the concept and then provide their reasoning for sorting and labeling the concepts as they have. Share traditional label with students. Have students examine and identify non-examples or examples and explain their reasoning for classification as an example or non-example. Ask students to restate critical attributes. Have students find or create their own examples of the concept. Debrief by reviewing the skill steps and reflecting upon their use. Determine the critical characteristics of the concept. Select three or more diverse examples. Prepare a chart for an example see page 4A in Developing Concepts in the Thinking Skills Guide for student use, or help the student to prepare one. Integrating the Skill Into the Curriculum In a social studies class, construct ideas and label them, using this skill to define terms such as "democracy. Applying the skill steps, have students work toward labeling them correctly. Background Information Hilda Taba was an educational researcher who, until her death, worked in the areas of concept formation and attainment. We generally refer to abstract and concrete concepts by their concept labels or names. The concept is the essence of the thing that can be defined by its critical characteristics or critical attributes and made clear through the use of examples and non-examples. Usually, concepts are taught by first introducing the label, e. Students tend to generalize the one familiar example. In other words, if the American experience of "democracy" is used as an example, the students may conclude that this example defines, hence limits, the concept. As a result, students may fail to recognize other examples of "democracy" that differ from the American experience, e. In other words, new examples are judged in terms of their possessing the critical attributes, rather than whether they match the familiar example used when learning the concept. In this inductive approach to "developing concepts," the label serves to provide a more general memory file location that enables students to retrieve the concept and its associated understandings appropriately, and in a more general manner. This is far more useful to the student than recalling "democracy" only when thinking about America, or in only one form, both of which are likely to happen with the approach of label, definition, and one familiar example. Concept development on a formal level, such as this, is most useful for teaching difficult concepts such as: Students can also be taught to ask teachers and others for a sufficient number of examples when attempting to form new concepts for themselves. Additional Resources Parker, Walter C. An Inductive Approach, 2nd Ed.

Chapter 4 : Socialthinking - Free Articles & Strategies

Note: Citations are based on reference standards. However, formatting rules can vary widely between applications and fields of interest or study. The specific requirements or preferences of your reviewing publisher, classroom teacher, institution or organization should be applied.

Their ability to use representational thought and symbols to stand for objects, people and events, which began in toddlerhood, is becoming even more complex. Preschoolers also begin to use logic to think about how and why things work in the world around them. Despite huge cognitive gains in the preschool years, however, they are not little adults and still display many cognitive limitations. By understanding their advances and limitations in thinking, teachers can best support preschoolers in their cognitive growth. Outlined below are teaching methods, book recommendations and activities that can be used to encourage cognitive development in each of these areas.

Reasoning and Problem Solving In the preschool years, children attempt to explain how things work and why things occur. While their explanations can often seem far-fetched to adults, their stream of how and why questions display a real desire to reason and solve problems about the causes of events. To hone in on the natural curiosity of 3- to 5-year-olds, teachers should pose thought-provoking questions as they read aloud to their students. Teachers should try to help children understand the natural causes of phenomena to push their cognitive development beyond merely seeing superficial changes in the appearance of things, a cognitive limitation often displayed at this age. A block may become a telephone, or a box may become a car. Preschoolers, unlike toddlers, begin to show an understanding of the difference between what is real and what is not. Make-believe play should be encouraged by teachers in the preschool years. Since children often identify with characters in books, reading stories that show children or other characters engaging in symbolic play is a good method to inspire children to participate in pretend play in new or unique ways. After reading these stories, teachers can present students with their own box or stick and see what creative ways they play with them on their own. For example, preschoolers understand that it is easier to remember a small list of items than a longer one, but would not spontaneously use a rehearsal strategy to remember the list. It is not until beyond the preschool years that children acquire knowledge of strategies that affect their own memory and learning. Teachers can encourage children to reflect on their own thinking and learning by allowing time for a post-book activity. Teachers can also ask each student to name one thing that they learned from the book. Child at this age remember new concepts and ideas more easily when they already have a wealth of knowledge about the subject at hand than when they know little about the topic. Children ages 3 to 5 will also better remember new concepts if they are put into a meaningful context, or if they are learned through hands-on experiences. Ask questions that require children to recall an earlier part of the story. What occurred at the beginning of the story? Children learn through repetition, so hearing new information more than once will help them learn and remember it. Teachers might also read books on a particular topic prior to introducing new concepts related to it. This story will give the children a knowledge base so that as they complete the hands-on pumpkin activity, their new learning and experiences will be organized into their current understanding of pumpkins.

Social Cognition Social cognition refers to thinking about others and social situations. As children gain new cognitive skills, their understanding of how the social world works grows. By the preschool years children begin to understand the mind as an entity of thought and are therefore better able to grasp why others behave or feel the way that they do. Advances in cognitive development during the preschool years allow children to communicate, play and logic in ways that were not possible in toddlerhood. With careful planning and knowledge of cognitive development during the preschool years, teachers can promote cognitive growth through everyday activities such as story time.

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Chapter 5 : Pearson Prentice Hall: eTeach: Strategies for Vocabulary Development

The concept development process gives you a way to focus on a selected number of "big ideas"-- or generalizations-- that you want your students to grasp. The following example comes from teacher Carin Sullman, whose third grade students explored the theme, "Persevering Despite Obstacles."

Teaching word meanings should be a way for students to define their world, to move from light to dark, to a more fine-grained description of the colors that surround us. Although the causal direction of the relation is not understood clearly, there is evidence that the relationship is largely reciprocal. However, not all approaches to teaching word meanings improve comprehension. This chapter will describe some of the most practical and effective strategies that high-school teachers can employ with diverse learners to enhance vocabulary development and increase reading comprehension. Instructional and curricular basics and implications. Lawrence Erlbaum Associates, , pp. There are a number of traditional teaching practices related to vocabulary that deserve to be left in the "instructional dustbin. Let us quickly review the most common of these less effective approaches. Certainly dictionaries have their place, especially during writing, but the act of looking up a word and copying a definition is not likely to result in vocabulary learning especially if there are long lists of unrelated words to look up and for which to copy the definitions. Use them in a sentence. Writing sentences with new vocabulary AFTER some understanding of the word is helpful; however to assign this task before the study of word meaning is of little value. There is little research to suggest that context is a very reliable source of learning word meanings. Nagy³ found that students reading at grade level had about a one twentieth chance of learning the meaning of a word from context. This, of course, is not to say that context is unimportant but that students need a broader range of instructional guidance than the exhortation "Use context. Rote learning of word meanings is likely to result, at best, in the ability to parrot back what is not clearly understood. Reviewing the research literature on vocabulary instruction leads to the conclusion that there is no single best strategy to teach word meanings but that all effective strategies require students to go beyond the definitional and forge connections between the new and the known. Nagy³ summarizes the research on effective vocabulary teaching as coming down to three critical notions: The following section will explore some practical strategies that secondary teachers can employ to increase the integration, repetition, and meaningful use of new vocabulary. This presents a particularly difficult challenge for underprepared high-school students who lack the reading habit. The following strategies can help motivate reluctant readers: Matching text difficulty to student reading level and personal interests e. Choose Appropriate Dictionaries for Heterogeneous Classrooms Secondary students certainly need to know how and when to use a dictionary to look up the meanings of unfamiliar words. Surprisingly, many adolescents lack even the most rudimentary dictionary skills and benefit from some explicit instruction. Without training and guidance, less proficient readers and English language learners are apt to encounter numerous difficulties as they struggle first to locate and then to effectively navigate a lengthy dictionary entry. Many students do not own a dictionary, and if they do, it is often not a very powerful or appropriate resource for clarifying word meanings. English learners may carry a bilingual dictionary, but this resource is generally inadequate for several reasons. First, long-term bilinguals or more recent immigrants with disrupted educational histories may have limited academic vocabulary in the home language. When looking up the meaning of a term such as categorize or stereotype, a bilingual youth may very well encounter an unfamiliar word in the native language. Simply copying a translation does little to promote reading comprehension. Further, the small bilingual dictionaries carried by secondary students offer limited and often inaccurate definitions. An electronic dictionary may be equally unproductive for a bilingual or less proficient reader tackling grade-level curricula, as it tends to offer scant definitions and no contextualized example sentences. An electronic dictionary is useful for a quick fix, but it is not the most considerate resource for a student operating from a weak academic vocabulary base while completing grade-level assignments. Another common language arts resource, which is likely to utterly demoralize an under prepared reader, is an adult thesaurus. To benefit from an array of synonyms, a reader must operate from a solid academic vocabulary base. Less proficient English users will generally have no

ability to gauge contextual appropriateness and will end up infusing their written work with glaringly inappropriate word choices. A traditional collegiate dictionary is probably a less effective resource for students daunted by grade-level literacy tasks. High school classrooms are predictably equipped with only college-level dictionaries, which are actually designed for a proficient adult reader possessing a relatively sophisticated vocabulary base and efficient dictionary skills. This does not describe the average high-school student, whether she or he is reading at or below grade level. English language learners and less proficient readers benefit from the clear, simple definitions and common synonyms as much as from the natural examples illustrating words and phrases in typical contexts. These dictionaries are also easier for students to utilize than collegiate dictionaries because the entries are printed in a larger type size and include useful and obvious signposts to guide them in identifying the proper entry. Developmentally-appropriate lexical resources are fundamental to providing all students, regardless of their level of English proficiency or literacy, with greater access to grade level competencies and curricula. A democratic language arts classroom, marked by cultural and linguistic diversity, must include considerately chosen and manageable dictionaries for less proficient readers, to enable them to develop more learner autonomy and to assist them in completing independent writing and reading tasks. Unfortunately, teachers who gravitated toward English instruction, in great part out of a passion for language and literature, may find all words of equal merit and devote too much instructional time to interesting and unusual, yet low-frequency, words, that a less prepared reader is unlikely to encounter ever again. This lexical accessorizing is overwhelming to a reader who may be striving simply to get the gist of a novel, and it proves to be even more daunting as the student attempts to study a litany of unfamiliar terms. Graves and Graves⁴ make a helpful distinction between teaching vocabulary and teaching concepts. Teachers can get more out of direct vocabulary work by selecting words carefully. More time-consuming and complex strategies are best saved for conceptually challenging words, while relatively expedient strategies can assist students in learning new labels or drawing finer-grained distinctions around known concepts. Making wise choices about which words to teach directly, how much time to take, and when enough is enough is essential to vocabulary building. Tips for selecting words: Distinguish between words that simply label concepts students know and new words that represent new concepts. Rather, focus attention on critical academic vocabulary that is essential to understanding the big ideas in a text e. As students learn the meanings of pre- and judge, they can connect to other concepts they know, such as "unfair. Many of these e. Provide a synonym students know, e. Not all words have antonyms, but thinking about for those that do, opposite requires their students to evaluate the critical attributes of the words in question. Requiring students to use their own words increases connection making and provides the teacher with useful informal assessmentâ€”"Do they really get it? The more personalized the better. An example for the new word egregious might be Ms. Invite students to explain why it is not an example. Ask for sentences that "show you know. Provide a list of vocabulary words from a reading selection and have students sort them into various categories e. Students can re-sort words into "guess my sort" using categories of their own choosing. International Reading Association, Designs for Student Success. Complex concepts require more multidimensional teaching strategies. The next section will elaborate on a number of these techniques: List-Group-Label Tabla6 This is a form of structured brainstorming designed to help students identify what they know about a concept and the words related to the concept while provoking a degree of analysis and critical thinking. These are the directions to students: Decide on a label for each group. Try to add words to the categories on the organized lists. Working in small groups or pairs, each group shares with the class its method of categorization and the thinking behind its choices, while adding words from other class members. Teachers can extend this activity by having students convert their organized concepts into a Semantic Map which a visual expression of their thinking. List-group-label is an excellent prereading activity to build on prior knowledge, introduce critical concepts, and ensure attention during selection reading. Possible Sentences Moore and Moore⁷ This is a relatively simple strategy for teaching word meanings and generating considerable class discussion. The teacher chooses six to eight words from the text that may pose difficulty for students. These words are usually key concepts in the text. Next, the teacher chooses four to six words that students are more likely to know something about. The list of ten to twelve words is put on the chalk board or overhead projector. The teacher provides brief definitions as needed.

Students are challenged to devise sentences that contain two or more words from the list. All sentences that students come up with, both accurate and inaccurate, are listed and discussed. Students now read the selection. After reading, revisit the Possible Sentences and discuss whether they could be true based on the passage or how they could be modified to true. Interestingly, this was true when compared to a control group and when compared to Semantic Mapping. Improving Classroom Instruction, 2nd ed. Learning clusters of words that share a common origin can help students understand content-area texts and connect new words to those already known. For example, a secondary teacher Allen⁹ reported reading about a character who suffered from amnesia. Teaching students that the prefix "not" derives from Greek and means "not," while the base "memory" means "memory" reveals the meaning. After judicious teacher scaffolding, students were making connections to various words in which the prefix "not" changed the meaning of a base word. This type of contextualized direct teaching meets the immediate need of understanding an unknown word while building generative knowledge that supports students in figuring out difficult words in future reading. Learning and reviewing high frequency affixes will equip students with some basic tools for word analysis, which will be especially useful when they are prompted to apply them in rich and varied learning contexts.

Chapter 6 : Teaching Thinking: The Taba Model of Concept Development | Learning & Courage

3 Literacy Concepts for Developing Students' Skills in Reading, Writing and Thinking It's important to reflect on three foundational literacy concepts and questions when developing students' skills in reading, writing and thinking.

Translate this page from English Print Page Change Text Size: The Problem Everyone thinks. It is our nature to do so. But much of our thinking, left to itself, is biased, distorted, partial, uninformed, or downright prejudiced. Yet, the quality of our life and that of what we produce, make, or build depends precisely on the quality of our thought. Shoddy thinking is costly, both in money and in quality of life. Excellence in thought, however, must be systematically cultivated. Critical thinking is self-directed, self-disciplined, self-monitored, and self-corrective thinking. It presupposes assent to rigorous standards of excellence and mindful command of their use. It entails effective communication and problem-solving abilities, as well as a commitment to overcome our native egocentrism and sociocentrism. To Assess Thinking Check it for clarity, accuracy, precision, relevance, depth, breadth, significance, logic, and fairness. Etymologically, then, the word implies the development of "discerning judgment based on standards. The tradition of research into critical thinking reflects the common perception that human thinking left to itself often gravitates toward prejudice, over-generalization, common fallacies, self-deception, rigidity, and narrowness. It assumes that the capacity of humans for good reasoning can be nurtured and developed by an educational process aimed directly at that end. The history of critical thinking documents the development of this insight in a variety of subject matter domains and in a variety of social situations. Each major dimension of critical thinking has been carved out in intellectual debate and dispute through years of intellectual history. That history allows us to distinguish two contradictory intellectual tendencies: Our basic concept of critical thinking is, at root, simple. We could define it as the art of taking charge of your own mind. Its value is also at root simple: Of course, this requires that we learn self-discipline and the art of self-examination. This involves becoming interested in how our minds work, how we can monitor, fine tune, and modify their operations for the better. It involves getting into the habit of reflectively examining our impulsive and accustomed ways of thinking and acting in every dimension of our lives. All that we do, we do on the basis of some motivations or reasons. But we rarely examine our motivations to see if they make sense. We rarely scrutinize our reasons critically to see if they are rationally justified. 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 responsibility for their own behavior. As citizens, too often we vote impulsively and uncritically, without taking the time to familiarize ourselves with the relevant issues and positions, without thinking about the long-run implications of what is being proposed, without paying attention to how politicians manipulate us by flattery or vague and empty promises. As friends, too often we become the victims of our own infantile needs, "getting involved" with people who bring out the worst in us or who stimulate us to act in ways that we have been trying to change. As husbands or wives, too often we think only of our own desires and points of view, uncritically ignoring the needs and perspectives of our mates, assuming that what we want and what we think is clearly justified and true, and that when they disagree with us they are being unreasonable and unfair. As patients, too often we allow ourselves to become passive and uncritical in our health care, not establishing good habits of eating and exercise, not questioning what our doctor says, not designing or following good plans for our own wellness. As teachers, too often we allow ourselves to uncritically teach as we have been taught, giving assignments that students can mindlessly do, inadvertently discouraging their initiative and independence, missing opportunities to cultivate their self-discipline and thoughtfulness. It is quite possible and, unfortunately, quite "natural" to live an unexamined life; to live in a more or less automated, uncritical way. It is possible to live, in other words, without really taking charge of the persons we are becoming; without developing or acting upon the skills and insights we are capable of. On this view, as you can see, critical thinking is an eminently practical goal and value. It is focused on an ancient Greek ideal of "living an examined life". It is based on the skills, the insights, and the values essential to that end. It is a way of going

about living and learning that empowers us and our students in quite practical ways. When taken seriously, it can transform every dimension of school life: Of course, we are likely to make critical thinking a basic value in school only insofar as we make it a basic value in our own lives. Therefore, to become adept at teaching so as to foster critical thinking, we must become committed to thinking critically and reflectively about our own lives and the lives of those around us. We must become active, daily, practitioners of critical thought. We must regularly model for our students what it is to reflectively examine, critically assess, and effectively improve the way we live. Critical thinking is that mode of thinking “about any subject, content, or problem” in which the thinker improves the quality of his or her thinking by skillfully analyzing, assessing, and reconstructing it. Back to top Critical thinking is self-guided, self-disciplined thinking which attempts to reason at the highest level of quality in a fair-minded way. People who think critically consistently attempt to live rationally, reasonably, empathically. They are keenly aware of the inherently flawed nature of human thinking when left unchecked. They strive to diminish the power of their egocentric and sociocentric tendencies. They use the intellectual tools that critical thinking offers “concepts and principles that enable them to analyze, assess, and improve thinking. They work diligently to develop the intellectual virtues of intellectual integrity, intellectual humility, intellectual civility, intellectual empathy, intellectual sense of justice and confidence in reason. They realize that no matter how skilled they are as thinkers, they can always improve their reasoning abilities and they will always at times fall prey to mistakes in reasoning, human irrationality, prejudices, biases, distortions, uncritically accepted social rules and taboos, self-interest, and vested interest. They strive to improve the world in whatever ways they can and contribute to a more rational, civilized society. At the same time, they recognize the complexities often inherent in doing so. They strive never to think simplistically about complicated issues and always consider the rights and needs of relevant others. They recognize the complexities in developing as thinkers, and commit themselves to life-long practice toward self-improvement. They embody the Socratic principle: The unexamined life is not worth living, because they realize that many unexamined lives together result in an uncritical, unjust, dangerous world.

Chapter 7 : The Framework Elements - The Cognitive Foundations of Learning to Read: A Framework

Teaching Reading as Concept Development: Emphasis on Affective Thinking. Henry, George H. The purposes of this monograph are to reveal how the language arts teacher at any level of instruction might go about the teaching of reading as concept development and to suggest that this method of teaching reading be made part of the preparation of both.

Seizing the Initiative Through Creative Thinking Versus Reacting to the Enemy local copy , by Grothe, SAMS paper, Leadership must be committed to learning, underwrite experimentation, and create an environment that generates creative thought and innovation. Doctrine must incorporate more aspects of innovation, creative and critical thinking and innovative leadership. The most critical area the Army must focus change in is within Professional Military Education for field grade officers. When words represent some indistinct idea, they are susceptible to reinvention or distortion with potentially significant unintended consequences. Innovation Starvation , by Stephenson, in World Policy Journal, Fall Still, I worry that our inability to match the achievements of the s space program might be symptomatic of a general failure of our society to get big things done. The vast and radical innovations of the midth century took place in a world that, in retrospect, looks insanely dangerous and unstable. In short, a world where big stuff can never get done. Thinking Critically and Creatively and How Military Professionals Can Do it Better , by McConnell et al, in Small Wars Journal, 16 Sep This essay will summarize how cognitive theorists have described critical and creative thinking in general, and how some military practitioners have applied them. In doing so, this essay will propose principles of critical and creative thinking applicable to the military profession to provide a common vocabulary that describes the type of thinking we do. To expand and improve critical and creative thinking, military professionals need a common vocabulary that accurately describes the very thinking we are to expand and improve on. Do schools kill creativity? Bring on the learning revolution! In a funny, stirring talk he tells us how to get out of the educational "death valley" we now face, and how to nurture our youngest generations with a climate of possibility. What schools are encouraged to do is to find out what kids can do across a very narrow spectrum of achievement. Our children and teachers are encouraged to follow routine algorithms rather than to excite that power of imagination and curiosity. Instead, what we have is a culture of standardization. Seth Godin Seth Godin: Quieting the Lizard Brain , a 99u video "Bestselling author and entrepreneur Seth Godin outlines a common creative affliction: Godin targets our "lizard brain" as the source of these primal doubts, and implores us to "thrash at the beginning" of projects so that we can ship on time and on budget. How to get your ideas to spread - a TED talk you may need to watch it on YouTube if TED videos are blocked "In a world of too many options and too little time, our obvious choice is to just ignore the ordinary stuff. Marketing guru Seth Godin spells out why, when it comes to getting our attention, bad or bizarre ideas are more successful than boring ones" other TED. Matt Ridley argues that, through history, the engine of human progress and prosperity has been, and is, "ideas having sex with each other. The key to growth? Race with the machines - a TED talk you may need to watch it on YouTube if TED videos are blocked "As machines take on more jobs, many find themselves out of work or with raises indefinitely postponed. Is this the end of growth? Be sure to watch the opposing viewpoint from Robert Gordon. Are we witnessing the end of growth? Be sure to watch the opposing viewpoint from Erik Brynjolfsson. Your elusive creative genius - a TED talk you may need to watch it on YouTube if TED videos are blocked "Elizabeth Gilbert muses on the impossible things we expect from artists and geniuses -- and shares the radical idea that, instead of the rare person "being" a genius, all of us "have" a genius. How to build your creative confidence - a TED talk you may need to watch it on YouTube if TED videos are blocked "Is your school or workplace divided into "creatives" versus practical people? Yet surely, David Kelley suggests, creativity is not the domain of only a chosen few. Telling stories from his legendary design career and his own life, he offers ways to build the confidence to create From mach glider to humming bird drone - a TED talk you may need to watch it on YouTube if TED videos are blocked "What would you attempt to do if you knew you could not fail? In this breathtaking talk she describes some of the extraordinary projects -- a robotic hummingbird, a prosthetic arm controlled by thought, and, well, the internet -- that her agency has created by not worrying that they might fail. But Steven Johnson shows how

history tells a different story. At TEDxMaastricht speaker Bart Knols demos the imaginative solutions his team is developing to fight malaria -- including limburger cheese and a deadly pill. Unintended consequences - a TED talk you may need to watch it on YouTube if TED videos are blocked "Every new invention changes the world -- in ways both intentional and unexpected. Historian Edward Tenner tells stories that illustrate the under-appreciated gap between our ability to innovate and our ability to foresee the consequences. She makes the case for unlocking your brain via pad and pen. The Science of Insight Creation , 40 min. Finding notable, new facts is getting harder. So how can we increase our capacity for breakthroughs and insights? What can new disciplines like neuroscience teach us about the innovation process? Jonah Lehrer explores creativity from a scientific perspective and discusses questions such as why we have our best ideas in the shower. Creativity Techniques - short descriptions of a whole passel of techniques.

Chapter 8 : Thinking Skills Guide - Developing Concepts

The specific theatrical issues being discussed include schema theory as a rational premise for the connection between reading comprehension and critical thinking, cognitive development processes, critical thinking: its nature and definitions, critical thinking: skills and dispositions, and critical thinking and reading comprehension.

Handwritten text may also be produced using a graphite pencil or a pen. Short texts may be written or painted on an object. Often the text relates to the object, such as an address on an envelope, product info on packaging, or text on a traffic or street sign. A slogan may be painted on a wall. A text may also be produced by arranging stones of a different color in a wall or road. Short texts like these are sometimes referred to as environmental print. Sometimes text or images are in relief, with or without using a color contrast. Words or images can be carved in stone, wood, or metal; instructions can be printed in relief on the plastic housing of a home appliance, or myriad other examples. A requirement for reading is a good contrast between letters and background depending on colors of letters and background, any pattern or image in the background, and lighting and a suitable font size. In the case of a computer screen, it is important to see an entire line of text without scrolling. The field of visual word recognition studies how people read individual words. This has revealed that reading is performed as a series of eye fixations with saccades between them. Humans also do not appear to fixate on every word in a text, but instead pause on some words mentally while their eyes are moving. This is possible because human languages show certain linguistic regularities. In the case of computer and microfiche storage there is the separate step of displaying the written text. For humans, reading is usually faster and easier than writing. Reading is typically an individual activity, though on occasion a person reads out loud for other listeners. Personalised books for children are recommended to improve engagement in reading by featuring the child themselves in the story. Before the reintroduction of separated text in the late Middle Ages, the ability to read silently was considered rather remarkable. Learning to read Literacy is the ability to use the symbols of a writing system. It is the ability to interpret what the information symbols represent, and re-create those same symbols so that others can derive the same meaning. Illiteracy is the inability to derive meaning from the symbols used in a writing system. Dyslexia refers to a cognitive difficulty with reading and writing. Alexia acquired dyslexia refers to reading difficulties that occur following brain damage, stroke, or progressive illness. The table to the right shows how reading-rate varies with age, [19] regardless of the period to and the language English, French, German. The Taylor values probably are higher, for disregarding students who failed the comprehension test. On average, from grade 2 to college, reading rate increases 14 standard-length words per minute each year where one standard-length word is defined as six characters in text, including punctuation and spaces. Rates of reading include reading for memorization fewer than words per minute [wpm]; reading for learning “ wpm; reading for comprehension “ wpm; and skimming “ wpm. Reading for comprehension is the essence of the daily reading of most people. Advice for choosing the appropriate reading-rate includes reading flexibly, slowing when concepts are closely presented and when the material is new, and increasing when the material is familiar and of thin concept. Speed reading courses and books often encourage the reader to continually accelerate; comprehension tests lead the reader to believe his or her comprehension is continually improving; yet, competence-in-reading requires knowing that skimming is dangerous, as a default habit. A Cochrane Systematic Review used reading speed in words per minute as the primary outcome in comparing different reading aids for adults with low vision. Reading aloud is a common technique for improving literacy rates. Big Brother Mouse, which organized the event, trains its staff in read-aloud techniques: Make eye contact with the audience. Pause occasionally for dramatic effect. Both lexical and sub-lexical cognitive processes contribute to how we learn to read. Sub-lexical reading, [23] [24] [25] [26] involves teaching reading by associating characters or groups of characters with sounds or by using phonics or synthetic phonics learning and teaching methodology, which some argue is in competition with whole language methods. Lexical reading [23] [24] [25] [26] involves acquiring words or phrases without attention to the characters or groups of characters that compose them or by using whole language learning and teaching methodology. Some argue that this competes with phonics and synthetic phonics methods, and that

the whole language approach tends to impair learning to spell. Other methods of teaching and learning to read have developed, and become somewhat controversial. There are cases of very young children learning to read without having been taught. There are also accounts of people who taught themselves to read by comparing street signs or Biblical passages to speech. The novelist Nicholas Delbanco taught himself to read at age six during a transatlantic crossing by studying a book about boats. Cross model mapping between the orthographic and phonologic areas in the brain are critical in reading. Thus, the amount of activation in the left dorsal inferior frontal gyrus while performing reading tasks can be used to predict later reading ability and advancement. Young children with higher phonological word characteristic processing have significantly better reading skills later on than older children who focus on whole-word orthographic representation. It is necessary to understand visual perception and eye movement to understand the reading process. Subvocalized reading combines sight reading with internal sounding of the words as if spoken. Advocates of speed reading claim it can be a bad habit that slows reading and comprehension, but other studies indicate the reverse, particularly with difficult texts. Methods include skimming or the chunking of words in a body of text to increase the rate of reading. It is closely connected to speed learning. Incremental reading is a software-assisted reading method designed for long-term memorization. In the course of reading, important pieces of information are extracted and converted into flashcards, which are then reviewed by a spaced repetition algorithm. Proofreading is a kind of reading for the purpose of detecting typographical errors. One can learn to do it rapidly, and professional proofreaders typically acquire the ability to do so at high rates, faster for some kinds of material than for others, while they may largely suspend comprehension while doing so, except when needed to select among several possible words that a suspected typographic error allows. Rereading is reading a book more than once. Structure-proposition-evaluation SPE method, popularized by Mortimer Adler in *How to Read a Book*, mainly for non-fiction treatise, in which one reads a writing in three passes: This method involves suspended judgment of the work or its arguments until they are fully understood. Reading is fundamentally a linguistic activity: However, most readers already use several kinds of intelligence while reading. Doing so in a more disciplined manner. Reading process is therefore a communication context. Assessment[edit] Types of tests[edit] Sight word reading: Difficulty is manipulated by using words that have more letters or syllables, are less common and have more complicated spelling-sound relationships. The difficulty is increased by using longer words, and also by using words with more complex spelling or sound sequences. Some tests incorporate several of the above components at once. For instance, the Nelson-Denny Reading Test scores readers both on the speed with which they can read a passage, and also their ability to accurately answer questions about this passage. Lighting[edit] Reading from paper and from some screens requires more lighting than many other activities. Reading from screens that produce their own light does not depend on external light, except that external light may lessen visual fatigue. For controlling what is on the screen scrolling, turning the page, etc. History[edit] Men reading The history of reading dates back to the invention of writing during the 4th millennium BC. Although reading print text is now an important way for the general population to access information, this has not always been the case. With some exceptions, only a small percentage of the population in many countries was considered literate before the Industrial Revolution. Some of the pre-modern societies with generally high literacy rates included classical Athens and the Islamic Caliphate. Reading has no concrete laws, but lets readers escape to produce their own products introspectively, promoting deep exploration of texts during interpretation. Some thinkers of that era believed that construction, or the creation of writing and producing a product, was a sign of initiative and active participation in society and viewed consumption reading as simply taking in what constructors made. They considered readers of that time passive citizens, because they did not produce a product. Michel de Certeau argued that the elites of the Age of Enlightenment were responsible for this general belief. This view held that writing was a superior art to reading within the hierarchical constraints of the era. As reading became less a communal, oral practice, and more a private, silent one and as sleeping increasingly moved from communal sleeping areas to individual bedrooms, some raised concern that reading in bed presented various dangers, such as fires caused by bedside candles. Some modern critics, however, speculate that these concerns were based on the fear that readers especially women could escape familial and communal obligations

and transgress moral boundaries through the private fantasy worlds in books.

Chapter 9 : Reading - Wikipedia

Teach students about higher order thinking and higher order thinking strategies. Help students understand their own higher order thinking strengths and challenges. Teach the concept of concepts.

Use generalizations as the basis for extension projects and further reading

Planning the Concept Development Process

Planning the process will help you anticipate some of the challenges your students may have as they come to understand the theme. In addition, the steps you will go through to plan the concept development process will be very similar to how you can guide students. After you have completed the planning, see "Teaching the Concept Development Process" for specific steps you can use to guide your students as they come to understand the theme.

Develop Central Questions

Carin brainstormed the following central questions that she wanted to explore through her themed literature unit. These questions guided her search for good books, informed her teaching, and helped her shepherd her students as they learned the big ideas from the unit.

Return to top Step 2: Carin chose picture books for her themed literature unit because her students could read them quickly. She selected the following books:

- Extract Character Traits The key to examining what it means and what it takes to persevere despite obstacles can be found within the characters -- what they say and do, how they think and react, how they interact with other characters, and what the author tells us about them. Therefore, the next step is to identify those traits that illustrate how people cope when obstacles roll into their paths. Carin read each book and extracted what she thought were the relevant traits. In this step, as in others below, Carin needed to do it first for herself so that she would know what traits rose naturally from these books. Later, she guided her students to identify what they thought were the relevant traits. Each reader may find different traits -- there is no one right way]:
- Adventurous spirit [and others already noted]
- So Far From the Sea: Rational thinking, understanding [and others already noted]
- Fly Away Home: Arrange in a Concept Web

A concept web is a visual way to show how various ideas are related -- in this case, the traits that show how the characters persevered despite obstacles. Carin began by drawing a blank concept web: And then began to add the character traits she had identified in each book. She added to the concept web, using a different color for the traits she extracted from each book. The finished web, showing the character traits from all five books, looked like this:

Return to top Step 5: Group Similar Traits

The objective of concept development is to discover the general life lessons or "big ideas" that arise from literature. Therefore, Carin needed to begin to synthesize the traits from the five books to find commonalities among them. She looked for groupings of traits that seemed to fit together. This process is highly flexible -- there is no one right way to group the traits. Look for similarities that make sense to you.

- Positive spirit or inner force within the characters that helped them persevere
- Intelligence, thinking, and hard work
- Finding purpose in looking to the future
- Support of others

Return to top Step 6: Form Generalizations

Generalizations are statements that synthesize the grouped traits and answer the central questions: What does it mean to persevere despite obstacles? What does it look like to persevere? Click here to see examples of generalizations from a variety of themes

This is the most difficult step in concept development -- but the most valuable, and the pathway to deep understanding about the theme. As with other steps in the process, there is no one right way to form the generalizations. Carin looked at each grouping of traits, and formed a generalization -- a declarative sentence -- that tied the traits together:

Return to top Teaching the Concept Development Process

Most students will not come to an in-depth understanding of the theme on their own.

Brainstorm Responses to the Central Questions

You need to know what students understand about the theme before the unit begins. An effective way to begin is to ask them to respond to your central questions either orally or in writing. You can present these on a typed form, chart paper, the board, or an overhead transparency. As students then read their literature circle books, add onto the concept web with examples from the books. The concept web that you developed in the planning process will be helpful to you here -- but use it only as a guide. Allow students to put their own words to the traits as they extract ideas from their own lives or from the books they read. The more examples you gather on the web, the easier it will be for students to develop their own generalizations.

Return to top Step 3: Read Books

Students now read their books with an eye to finding out how the characters persevered or worked for

justice, took action to care for others, or overcame adversity, etc. You can guide them in the same way you would in any literature circle by offering some effective tools to capture ideas Prompts, questions, Post-it Notes, Golden Lines from what they read. Return to top Step 4: Show students how to identify these traits. Begin by reading aloud a picture book -- or use your daily read aloud book -- so that everyone has the same frame of reference. For example, Lori Scobie used *Sweet Clara and the Freedom Quilt* by Deborah Hopkinson to help her 4th grade students understand how to identify character traits that helped Clara take action to care for others. After reading the book, Lori asked her students, "What did Clara do to take action? What did she have to have inside her to help her do this? Add to the Concept Web Add traits from the literature circle books to the growing concept web. In the photo below, Lori Scobie created a second concept web that incorporated the traits from *Sweet Clara and the Freedom Quilt*, as well as from five literature circle books. Group Similar Traits Guide your students to group similar traits the same way you did it in Planning Step 5. Return to top Step 7: Form Generalizations to see examples of generalizations, [click here](#) You can also use the work you did during Planning Step 6 to help you guide students to form generalizations. Going through the process yourself during the planning stage will pay big dividends now that you are working with your students. You will already have an idea of the challenges they may face. First, explain to students what a generalization is and why it is important to help them understand the theme more deeply. Then, model how you formed one or two of the generalizations. Finally, you might find it helpful to offer some sentence starters as students try out generalizations on their own: In order to stand up for what is right, you must People who persevere despite obstacles One or two good generalizations can be an excellent starting point! Remember that your final set of generalizations do not have to match those you developed during the planning process. In fact, students will remember them better if the generalizations are in their own words and come from their own thinking. Return to top Step 8: Use Generalizations as the Basis for Extension Projects and Further Reading Now you can use these generalizations as the basis for extension projects and further reading. See example extension projects on the Literature Circles Resource Center website for ideas.