Appendix A: Professional Learning Program

Critical Thinking in Writing

Day 1

Presented by Monica Murray

Professional learning Program

Agenda for Tier I - Day 1
Building Declarative Awareness

1. Metacognition in Action Overview
2. Why a professional learning program?
3. Critical Thinking
4. Metacogntion

Building Declarative Awareness

Metacognition in action!

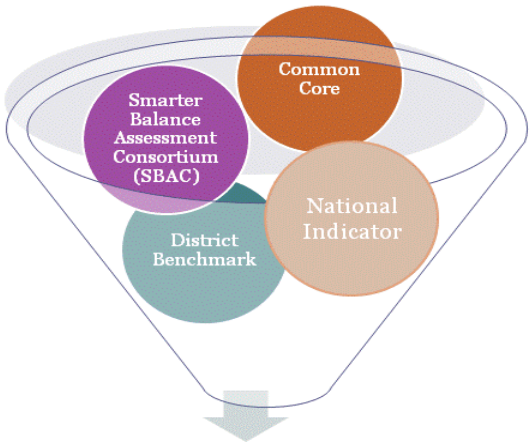
Day 1 and 2 — The What Stage

Day 3 and 4 — The How Stage

Day 5 — The Why Stage

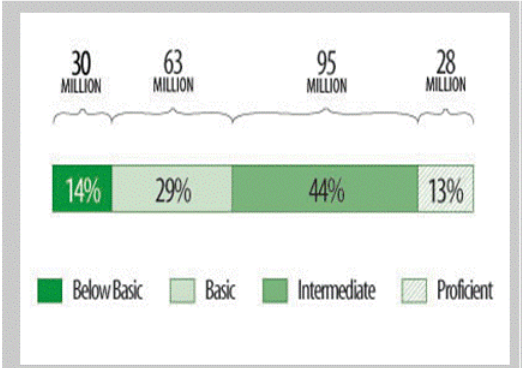
Negretti, R. (2012). Metacognition in student academic writing: A longitudinal study of metaconitive awareness and its relation to task perception, self-regulation, and evaluation of performance. Written Communication, 29(2). p.142-179/ doi: 10.1177/0741088312438529

Why a professional learning program?



Demand to develop critical thinking

National Indicators

National Assessment of Adult Literacy (NAAL)	Program for International Student Assessment (PISA)
	U.S. ranking in literacy 
Image: The National Center of Education Statistics. The National Assessment of Adult Literacy (NAAL). https://nces.ed.gov/naal/kf_demographics.asp	Access and retrieve information,19th Integrate and interpret ,16th Reflect and evaluate ,16th

National Indicators

<u>The American College Test (ACT)</u>

Only 31% of students in California students are college and career ready.

Break

California Assessment of Student Performance and Progress

By 11th grade:

Claims:

- Overall: "Students can demonstrate college and career readiness in English Language Arts."

But how?

Smarter Balanced Assessment Consortium.(2012). Claims for the English Language arts and literacy. Retrieved on August 17m 2015from www.smarterbalanced.org

What do claims tell us?

"Students can demonstrate college and career readiness in English Language Arts."			
Reading: "Students can read closely analytically to comprehend a range of increasingly complex literary and informational text (Smarter Balance Assessment Consortium, 2012)"	**Writing**: Students can produce effective and well-grounded writing for a range of purposes and audiences" (Smarter Balance Assessment Consortium, 2012)".	**Speaking and listening:** Students can employ effective speaking and listening skills for a range of purposes and audiences (Smarter Balance Assessment Consortium, 2012)"	**Research and Inquiry**: Students can engage in research and inquiry to investigate topics and to analyze, integrate, and present information (Smarter Balance Assessment Consortium, 2012)".

Smarter Balanced Assessment Consortium.(2012). Claims for the English Language arts and literacy. Retrieved on August 17m 2015 from www.smarterbalanced.org

Writing Claim: Sample of an 11th Grade Task.

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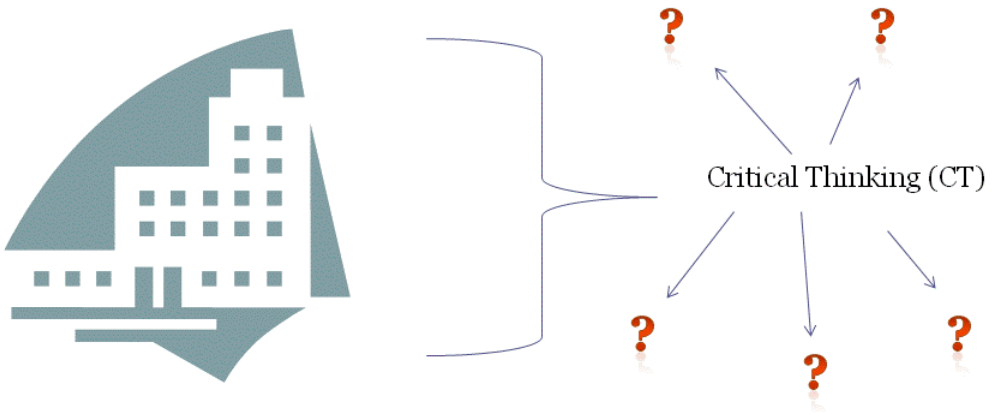
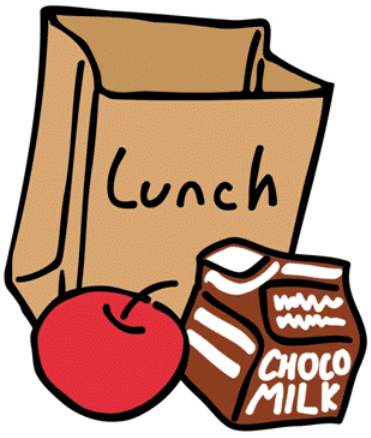


Characteristics of Critical Thinking

What is critical thinking?

Image: http://myrenhbarte.blogspot.com/2010/05/art-tools.html

Lunch



Dispositions in Critical Thinking

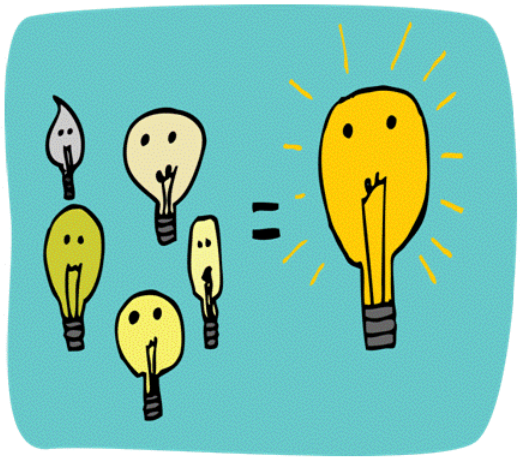
What are the dispositions we want our students to demonstrate when thinking critically?

Critical Thinking

Evidence and truths about logical situations, not judgments

(Paul et. al., 1997)

Gardner (1990) defined intelligence as the manifestation of an individual's knowledge domain in connection with the society that supports it and the values it promotes. Critical thinking can also be defined as a "reflective and reasonable thinking that is focused on deciding what to believe or do" (Ennis, 1985, p. 45).



Critical thinking is also characterized as a "form of thought, involves a state of doubt, hesitation, perplexity and complexity and also a desire for inquiry, retrieval, creation and integration that leads to resolution of the problem at hand" (Lizarraga, Baquedano, & Villanueva, 2012).

Critical Thinking: Dual Processing

System 1 Thinkin

Automatically

Mental shortcuts

System 2 Thinking

Slower

Conscious process

Self monitoring

Problem solve

System 1 or 2?

With your table group solve the following problem:

4+4=

The first group to solve the problem must come up to the front of the room.

System 1 or 2?

Tell the person next to you how to cook your favorite meal.

System 1 or 2?

Point to the tallest person in the room.

System 1 or 2?

or

Critical Thinking: System 2

self-monitoring
+
self reflection
=
metacognitive
process

Characteristics of Critical Thinking

What is critical thinking?

Image: http://myrenhbarte.blogspot.com/2010/05/art-tools.html

Closing

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(8 minutes).

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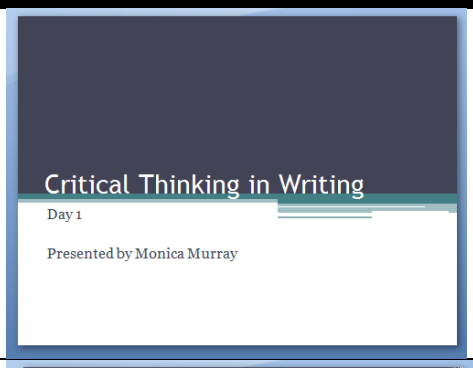
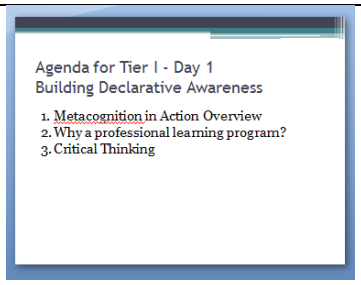
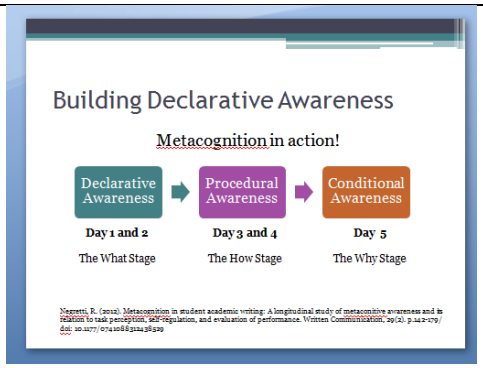
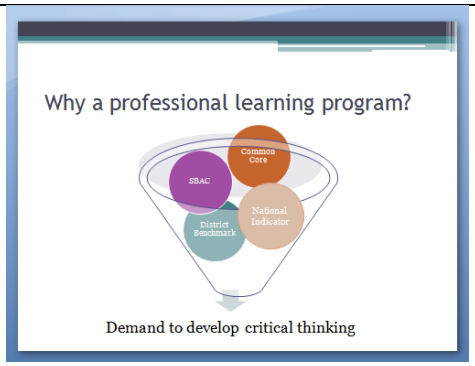
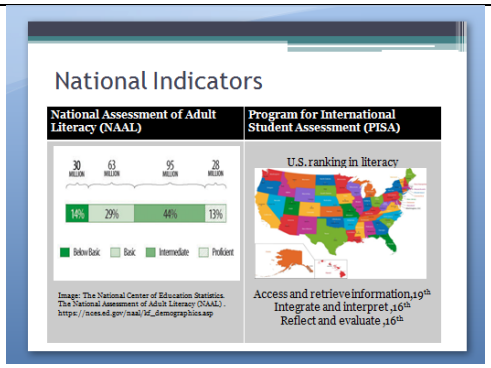
Sanfey, A. G., & Chang L. J. (2008). Of two minds when making a decision. Scientific American. Retrieved March 10, 2013, from http://www.scientificamerican.com/article.cfm.?id=of-two-minds-when making&print=true

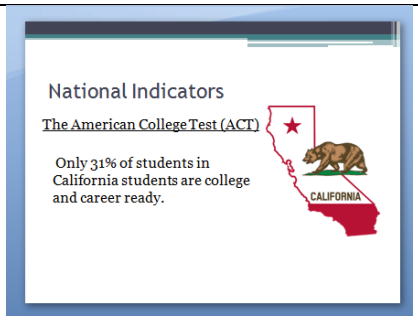
Day 1 Presenters Notes

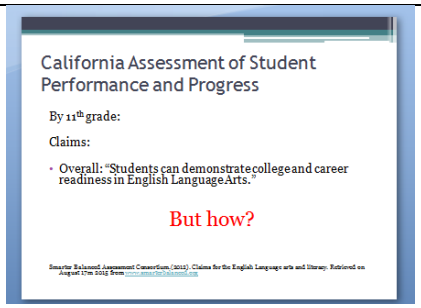
Slide	Presenter Script	Time
	Good morning teachers and administrators. Thank you for being part of the Critical Thinking in Writing Professional Learning Program. I am excited to start this journey with you.	8:00 a.m.-8:05 a.m.
	During the professional learning program, you will build the necessary supports for you and your site. As you see on this slide, this is a multi-tiered program. The first tier will focus on building the necessary foundation to understand critical thinking, metacognition, and develop units of study. During the second tier, one English Language Arts teacher and a site administrator will receive training on how to support teachers though coaching. The third tier will focus on developing the school leader and establishing a positive infrastructure at each school site to support critical thinking and writing. Do you have any questions at this time? Allow a few minutes for questions.	8:05 a.m.-8:15a.m.
	The following is the agenda for today. We are going to cover the following: 1. Metacognition in Action Overview 2. Why a professional learning program? 3. Critical Thinking The expectation for today is that participants walk away with an understanding of critical thinking	8:15 a.m. - 8:20a.m.

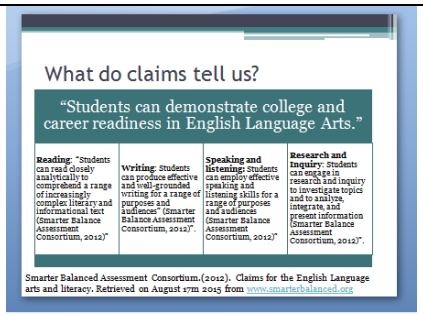
	Today we will focus on building your declarative awareness. What is declarative awareness? Declarative awareness is a term used in the research of Raffaella Negretti (2012) in which she conducted a longitudianl study of metacognitive awareness in relation to students perception of a task, self regulatation, and evaluation of student performance. Her research suggests that the way students perceive a task and develop their metacognition has an impact on how they (1) understand a writing task (the what) and (2)the why of the task. She examined how students build their metacognitive awareness in three distinct stages. Declarative awareness is the "what" of what one is learning. For the next two days you are going to focus on building the "what" behind critical thinking and metacognition and how both can be integrated into writing instruction. After developing declarative awareness, you will learn how to apply your new knowledge during day 3 and 4. During day 5, you will combine the "what" you learned with the "how" in order to ensure that our students receive critical thinking instruction in writing. Refer to visual on powerpoint when presenting.	8:20 a.m. - 8:30 a.m.

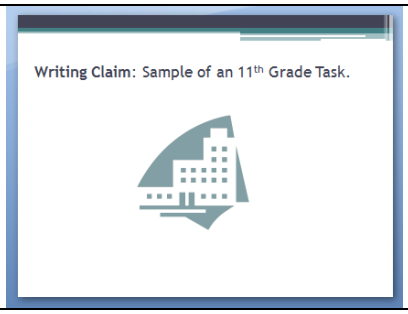
	Why do we need a professional learning program? How much time will this take? Is this really needed? These are probably some of the questions that you may be asking yourself right now. It is important to understand the why we are here. As you can see in this image there is currently a high demand to develop critical thinking. We have the new California State Standards which encompass the common core, ELD, and next generation science standards. Furthermore, we have data from district benchmarks and national indicators that discuss the need to increase the level of critical thinking across content areas. Finally, we have a new testing system across the state of California. The new testing system demands students to think critically and creatively by demonstrating their knowledge through writing.	8:30 a.m.-8:45 a.m.
	The National Assessment of Adult Literacy (NAAL) measured the literacy of people 16 years and older. According to the NAAL, the literacy level of adults in 2003 was lower than in 1992, this means that there were 11 million non-literate people in the United States (National Center for Education Statistics, 2003). Common Core State Standards Initiative (2012) states, "Being able to read complex text independently and proficiently is essential for high achievement in college and workplace and important in numerous life tasks" (p.3). Survey the audience: How many teachers or principals are familiar with the common core state standards? Who is willing to share one impact the common core has made in your instruction?	8:45 a.m. – 9:20a.m.

	(5-8 minutes for sharing). As many of you know, common core is here; it is not going anywhere. It is evident that our students are not only having a difficult time mastering the common core but the California Assessment of Student Progress and Performance. Porter et al.(2011) indicate that there is an overall emphasis in higher-order thinking on the cognitive demand rather than on memorization and recall. Thus, the CCSS creates a shift in assessments. The Smarter Balance Assessments assess knowledge-based tasks and higher-order thinking skills such as analysis, synthesis, and creation.(p.6) For instance, when students write an argument, they must, "think critically and deeply, assess the validity of their own thinking, and anticipate counterclaims in opposition to their own assertions" (Common Core State Standards Initiative, 2012c, p. 24). Students must understand the complexity of the task and metacognitively plan on how to achieve the task. Survey the audience: How many people are familiar with the Program for International Student Assessment (PISA)? Ask participants to share their insight on PISA. (5-8 minutes) The Program for International Student Assessment (PISA) assessed the level of proficiency among 15-year-olds in the area of reading literacy, math, science, and problem solving while embedding real-world context (International Activities Program, 2010). PISA measured three	

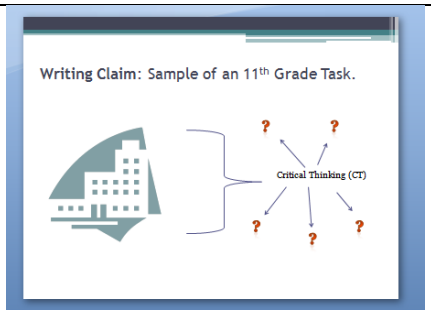
	literacy components of the situation, the text, and the cognitive approach (National Center for Education Statistics, 2011). The results were categorized under subscales: access and retrieve (U.S. 19th rank), integrate and interpret (U.S. 16th rank), and reflect and evaluate (National Center for Education Statistics, 2011). Overall, the United States ranked 14 out of 33 countries. The United States must increase the level of critical thinking and writing among students in order to compete in a global market.	
	How many teachers and or administrators are familiar with the American College Test? What does the test assess? Allow a few minutes for participants share their answer (5-8 minutes). The American College Test (ACT) is, "A curriculum-and standards-based educational and career planning tool that assesses students' academic readiness for college" (The ACT, 2013, para. 1). The result of ACT provides high schools with a comprehensive evaluation of a student readiness for college (ACT, 2006b). In addition, the ACT is calibrated to real world success which indicates a students' success in college and career (ACT, 2006b). ACT (2012a) reports focused on performance, access, course selection, course rigor, college readiness, awareness, and articulation. The ACT (2012) reported that the California education system needs to evaluate the rigor of courses, provide career and college guidance, ensure that students have the right courses, and provide equal access for all students.	9:20 a.m.- 9:50 a.m.

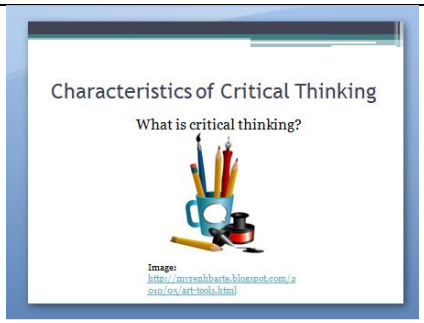
	After reviewing these data points, take the next few minutes with your group and answer these questions (8 minutes) 1. What can we do to prepare our students? 2. Are our standards helping target the gap present in literacy and critical thinking? Have various groups share their. As they share their answer, the presenter should be writing them on a poster. (10 minutes to share). Let's take a closer look at what the standards and state assessment are asking from students.	
Break		9:50 a.m.- 10:00 a.m.
	Students in grades 3-11 will take the Smarter Balance Assessments (Smarter Balanced Assessment Consortium, 2012b). They will have both a summative component and an optional interim component that will be done on a computer (Smarter Balanced Assessment Consortium, 2012a). On this slide, there is a sample claim from Smarter Balance Assessment Consortium. By 11th grade, the goal is for all students to demonstrate college and career readiness in English Language Arts. This claim addresses the need for schools to ensure that all students can graduate college and career ready in English Language Arts. As educators, we are in this profession to ensure that all students can achieve and be ready to enter the real world	10:00a.m- 10:10 a.m.

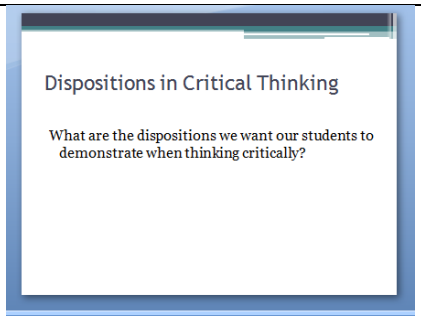
	and have the skills and intellect needed to succeed whether it is in college or any career of their choosing. But how will we do this? We will now take a closer look at what this claim tell us.	
	Under this claim there are four sub claims. For reading, "Students can read closely analytically to comprehend a range of increasingly complex literary and informational text (Smarter Balance Assessment Consortium, 2012)". Pause and allow question about this claim. Under writing, "students can produce effective and well-grounded writing for a range of purposes and audiences" (Smarter Balance Assessment Consortium, 2012)". Pause and allow questions about this claim. Under speaking and listening, "Students can employ effective speaking and listening skills for a range of purposes and audiences (Smarter Balance Assessment Consortium, 2012)" Pause and allow questions about this claim. Under research and inquiry, "Students can engage in research and inquiry to investigate topics and to analyze, integrate, and present information (Smarter Balance Assessment Consortium, 2012)". For the purpose of this training, we will focus in the area of writing in order to determine what type of critical thinking skills our students will need. Let's take a look at the writing claim, it states that students should be well grounded in purposes and audiences. Take the next few minutes and answer the	10:10 a.m.-10:50a.m.

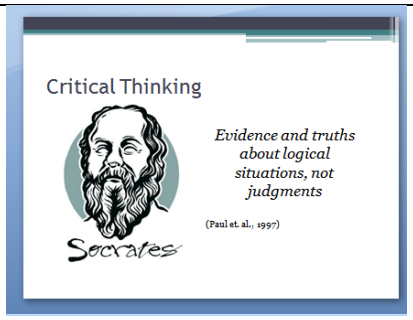
	following questions in relation to the writing claim: 1. How do we prepare students to be well grounded? 2. What type of skills or knowledge do our students need before they exit high school in the area of writing? (10 minutes) Now that you were able to brainstorm some answers, turn to the person next to you and discuss your thoughts. Let's take an even closer look at this claim within an 11th grade writing performance task. A performance task is a type of instrument that shows potential for the measurement of complex constructs such as critical thinking" (Saxton, Belanger, & Becker, 2012, p. 253). Performance-based assessments are part of the Smarter Balance Assessments all students will take in spring 2015. The assessment "uses performance tasks to measure skills valued by higher education and the workplace — critical thinking, problem solving, and communication — that are not adequately assessed by most statewide assessments today" (Smarter Balance Consortium, 2012b).	
	Smarter Balance Assessment Consortium has a bank of performance tasks that not only address the common core standards in writing but demonstrate how all four claims interconnect in one simple performance task. As mentioned in the previous slide, SBAC "uses performance tasks to measure skills valued by higher	10:50 a.m.- 11:00 a.m.

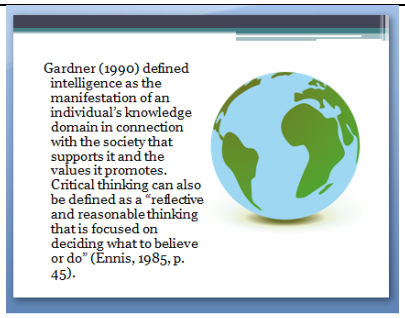
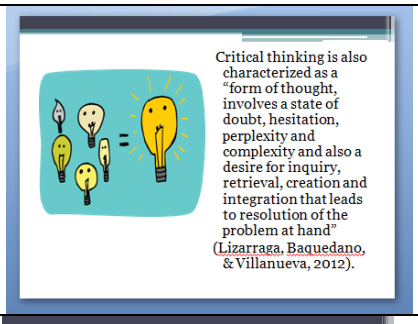
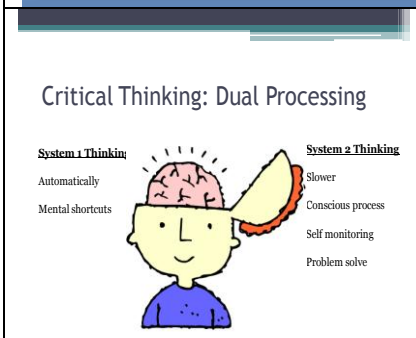
	education and the workplace — critical thinking, problem solving, and communication — that are not adequately assessed by most statewide assessments today" (Smarter Balance Consortium, 2012b). Now I will read a performance from Smarter Balance Assessments for an 11th grade student. As I read the performance task, I want you to jot down all of the things an 11th grader will have to do: " Your neighborhood's city council representative has asked you for a recommendation about whether to continue funding the local art museum. She will use your recommendation in a speech about the issue at an upcoming meeting. She will deliver the speech to an audience of city government officials and citizens. Your assignment is to use the sources to write a multi-paragraph argumentative paper supporting or opposing the funding of the local art museum. Make sure you establish an argumentative claim, and address potential counter arguments, and support your claim from the sources you read. Develop your ideas clearly and use your own words, except when quoting directly from the sources. Be sure to reference the sources by title or number when using details or facts directly from the sources (Smarter Balance Assessment Consortium, p.29)	

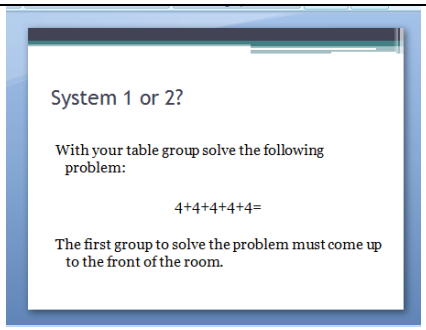
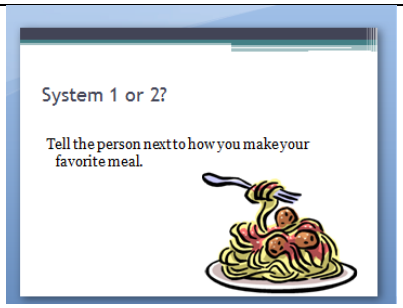
	With the person sitting next to you, discuss some of the items you wrote as you listened to this task. (3 minutes) Survey the room: Now how many of you have one item on your list? Two? Four? Maybe ten? There are quite of bit of thinking students have to do. I am going to read it one more time. This time as I read it, I want you to sort through your list and write CT for critical thinking next to a task that might require a student to think critically. Re-read the passage: “ Your neighborhood’s city council representative has asked you for a recommendation about whether to continue funding the local art museum. She will use your recommendation in a speech about the issue at an upcoming meeting. She will deliver the speech to an audience of city government officials and citizens. Your assignment is to use the sources to write a multi-paragraph argumentative paper supporting or opposing the funding of the local art museum. Make sure you establish an argumentative claim, and address potential counter arguments, and support your claim from the sources you read. Develop your ideas clearly and use your own words, except when quoting directly from the sources. Be sure to reference the sources by title or number when using details or facts directly from the sources (Smarter Balance Assessment Consortium, p.29) Now that you closely listened, discuss with	11:00a.m.- 11:40 a.m.

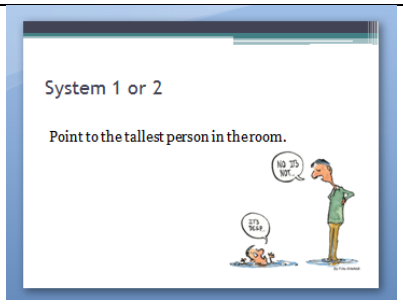
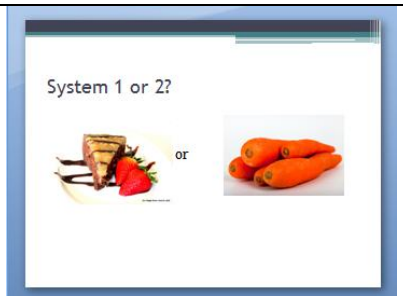
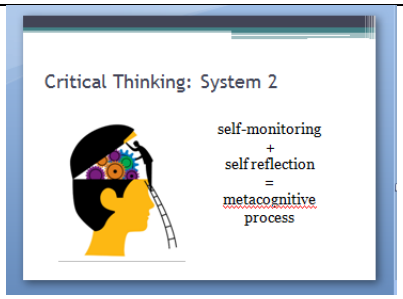
	your partner which tasks you considered critical thinking and which you did not? (10 minutes) Now ask your partner "How do you know the task will require critical thinking?" Take the next few minutes and discuss why it might take critical thinking for student to complete the task. (3 minutes) Round table discussion: Now let's make a list of what you considered to be a critical thinking task. Go throughout the room and make a t-chart based on the feedback. One side of the column will be for critical thinking and the other side will be for non critical thinking. Let the participants know that an answer will not be given . The purpose of this activity is to spark the discussion of what is critical thinking and what it is not.	
	What is critical thinking? You were able to analyze a performance task and identify tasks within the performance task that suggest that it might require critical thinking. But what is critical thinking? What do you think critical thinking is? Activity: I am going to number you off 1-4. You are to go with your assigned number. Once you are in the group, I want you to draw what critical thinking is. Do not use any words just pictures? Draw what your group determine what critical thinking is. Provide each group with time. Have each group share out their drawing. Now that we have a better understanding of	11:40 a.m.-12:20 p.m.

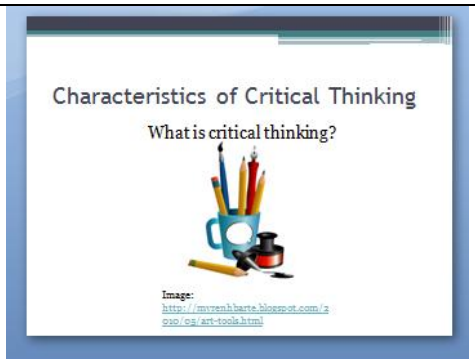
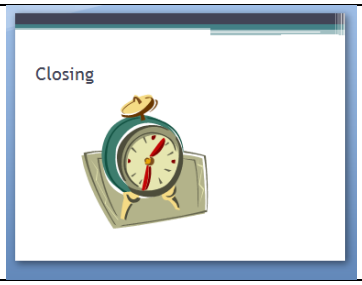
	critical thinking, when you come back from lunch we will discuss how to develop critical thinking dispositions among our students.	
Lunch		12:20p.m. - 1:00p.m.
	Now that we brainstormed what we perceive critical thinking to be, we will begin to examine the dispositions we want our students t have when they are in the process of thinking critically. According to the California Critical Thinking Disposition Inventory (CCTDI, 2003), dispositions are thinking skills such as the ability towards, "truth-seeking or bias, toward open-mindedness or intolerance, toward anticipating possible consequences or being heedless of them, toward proceeding in a systematic or unsystematic way, toward being confident in the powers of reasoning or mistrustful of thinking, toward being inquisitive or resistant to learning, and toward mature and nuanced judgment or toward rigid simplistic thinking". What are the dispositions we want our students to demonstrate when thinking critically? Go back to the poster you were working on. As a group, discuss the types of dispositions we would like our student to have? How does a 21st century college and career ready act, think, and behave? Give groups 10 minutes to discuss and write out dispositions. Have groups share their findings. Share out for 5 minutes.	1:00 p.m.- 1:30p.m.

	Having a disposition towards critical thinking takes time to develop. For instance, how many people know who Socrates is? Allow a few minutes for people to give some answers. How about the Socratic seminar? What is the Socratic Seminar? Some teachers who use AVID may be familiar with this. Socrates believed that a person cannot rely on an authority for judgment but must find evidence and truths about logical situations and assumptions (Paul et al., 1997). This type of thinking begins with how humans use "cognitive skills or strategies that increase the probability of a desirable outcome-in the long run, critical thinkers will have more 'desirable' outcomes than 'noncritical' thinkers" (Halpern, 1998, p. 450). In the long run, desirable outcomes will lead to success in school, college, and career choices. Does identifying evidence and truths help develop our critical thinking? Will it help students lead to success in college and careers? Give participants a few minutes to discuss (3 minutes). Can we help high school students develop a desirable outcome? If so, how would we do this?	1:30 p.m.-1:40p.m.

	Howard Garner (1990) who is a professor at Harvard in the school of Cognition and Education, is famously known for his theory of multiple intelligence which defines intelligence as the manifestation of an individual's knowledge domain in connection with the society that supports it and the values it promotes. Critical thinking can also be defined as a "reflective and reasonable thinking that is focused on deciding what to believe or do" (Ennis, 1985, p. 45). How does society view critical thinking today versus critical thinking 100 years ago? Provide time for participants to discuss and talk.	1:40p.m.-1:50 p.m.
	Critical thinking is also characterized as a "form of thought, involves a state of doubt, hesitation, perplexity and complexity and also a desire for inquiry, retrieval, creation and integration that leads to resolution of the problem at hand"(Lizarraga, Baquedano, & Villanueva, 2012).	1:50p.m.-1:55p.m.
	How does the brain know when it is thinking critically or solving a hard task? The decisions made as the mind reaches out and assimilates stems from two systems of thinking: System 1 and System 2. Although the dual processing theory is questionable by some, it demonstrates how human thinking works. Dual process theory has characteristics of dividing "the mental processes underlying social judgments and behavior into two general categories depending on whether they operate automatically or in a controlled fashion" (Gawronski & Creighton, 2014, p. 1). System 1 thinking occurs automatically; it	1:55 p.m.-2:10 p.m.

	involves the mental shortcuts that help an individual to process answers automatically (Gawronski & Creighton, 2014; Sanfey & Chang, 2008). System 2 thinking is a slower conscious process an individual uses to monitor oneself to answer or solve a problem. Although these two systems are considered to be independent of each other, Keren and Schul (2009) stated that they require higher-order mental tasks that are interdependent of each other and cannot stand alone. How do we develop System 1 and System 2 thinking?	
	Let's practice With your table group solve the following problem: 4+4= The first group to solve the problem must come up to the front of the room. Did you use system 1 thinking or system 2 thinking? For us, this is a more fast and automatic thinking. It does not require a great deal of mental effort.	2:10 p.m.- 2:15 p.m.
	Tell the person next to you how to cook your favorite meal. Give them one minute Did you use your system 1 or system 2 thinking? For most people this may require some effort. It would not be considered a higher order skill but a procedural skill that would require us to retrieve information.	2:15 p.m.- 2:20 p.m.

	Point to the tallest person in the room. Give them one minute. Did you use your system 1 or system 2 thinking? For some of us, this required no effort. You had an automatic reaction to point to the tallest person in the room.	2:20 p.m.-2:25p.m.
	Which one do you choose? Give them a minute Did you use your system 1 or system 2 thinking? Hopefully you were able to use your system 2 thinking where you thought critically and self reflective on what a good choice would be. You evaluated your options and determined the best solution. Some of you demonstrated self control. Part of system 2 thinking is developing that level of metacognition where students can self reflect about their thinking and eventually in writing.	2:25p.m.-2:30 p.m.
	When teachers teach a student a CT skill, the student will be able to develop shortcuts within their System 1 thinking. This may be applied more rigorously through System 2 self-monitoring and reflection. To develop this type of metacognitive process, the underlying principles of metacognition needs to be understood. The cognitive process of metacognition consists of two processes: monitoring and control (Perfect & Schwartz, 2004). In this same source, metacognitive monitoring, “allows the individual to observe, reflect on, or experience his or her own cognitive process” (Perfect & Schwartz, 2004, p. 4).	2:25p.m.-2:35p.m.

	It is also the "conscious and non-conscious decisions that individuals make based on the output of the monitoring process" (Perfect & Schwartz, 2004, p. 4). When both systems work together, they build a meta-level operating system that helps in developing higher-order thinking skills. Once the skills are developed, students can use these multiple metacognitive skills to address problems (Mango, 2010).	
	Let's revisit our posters we created on CT. Now that we were able to develop a deeper understanding of CT, go back to your poster and add words that can provide a better definition of what CT means to you and your team. More poster paper is available for groups who need more room to write. Share out posters.	2:35 p.m.- 2:55 p.m.
	Today, we unpacked critical thinking and determined the dispositions and skills we want our students to develop. Tomorrow we will go even further and develop our metacognition awareness and the impact it can have in developing 21st century writers.	2:55p.m.- 3:00p.m.

Day 1 Handouts

Note Taking Guide

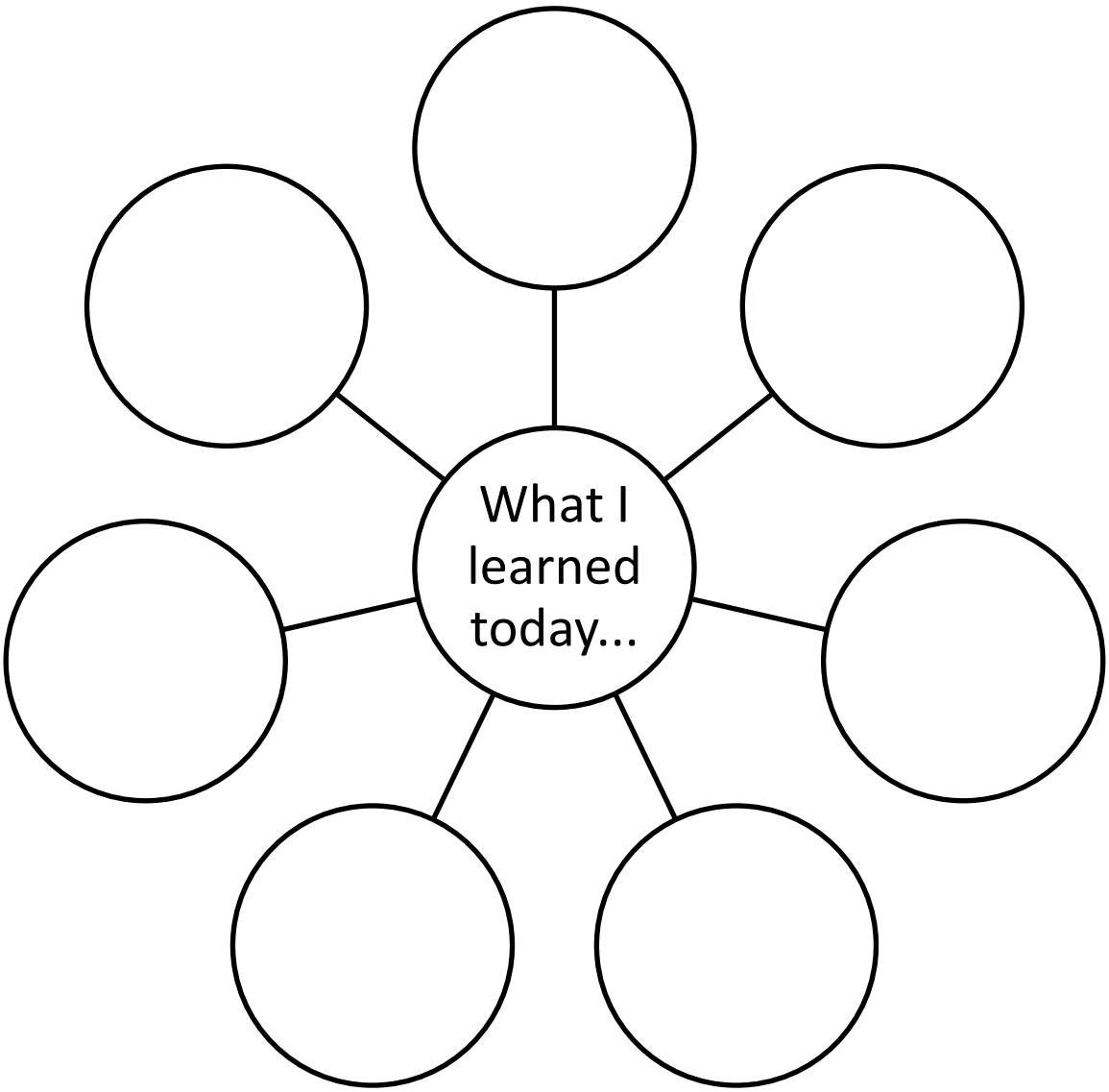
Topic	Key Points

11th Grade Sample of a Performance Task

Tasks	Critical Thinking Which task requires critical thinking?	Group Consensus
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐		

Critical Thinking Recap

Directions: Answer the following question, “What did I learn today about critical thinking?” using the graphic organizer

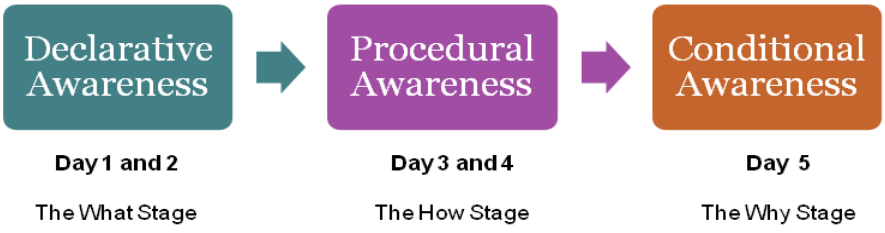


Day 2 of Professional Learning Program

Professional learning Program

Building Declarative Awareness

Metacognition in action!

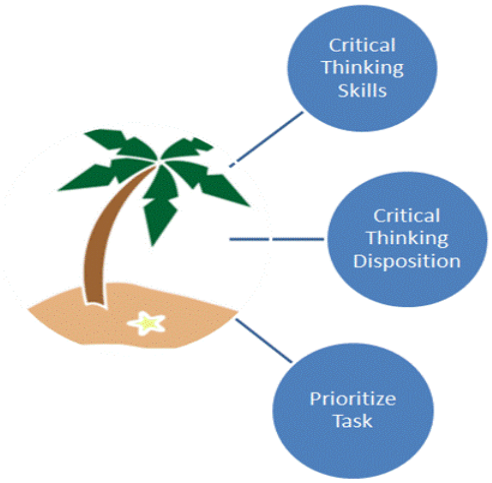


Negretti, R. (2012). Metacognition in student academic writing: A longitudinal study of metaconitive awareness and its relation to task perception, self-regulation, and evaluation of performance. Written Communication, 29(2). p.142-179/ doi: 10.1177/0741088312438529

Agenda

- 1. Welcome
- 2. Critical Thinking Recap
- 3. Metacognition
- 4. Metacognition in writing
- 5. Strategy Brainstorm

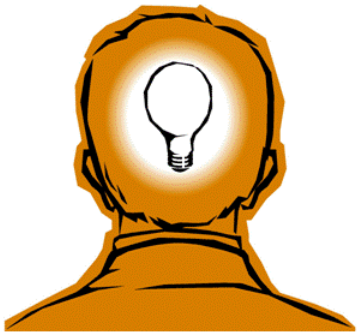
Wake-up Brainstorm



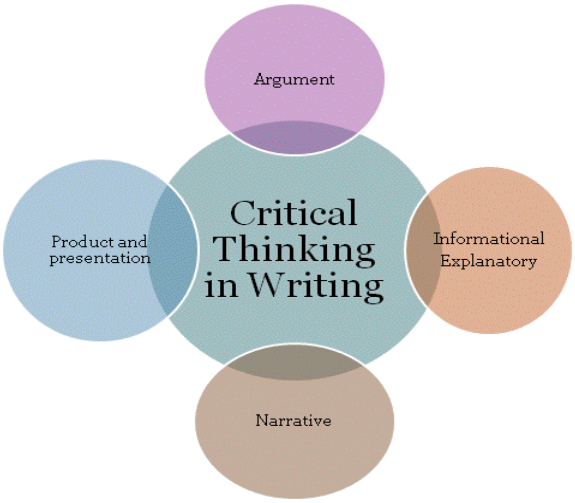
Critical Thinking Recap

What is critical thinking?

Why do we need to teach critical thinking?

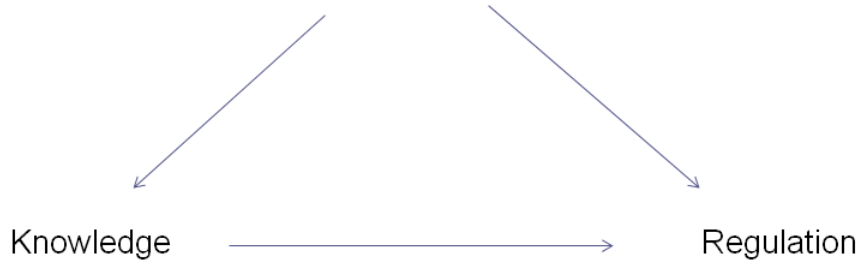


Critical Thinking Recap



Role of metacognition in critical thinking

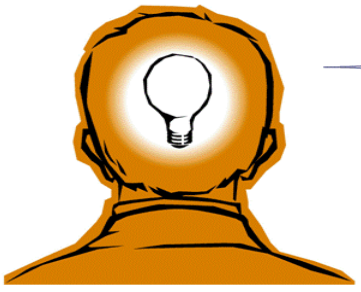
"Thinking about Thinking" (Ku & Hi, 2010)



Metacognitive monitoring, "allows the individual to observe, reflect on, or experience his or her own cognitive process" (Perfect & Schwartz, 2004, p. 4).

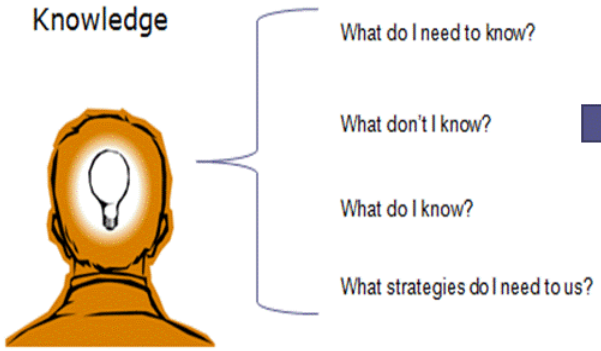
What is metacognition?

Knowledge



- What do I need to know?
- What don't I know?
- What do I know?
- What strategies do I need to use?

What is metacognition?



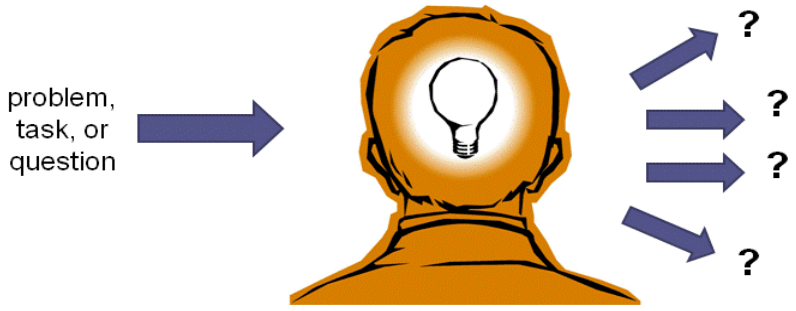
Regulation

How will I:

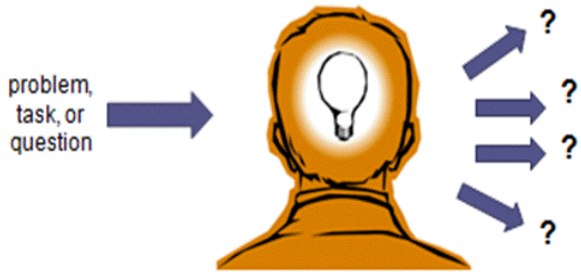
- Devise a **plan**
- **Monitor** my thinking
- **Comprehend** what I am learning
- **Evaluate** my thoughts and actions

Metacogntion

What can we do to ensure our students are able to monitor and regulate their learning?



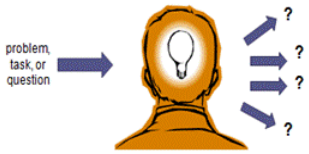
Metacognitive Planning



Task:

For the next 10 minutes within your group you will brainstorm self-ask questions/stems for students to use with a given task.

Day 1 Task:



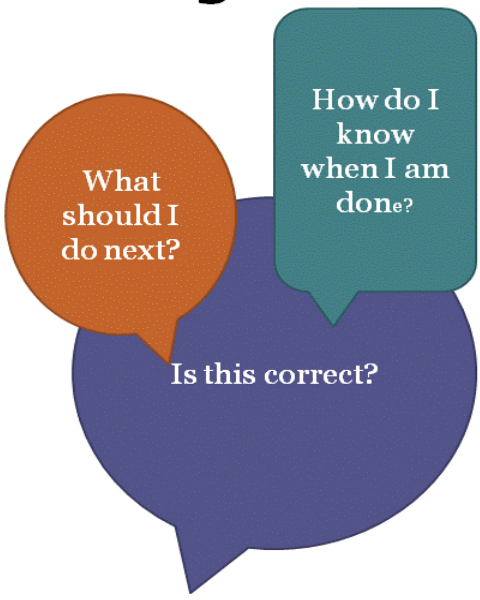
" Your neighborhood's city council representative has asked you for a recommendation about whether to continue funding the local art museum. She will use your recommendation in a speech about the issue at an upcoming meeting. She will deliver the speech to an audience of city government officials and citizens. Your assignment is to use the sources to write a multi-paragraph argumentative paper supporting or opposing the funding of the local art museum. Make sure you establish an argumentative claim, and address potential counter arguments, and support your claim from the sources you read. Develop your ideas clearly and use your own words, except when quoting directly from the sources. Be sure to reference the sources by title or number when using details or facts directly from the sources "(Smarter Balance Assessment Consortium, p.29)

Reference:
Smarter Balance Assessment Consortium. (2012). English Language Arts Performance Task Specifications: Grade 11 Argumentative Writing. Retrieved on August 17 from www.smarterbalance.org

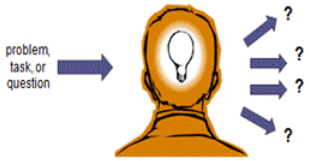
Lunch

Metacognition: Monitoring

- How are students aware of what they are doing?
- Self monitoring.



Day 1 Task:



" Your neighborhood's city council representative has asked you for a recommendation about whether to continue funding the local art museum. She will use your recommendation in a speech about the issue at an upcoming meeting. She will deliver the speech to an audience of city government officials and citizens. Your assignment is to use the sources to write a multi-paragraph argumentative paper supporting or opposing the funding of the local art museum. Make sure you establish an argumentative claim, and address potential counter arguments, and support your claim from the sources you read. Develop your ideas clearly and use your own words, except when quoting directly from the sources. Be sure to reference the sources by title or number when using details or facts directly from the sources "(Smarter Balance Assessment Consortium, p.29)

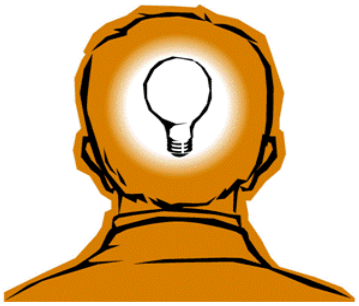
Reference:
Smarter Balance Assessment Consortium. (2012). English Language Arts Performance Task Specifications: Grade 11 Argumentative Writing. Retrieved on August 17 from www.smarterbalance.org

Metacognitive Monitoring

Halpern (1998) uses the following guide questions:

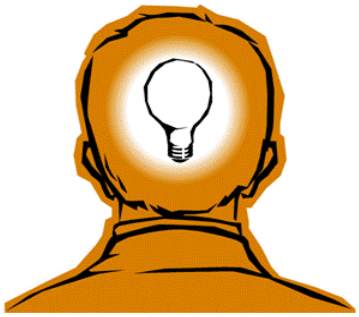
- How much time and effort is this problem worth?
- What does the writer already know about this problem or argument?
- What is the goal or reason for engaging in extended and careful thought about this problem or argument?
- How difficult does the writer think it will be to solve this problem or reach a conclusion?
- How will the writer know when they have reached the goal?
- What critical thinking skills are likely to be useful in solving a problem or analyzing this argument?
- Does the writer move towards a solution? (p.454)

Metacogntion: Evaluation



- How are students processing their own language ?
- How can students check for understanding.?
- How do they evaluate their work?

Can metacognition be taught?



Can it be taught?

Metacognitive monitoring and control are necessary for daily decision-making, processing of information, and making judgments (Lai, 2011b; Mango, 2010). **Teachers should model the process and allow students opportunities to observe a critical thinking skill in action, develop relevancy, and reflect on it** *(Mango, 2010; Martinez, n.d.; Swartz, 2008). In essence, "for students to think critically, they should be taught how to be aware of the underlying specific ways to think" (Mango, 2010, p 152).*

Let's Practice

julie and kyle rannded to the park and fell and tripped and found a ball, them loved to play in parck.

Reflection

How can doing a "think aloud" assist students in developing critical thinking and metacognitive processing?

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Halpern, D.F. (1998). Teaching critical thinking for transfer across domains dispositions, skills, structure training, and metacognitive monitoring. *American Psychologist*, *53*(4), 449-455. doi:10.1037/0003-066X.53.4.449

Halpern, D.F. (2003). *Thought and knowledge: An introduction to critical thinking*. (4th ed.). Mahwah, NJ: Laurence Erlbaum Associates.

Ku, K. Y. L., & Ho, I. T. (2010). Metacognitive strategies that enhance critical thinking. *Metacognition Learning*, *5*, 251-267. doi:10.1007/s11409-010-9060-6.

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Marin, L. M., & Halpern, D. F. (2011). Pedagogy for developing critical thinking in adolescents: Explicit instruction produces greatest gains. *Thinking Skills and Creativity*, *6*, 1-13. doi:10.1016/j.tsc.2010.08.002

Mango, C. (2010). The role of metacognitive skills in developing critical thinking. *Metacognition Learning*, *5*, 137–156. doi: 10.1007/s11409-010-9054-4

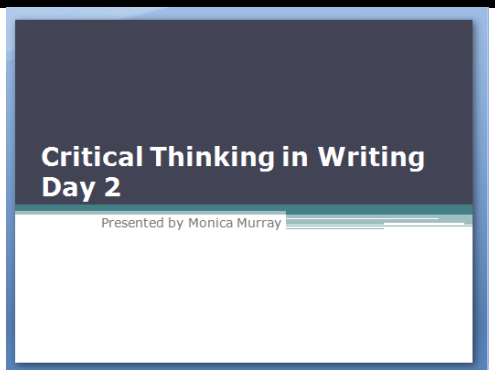
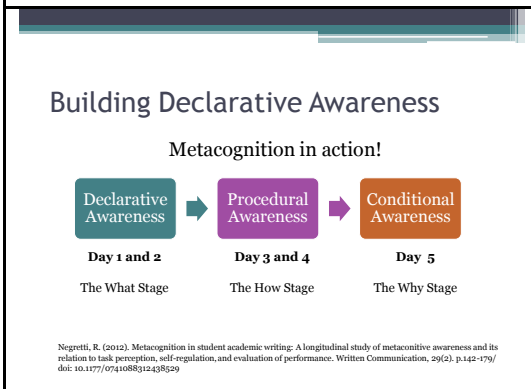
Perfect, T. J., & Schwartz, B. L. (2004). *Applied metacognition.* New York, NY: University of Cambridge.

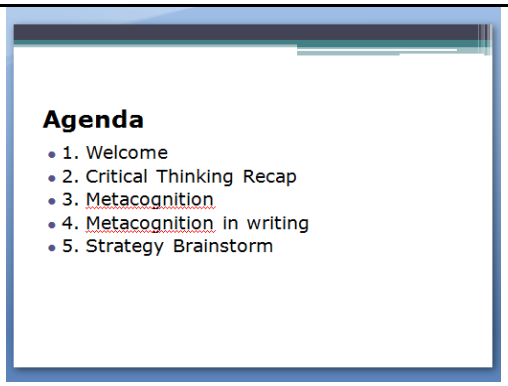
Saiz, C., & Rivas, S. F. (2011). Evaluation of the ARDESOS program: An initiative to improve critical thinking skills. *Journal of Scholarship of Teaching and Learning, 11*(2), 34-51.

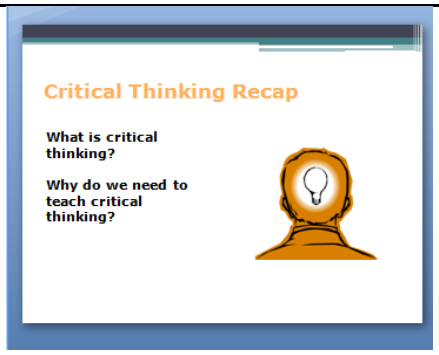
Shakirova, D. M. (2007). Technology for the shaping of college students' and upper grade students' critical thinking. *Russian Education and Society, 49*(9), 42-55. doi:10.2753/RES1060-9393490905

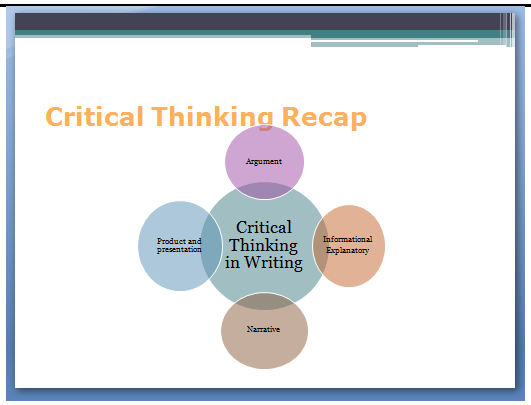
Smarter Balance Assessments Consortium. (2012b). Smarter balanced releases sample assessment items and performance tasks. Retrieved November 25, 2013, from http://www.smarterbalanced.org/news/smarter-balanced-releases-sample-assessment-items-and-performance-tasks/

Day 2 Presenters Notes

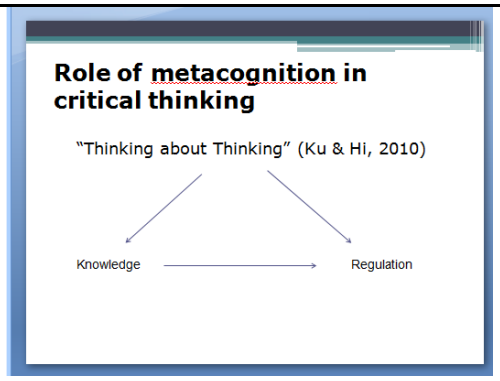
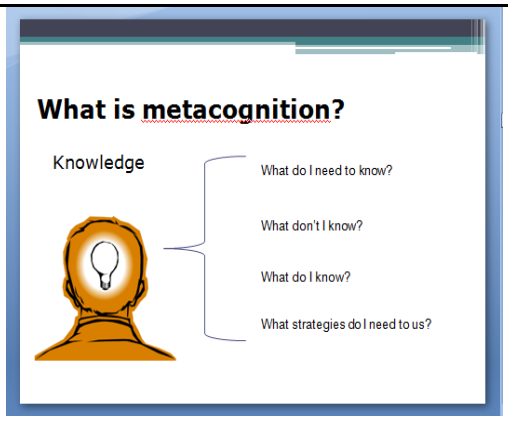
Slide	Presenter Notes	Time
	Welcome back to day two of the professional learning program "Critical Thinking in Writing." Ask participants their insights on yesterday. Allow a few minutes for participants to share insights from yesterday.	8:00a.m.-8:05a.m.
	Yesterday we went over critical thinking and how it is connected with the common core state standards, SBAC, and college and career readiness focus in education. We were able to develop our declarative awareness in critical thinking. Today we are going to continue to build our awareness and build our knowledge on metacognition.	8:05a.m.-8:08a.m.
	Today we are going to continue to build our declarative awareness and build our knowledge on metacognition.	8:08a.m.-8:09a.m.

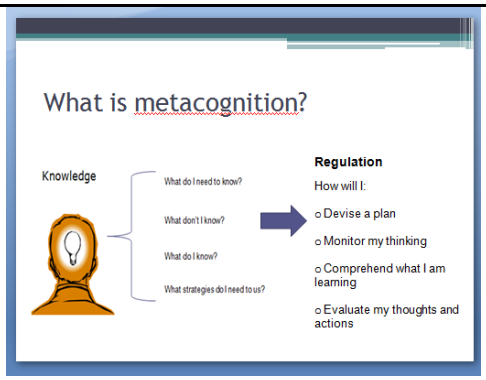
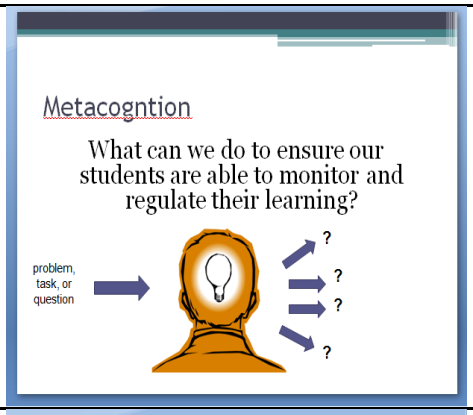
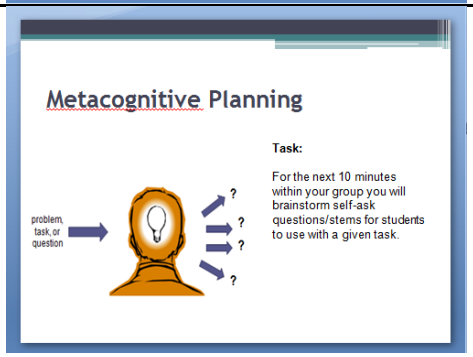
	We are going to review what we learned on day one of the professional learning program. We are going to build our knowledge on metacognition and how it can be applied in writing. Towards the end of the day we are going to have a strategy brainstorm session.	8:09a.m.-8:10a.m.
	Imagine that you decided to go on a 7 day Carnival cruise to the Bahamas with some friends. You decided to go in mid August knowing perfectly well that it was the middle of the hurricane season. As you entered day four of your trip, the cruise liner was tossed into the ocean by a strong hurricane. Unwillingly you reached for the closest piece of debris and held on for dear life. After 2 days out in sea, you spotted land and you were able to swim toward it. Once on land you felt helpless and didn't know what to do. As you walked along the beach you noticed a small graphic organizer, similar to the one that is on the table. The graphic organizer outlined critical thinking skills you need to survive, disposition you need to have to live on an island, and a list of prioritized task. Since you, the audience, have already been on this island you will have 20 minutes to discuss the critical thinking skills, disposition, and a prioritized list of tasks this person will need in order to survive. As you discuss, use the chart paper underneath the graphic	8:10a.m.-9:00a.m.

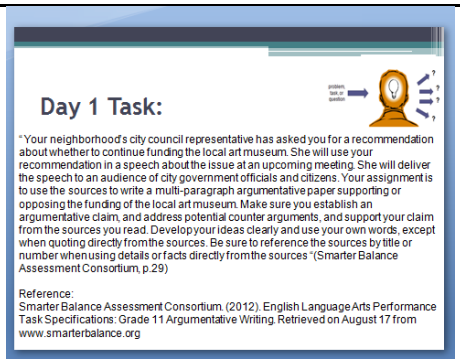
	organizer to write down the CT skills, disposition, and prioritized tasks. Each group will share their skills, dispositions, and prioritized tasks. As they share their critical thinking skills ask participants whether it will require system 1 or system 2 thinking. How do the critical thinking skills, dispositions, and prioritized task you did this morning relevant to education? Allow a few minutes for discussion. The task was a real world scenario that allows students to use their system 2 thinking. Students would need to self-reflect, self-evaluate, prioritize, and synthesize how to survive. Let's recap how the connection between this scenario and critical thinking is possible.	
	What is critical thinking? Allow participants to recap their thoughts from yesterday. Critical thinking is the self analysis process in which humans uses their system 2 thinking to consciously process and monitor oneself to answer or solve a problem. CT can be defined as a multidimensional construct that requires skills, reasoning, and self-regulation (Bensley & Murtagh,	9:00a.m.-9:10a.m.

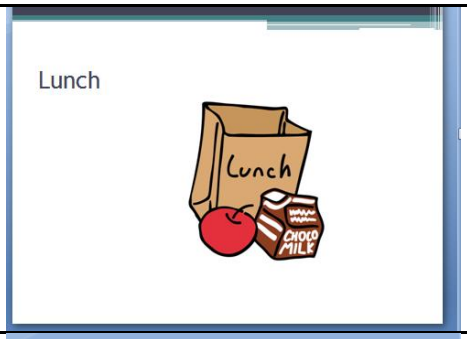
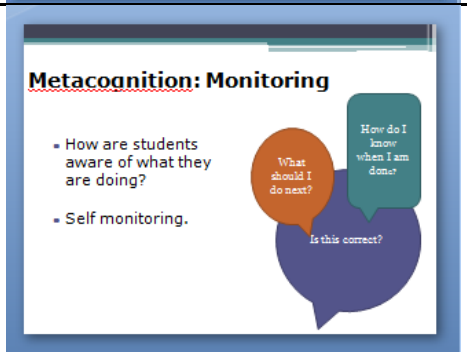
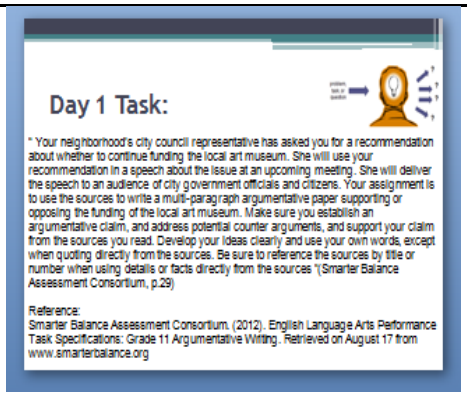
	2012). It is also described as a process of acquiring knowledge through reasoning skills, problem-solving, and decision-making (Saiz & Rivas, 2008). Why do we need to teach critical thinking? It is important not only to encourage critical thinking within the professional learning program but it is ideal to specifically teach students how to think about thinking within the context of real world experiences. Did the scenario from this morning require students to think critically? Allow participants a few minute to share out.	
	How can we teach our students to think critically? You will be numbered off 1-4. All the number ones will go to east of the room. All the number two's will go to the west side of the room. All number three's will go to the north side of the room. All the number fours will go the south side of the room. Each group will have a poster. All number ones will focus on argumentative writing. All number two's will focus on informational/explanatory writing All the number three's will focus on narrative writing.	9:10a.m.-10:10a.m.

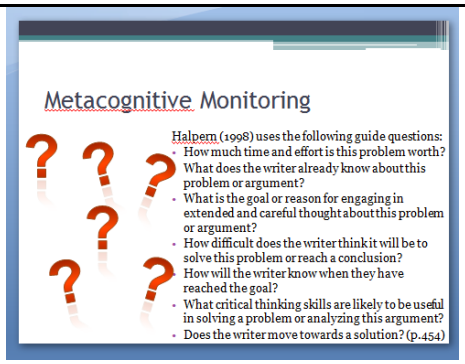
	All the number four's will focus on the product and presentation of writing. Each group will have a set of standards for reference. You will have 10 minutes to draft some critical thinking strategies. After ten minutes each group will rotate to the next area. When you rotate to the next area, you will have a chance to add more strategies and put a star next to the one strategy from the previous group that is truly a critical thinking strategy. At the end of the entire rotation cycle, each group will present their work. They will share the top three critical thinking strategies and one strategy that they never would have thought of before. The purpose of this activity is for teachers to self-reflect on their own instructional practice and share critical thinking strategies that can have a direct impact on student writing. The goal of CT instruction should be to prepare students "to deal effectively with social, scientific, and practical problems" (Shakirova, 2007, p. 42). Being able to self-regulate and infer are essential CT skills that students need during writing, especially in problem-solving tasks.	
	Break	10:10a.m.-10:20 a.m.

	Metacognition is "thinking about thinking" (Ku & Ho, 2010). Metacognition can further be defined as the cognitive process where humans carry out tasks and cognitively identify specific strategies to perform the given task. This consists of two components: knowledge and regulation (Ku & Ho, 2010).	10:20 a.m.-10:25a.m.
	Knowledge refers to the understanding of self in regards to thinking (Ku & How, 2010; Perfect & Schwartz, 2004). It is how we evaluate what we know, what we need to know, what we don't know, and what strategies we will need. The knowledge component of metacognition occurs rather rapidly with students. If a student is about to answer an argumentative performance task on SBAC, he or she must be equipped with strategies to answer a complex problem. If students are not equipped with the right strategy, they will not be able to regulate their thinking. What other questions do you think students may internally ask? Talk to your table (3 minutes). Allow time for participants to share questioning. Make a list on chart paper.	10:25a.m.-10:40 a.m.

	Regulation in the metacognitve realm refers to the strategies humans use throughout the thinking process such has planning, monitoring, comprehending, and evaluating (Ku & Ho, 2010). When the level of knowledge increases, students are able to regulate their thinking and select strategies to execute a task (Ku & Ho, 2010). Within the knowledge and regulation component, metacognition can further be divided up into planning, monitoring, and evaluating (Ku & Ho, 2010). When all three categories are taught and fostered, students can apply them to a problem-solving task (Halpern, 1998).	10:40 a.m.-11:00 a.m.
	What can we do to ensure our students are able to monitor and regulate their learning? Allow participants a few minutes to discuss at their table. Select a few to share out response.	11:00 a.m.-11:10 a.m.
	In order for students to regulate their thinking and begin to process their planning, organization needs to take place. During the planning phase students begin to "self ask" and develop an understanding of a given task. How will they self manage? Will they use a graphic organizer? How will they pay attention to the	11:10 a.m.-11:20 a.m.

	central task? Unfortunately not all of our students are equipped with the concept of self-asking. They may not know what type of questions to ask or where to start. For the next 10 minutes, brainstorm with your group questions that will help students to metacognitvely plan their thinking. Refer to following slide.	
	Reread the following task from Day 1 training. With your group brainstorm questions that will help students to metacognitvely plan their thinking. Refer to following slide. Write all questions on chart paper. After participants have 10 minutes to brainstorm, each group will post their chart paper on the wall. Each group will do a gallery walk as a group. As they go through each chart paper, they will place a star next to the question that focuses the most on planning. They are not allowed to choose the same question in each group. Discussion: Which questions stood out the most and why? Allow participants to share questions. Provide them with their note taking template where they can write down self-asking questions for planning.	11:20a.m.-12:00p.m.

		12:00p.m.12:40p.m.
	Before we went to lunch we brainstormed some self- ask questions to help students plan around a given task. We will now take a look at the monitoring component of metacogition. During monitoring, a student is self aware of what he or she is doing. What can we do to help students develop a self-monitoring awareness towards the given task?	12:40 p.m.-12:50 p.m.
	Let's go back to the task. On the chart paper, discuss strategies that your group can use to help students self monitor. For each strategy give an example. For example, if I state rubric, I am going to give an example of a rubric that will help students self-monitor. I want at least three self-monitoring strategies or supports you will provide students using this task. You will have 15 minutes. After the 15 minutes we will do a gallery walk and select the best strategy from each poster.	12:50p.m.-1:20p.m.



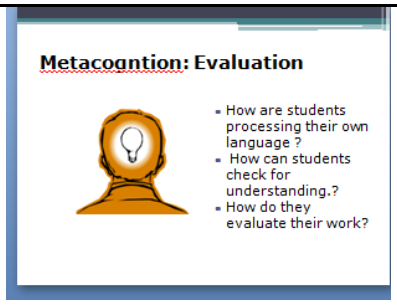
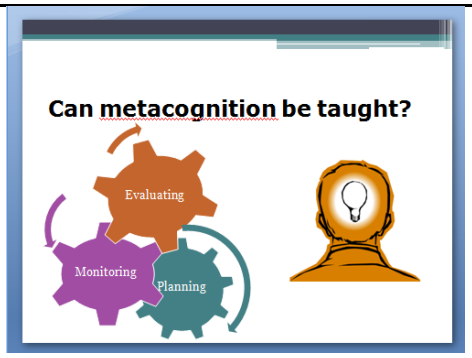
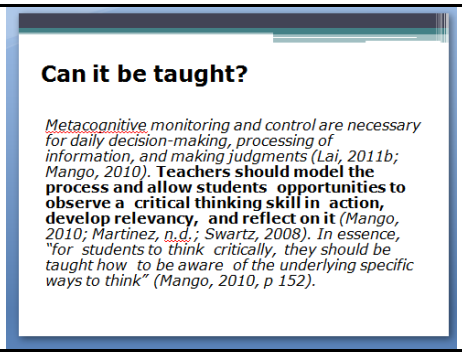
Essential questions to use while preparing students to solve real world situations are discussed as metacognitive monitoring in Halpern's research on CT. Halpern (1998) uses the following guide questions:

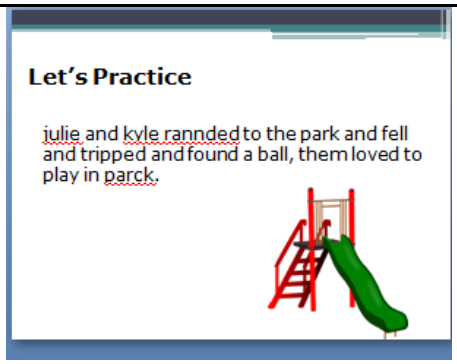
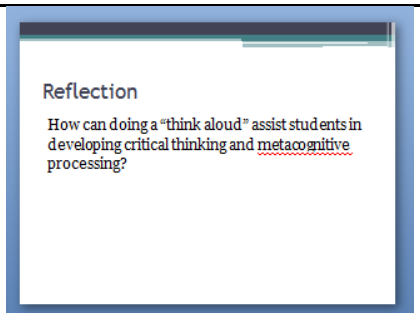
- How much time and effort is this problem worth?
- What does the writer already know about this problem or argument?
- What is the goal or reason for engaging in extended and careful thought about this problem or argument?
- How difficult does the writer think it will be to solve this problem or reach a conclusion?
- How will the writer know when they have reached the goal?
- What critical thinking skills are likely to be useful in solving a problem or analyzing this argument?
- Does the writer move towards a solution? (p.454)

Using Halpern's (1998) questioning allows students to synthesize the mental development of assessing the structural components of an argument or problem.

Metacognitive monitoring, "allows the individual to observe, reflect on, or experience his or her own cognitive process" (Perfect & Schwartz, 2004, p. 4).

1:20-1:30p.m.

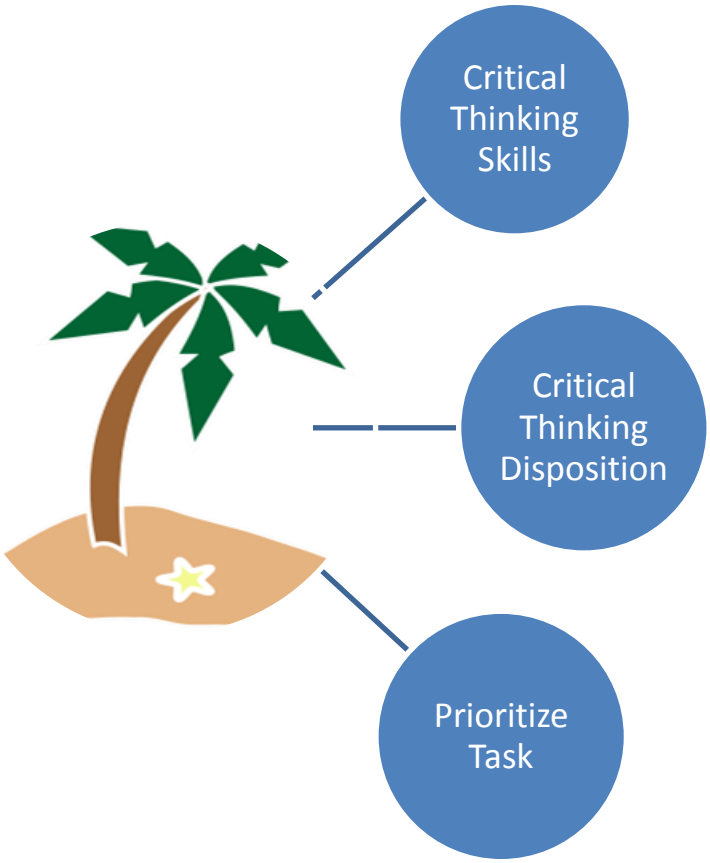
	The next phase of metacognition is how students evaluate their work. What steps do they take? During this phase, students need to learn how to double check work, monitor the language usage within their writing, stylistic forms, and evaluate the overall product. Using the task presented, in which ways should students evaluate their work? 10 minute discussion within your table and we will share out.	1:30p.m.-1:45p.m.
	Increasing such knowledge allows the transfer of what students are learning to problems in the real world. This provides an opportunity for a deepening of knowledge. To prepare students to enter a competitive global market, CT needs to be taught to all students, especially in writing. It can be done through imbedded instruction or explicit instruction of CT skills (Garcia & Hooper, 2011; Marin & Halpern, 2011).	1:45p.m.-1:50p.m.
	Read the following slide. Ask participants to reflect on the message within the slide.	1:50 p.m.-2:00 p.m.

	Look at this sentence. Surprisingly some of you may see this in your high school English classes. Many of our high school students do not have the necessary skills to think critically or self monitor. For the next ten minutes, in your group I want you to model how you would correct this sentence in front of the class. Now that you had the opportunity to share with your group how you would model correcting the errors, Write a small script for another teacher to follow. Each script will be given to another group to read aloud. You will have ten minutes to complete the script. Allow 15 additional minutes for each group to switch scripts and present.	2:00p.m.-2:45p.m.
	How can doing a "think aloud" assist students in developing critical thinking and metacognitive processing. Have a discussion and allow teachers to share their thoughts for the day. By correcting a problem in front of the class, you were able to think aloud your thinking. Many of our high school students are expected to self-regulate but never had a model to follow. Doing a think aloud in a high school classroom is crucial for developing metacognition.	2:45-3:00p.m.

Tomorrow we are going to use what we learned in day one and two and apply it in developing tools to support our students.

Day 2 Handouts

Brainstorming CT Skills, Dispositions & Tasks



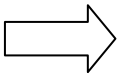
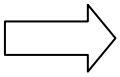
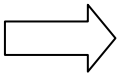
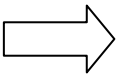
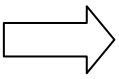
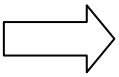
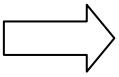
Common Core State Standards in Writing

Types	Purposes
Argumentative Writing	"CCSS.ELA-Literacy.W.11-12.1 Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. ▪ CCSS.ELA-Literacy.W.11-12.1.a Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence. ▪ CCSS.ELA-Literacy.W.11-12.1.b Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level, concerns, values, and possible biases. ▪ CCSS.ELA-Literacy.W.11-12.1.c Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. ▪ CCSS.ELA-Literacy.W.11-12.1.d Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. ▪ CCSS.ELA-Literacy.W.11-12.1.e Provide a concluding statement or section that follows from and supports the argument presented" (Common Core Initiative, 2010).
Informational/ Explanatory Writing	"CCSS.ELA-Literacy.W.11-12.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content. ▪ CCSS.ELA-Literacy.W.11-12.2.a Introduce a topic; organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. ▪ CCSS.ELA-Literacy.W.11-12.2.b Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. ▪ CCSS.ELA-Literacy.W.11-12.2.c Use appropriate and varied transitions and syntax to link the major sections of the text, create cohesion, and clarify the relationships among complex ideas and concepts. ▪ CCSS.ELA-Literacy.W.11-12.2.d

	Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic. ▪ CCSS.ELA-Literacy.W.11-12.2.e Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. ▪ CCSS.ELA-Literacy.W.11-12.2.f Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic)" (Common Core Initiative, 2010).
Narrative Writing	▪ "CCSS.ELA-Literacy.W.11-12.3 Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences. ▪ CCSS.ELA-Literacy.W.11-12.3.a Engage and orient the reader by setting out a problem, situation, or observation and its significance, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events. ▪ CCSS.ELA-Literacy.W.11-12.3.b Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters. ▪ CCSS.ELA-Literacy.W.11-12.3.c Use a variety of techniques to sequence events so that they build on one another to create a coherent whole and build toward a particular tone and outcome (e.g., a sense of mystery, suspense, growth, or resolution). ▪ CCSS.ELA-Literacy.W.11-12.3.d Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters. ▪ CCSS.ELA-Literacy.W.11-12.3.e Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative" (Common Core Initiative, 2010).
Production and Distribution of Writing	▪ "CCSS.ELA-Literacy.W.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.) ▪ CCSS.ELA-Literacy.W.11-12.5 Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. ▪ CCSS.ELA-Literacy.W.11-12.6 Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information"(Common Core Initiative, 2010)

Research to Build and Present Knowledge	“CCSS.ELA-Literacy.W.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. CCSS.ELA-Literacy.W.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. CCSS.ELA-Literacy.W.11-12.9 Draw evidence from literary or informational texts to support analysis, reflection, and research. CCSS.ELA-Literacy.W.11-12.9.a Apply *grades 11-12 Reading standards* to literature (e.g., "Demonstrate knowledge of eighteenth-, nineteenth- and early-twentieth-century foundational works of American literature, including how two or more texts from the same period treat similar themes or topics"). CCSS.ELA-Literacy.W.11-12.9.b Apply *grades 11-12 Reading standards* to literary nonfiction (e.g., "Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning [e.g., in U.S. Supreme Court Case majority opinions and dissents] and the premises, purposes, and arguments in works of public advocacy [e.g., *The Federalist*, presidential addresses]"(Common Core Initiative, 2010).

Self Asking Template

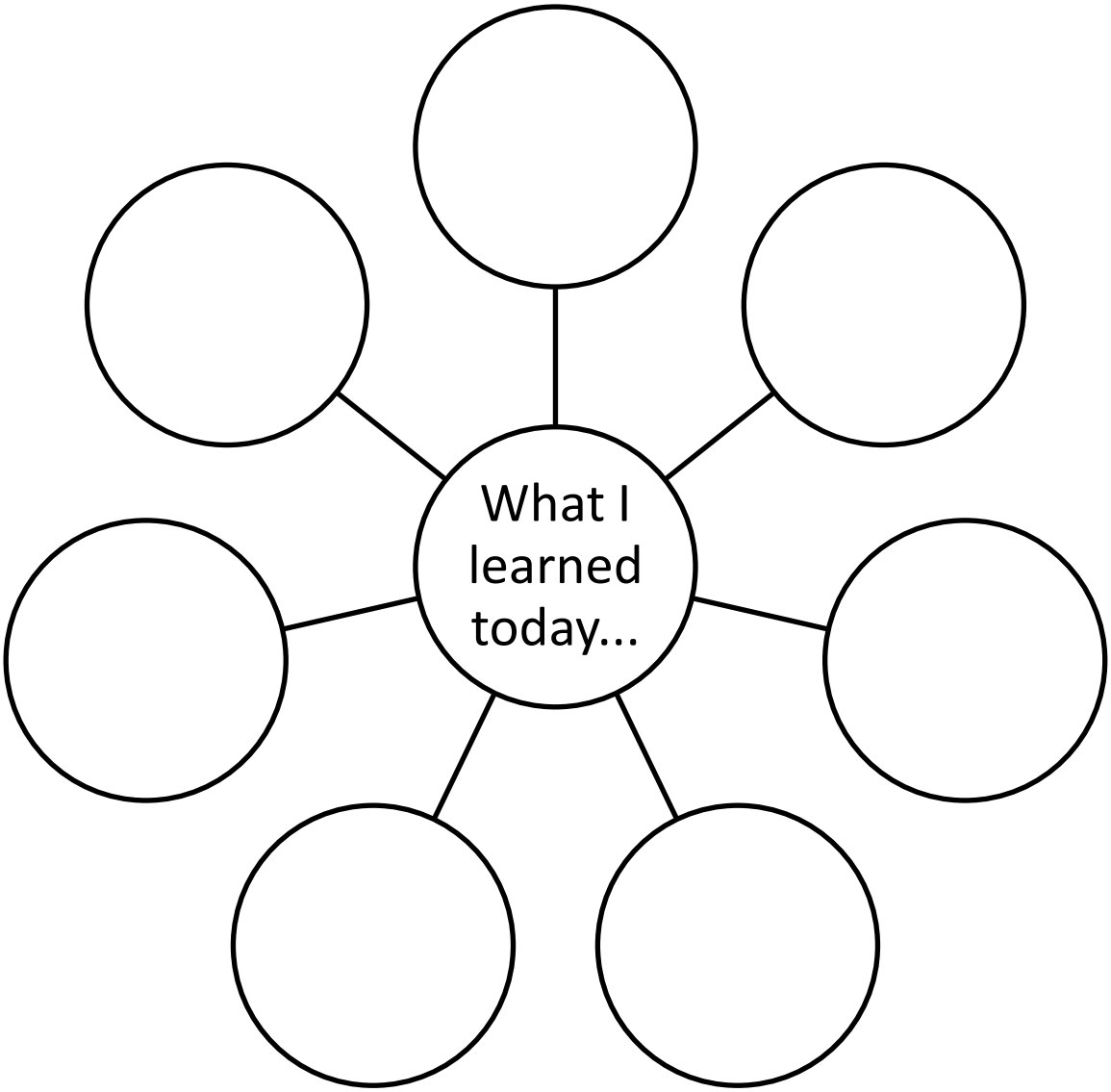
Questions	Purpose
	
	
 	
	
	
	

Note Taking Guide

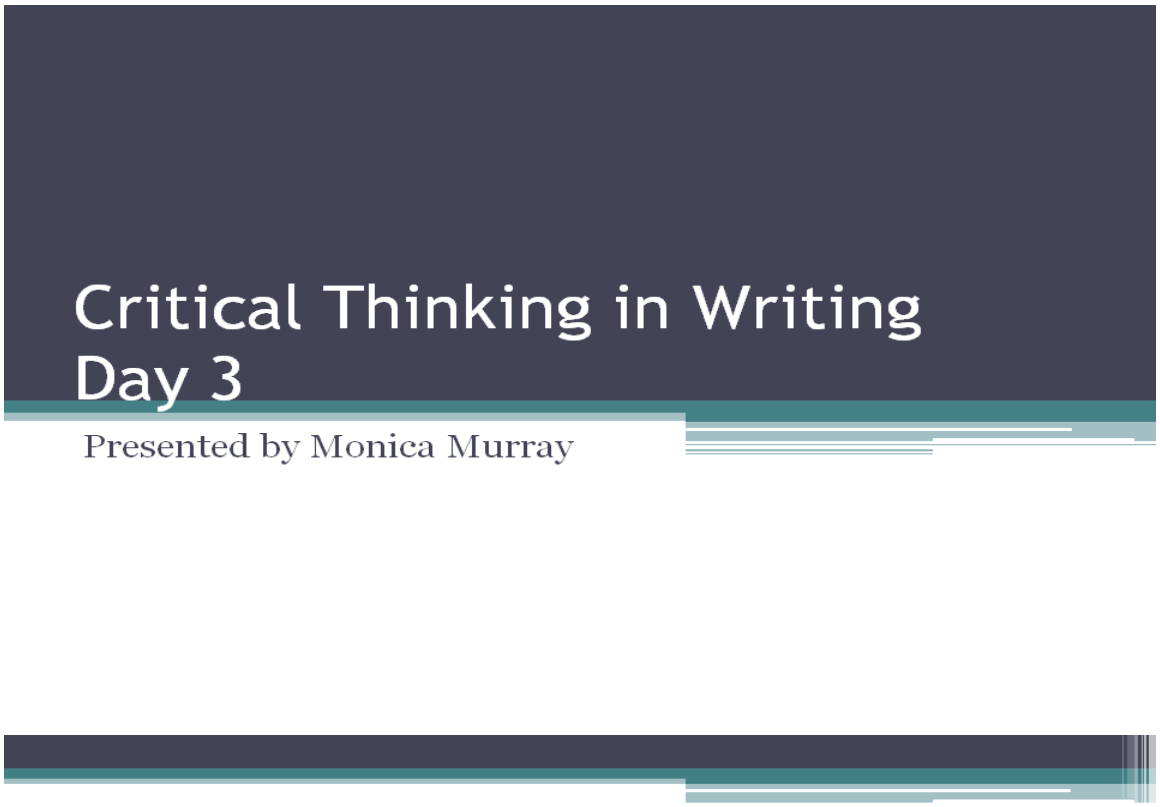
Topic	Key Points

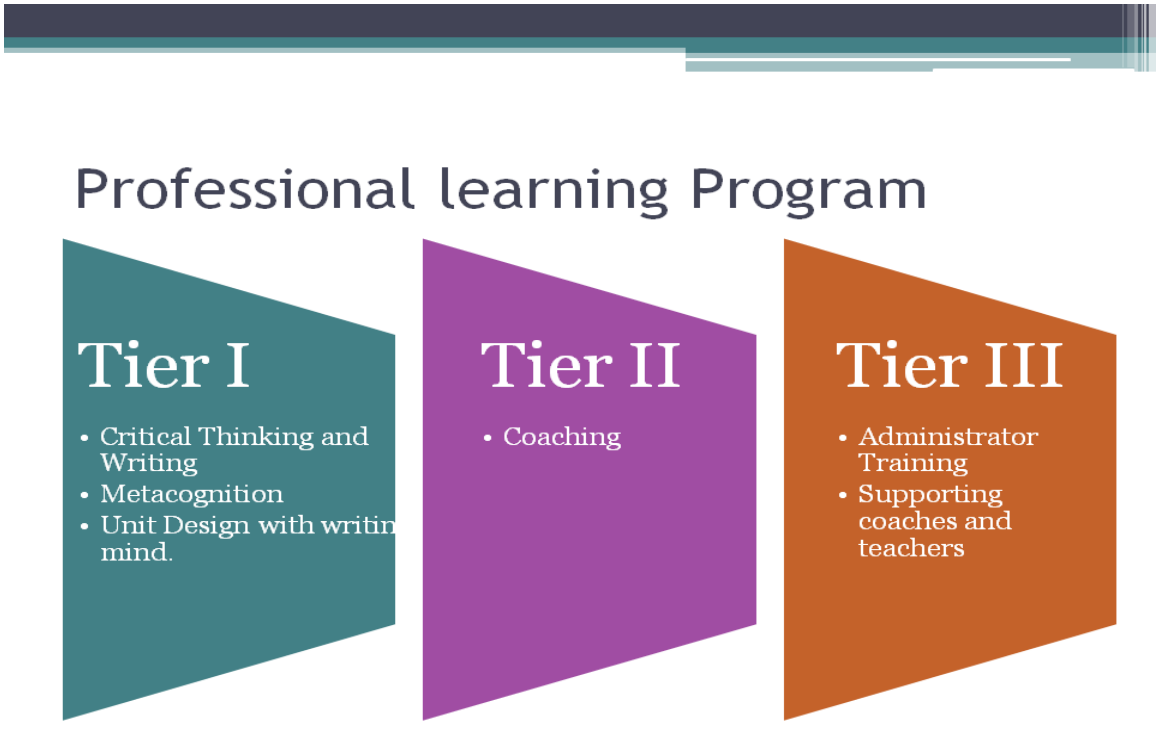
Metacognition Thinking Recap

Directions: Answer the following question, “What did I learn today about metacognition?” using the graphic organizer



Day 3 of Professional Learning Program





Building Declarative Awareness

Metacognition in action!

Day 1 and 2	Day 3 and 4	Day 5
The What Stage	The How Stage	The Why Stage

Negretti, R. (2012). Metacognition in student academic writing: A longitudinal study of metaconitive awareness and its relation to task perception, self-regulation, and evaluation of performance. Written Communication, 29(2). p.142-179/ doi: 10.1177/0741088312438529

Agenda

1. Metacognition Recap
2. Unit and Task Design
   - Blooms Taxonomy
   - Depth of Knowledge
3. Hands on Unit and Task Design

Metacognition Recap

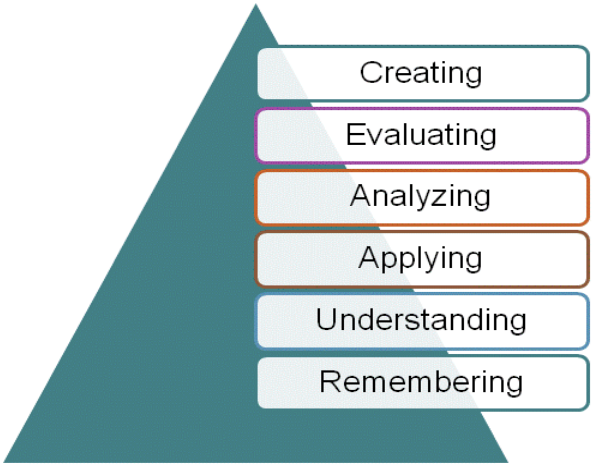
Task

1. Devise a plan
2. Monitor thinking
3. Comprehend the task
4. Evaluate thoughts and actions

Integrating Critical Thinking and Metacognition into writing

"In fact, a skilled writer/speaker is one who can flexibly and competently select, from within an extensive linguistic repertoire, a combination of forms and functions to aptly present a stance—even a combination of stances—within a text to effectively convey meaning" (Uccelli, Dobbs & Scott, 2013, p. 56).

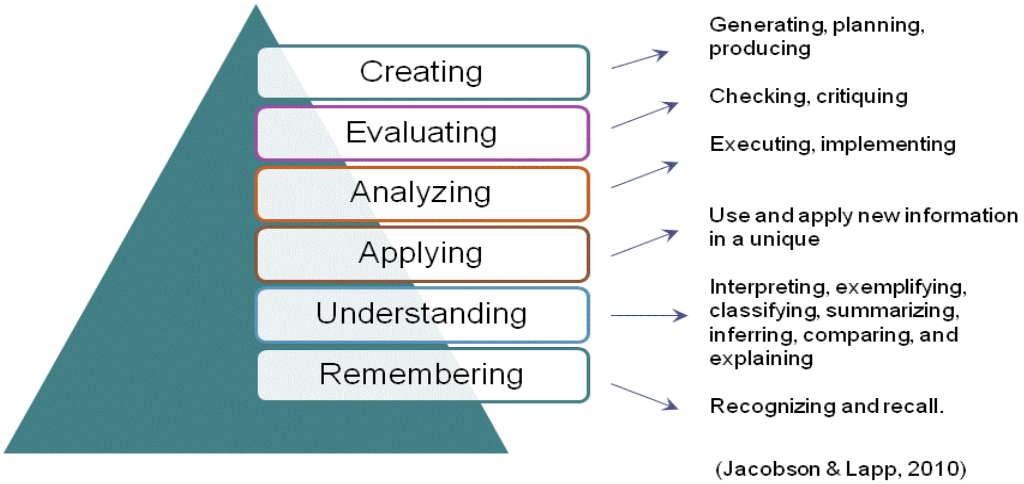
Blooms Taxonomy



Goal of Blooms Taxonomy

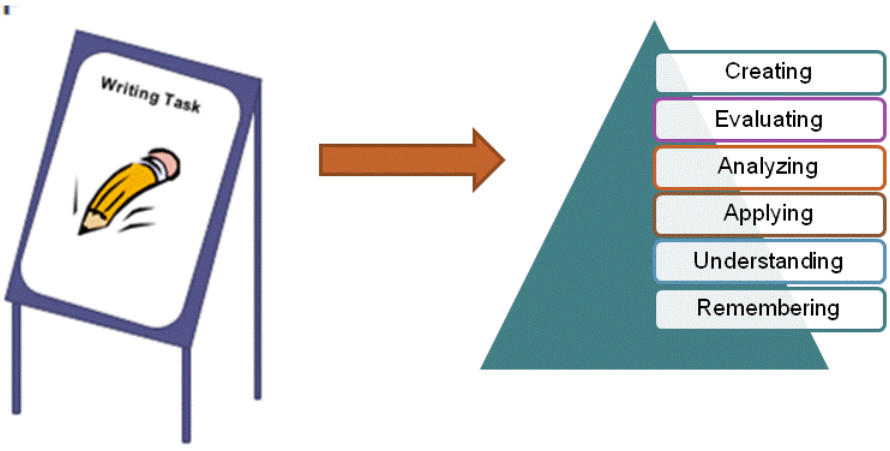
Essentially, the goal of Bloom's taxonomy educational objectives was to develop "explicit formulations of the ways in which students are expected to be changed by the educative process. That is, the ways in which they will change in their thinking, their feelings, and their actions" (Jacobson & Lapp, 2010,p. 26).

Blooms into Writing

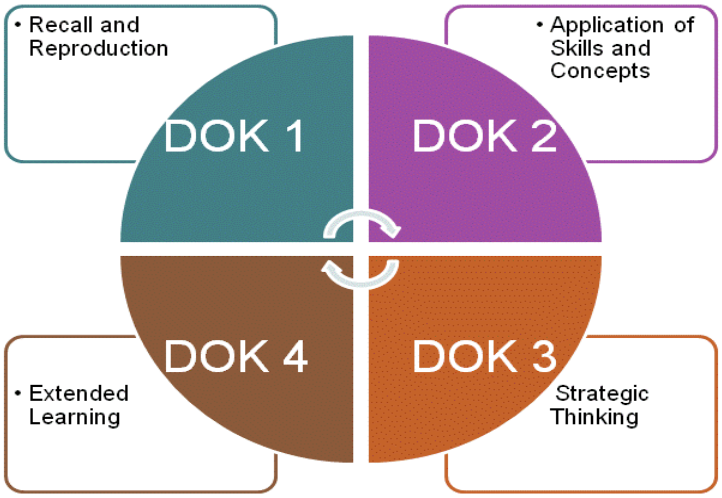


(Jacobson & Lapp, 2010)

Blooms and Writing Activity



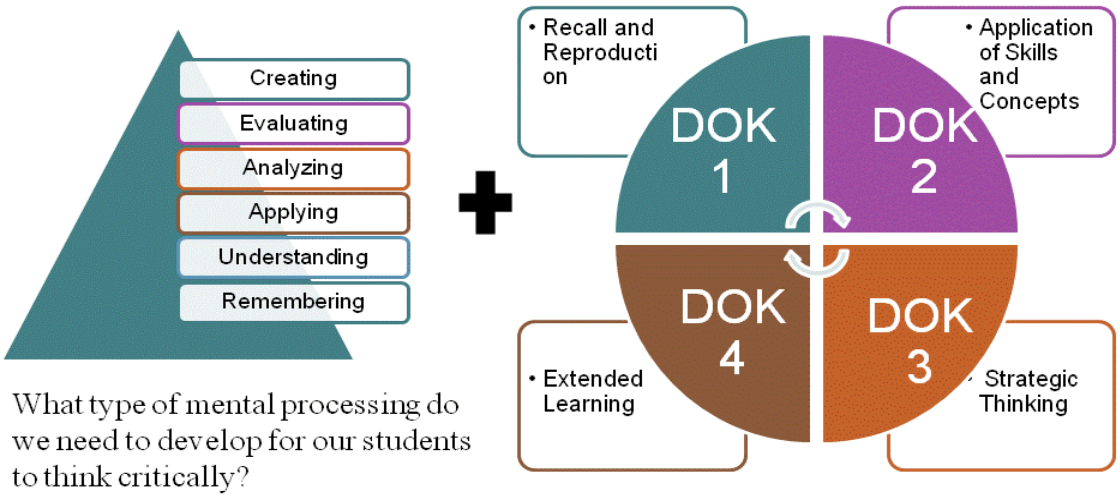
Depth of Knowledge (DOK)- Why



Depth of Knowledge - How

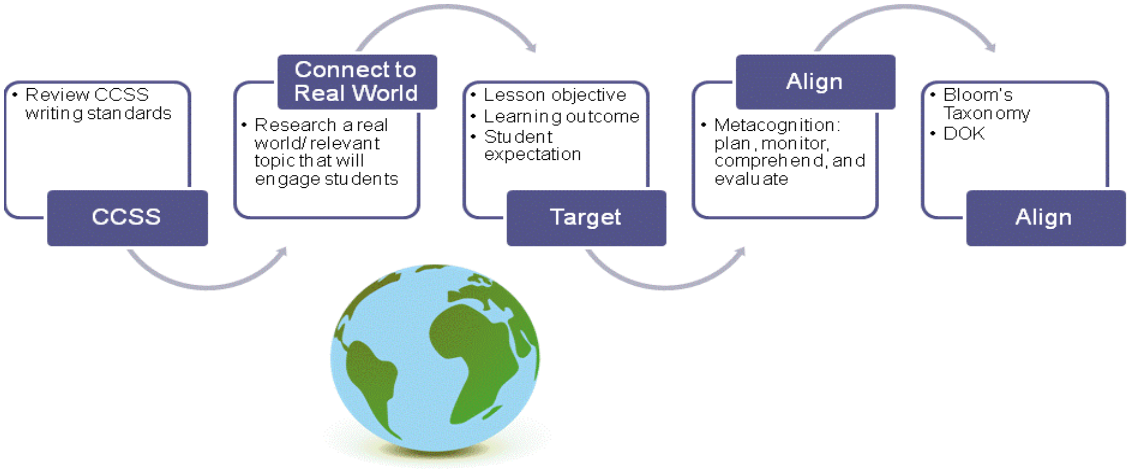
Hess, K. (2013). Karen Hess Webb's Depth of Knowledge. Retrieved September 1, 2015 from https://www.youtube.com/watch?v=dRAOefIDcxs

Depth of Knowledge and Bloom

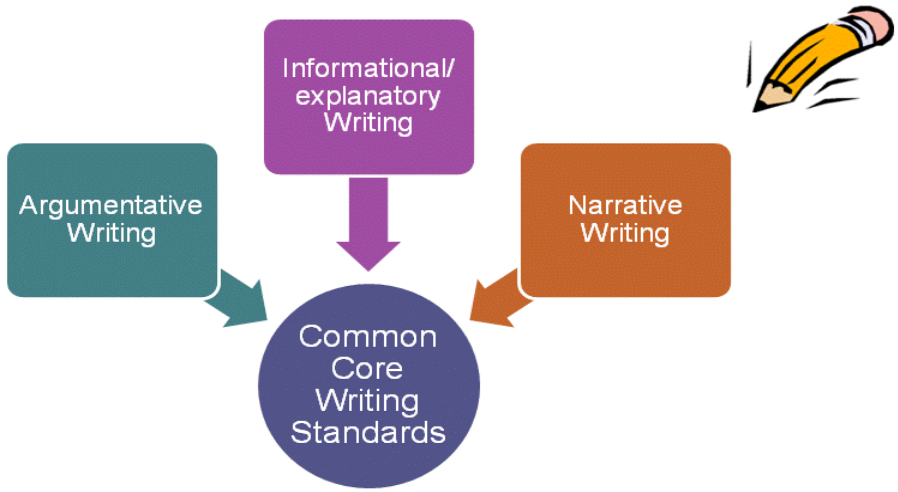


What type of mental processing do we need to develop for our students to think critically?

Design a Task that Leads to Developing a Unit of instruction



Task Development: CCSS



Task Development: Connect to Real World

Current events

Relevant problems within the school community, city, state, country, world.

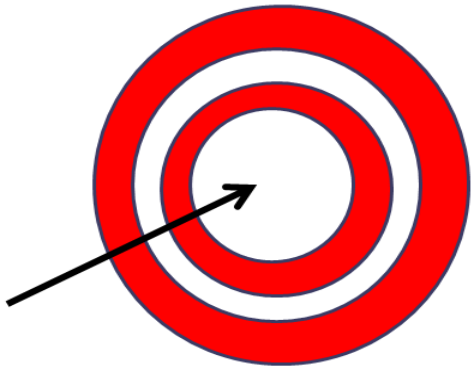
Personal relevance

Task Development: Target

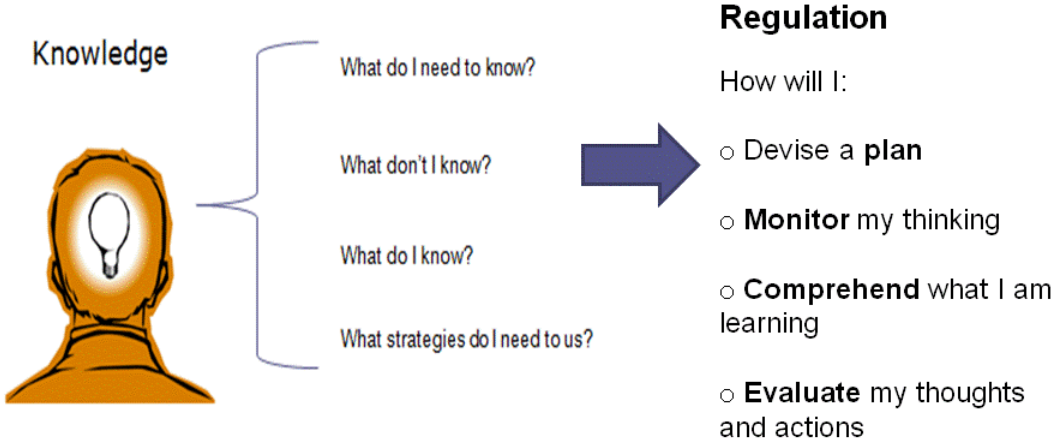
Lesson Objective
What will students be able to do?

Student Expectation
What are expectations for students?

Overall Learning Outcome
What is the overall purpose of this task?



What is metacognition?



References

Bloom, B. (1956). *Taxonomy of educational objectives: The classification of educational goals, handbook I: Cognitive domain*. London, England: Longman, Green, and Co LTD.

Jacobson, J. & Lapp , D. (2010). Revisiting Bloom's Taxonomy: A framework for modeling writing and critical thinking skills. The California Reader, 43 (3), p.32-47.

Hess, K. (2013). Karen Hess Webb's Depth of Knowledge. Retrieved September 1, 2015 from https://www.youtube.com/watch?v=dRAOefIDcxs

Hess, K. (2009). Hess' Cognitive Rigor Matrix. Retrieved January 25, 2015 from https://www.pdesas.org/.../M1-Slide_22_DOK_Hess_Cognitive_Rigor.pdf

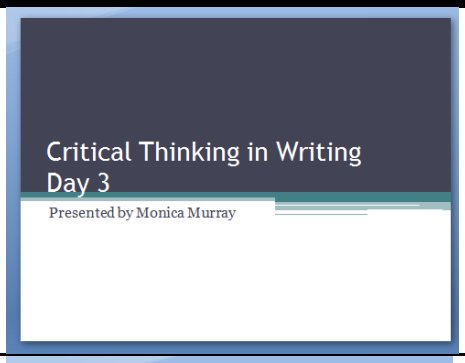
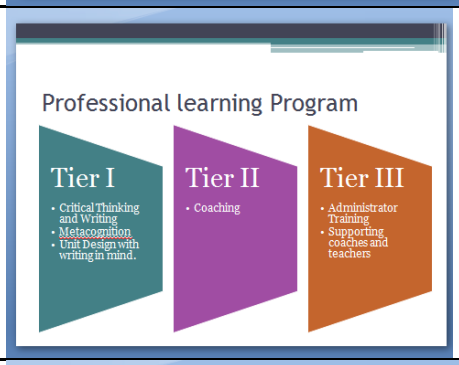
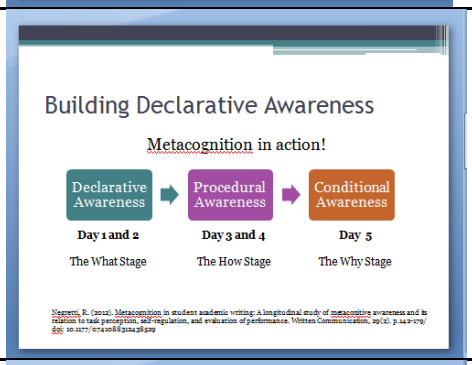
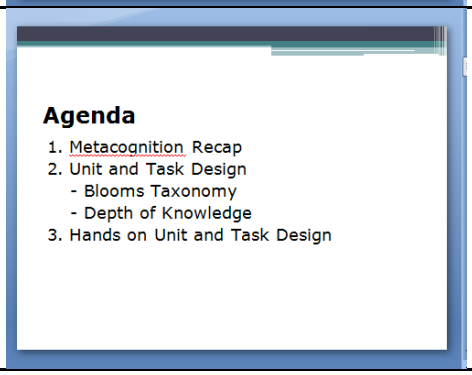
References

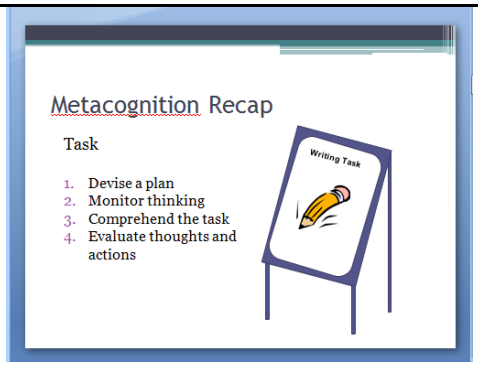
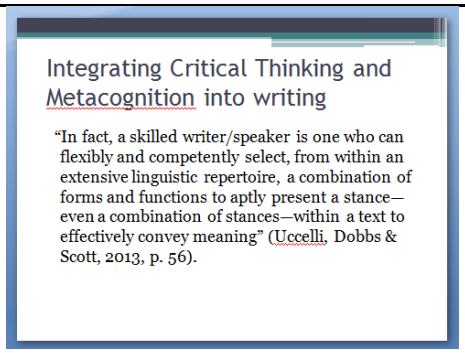
Lv, F., & Chen, H. (2010). A study of metacognitive-strategies-based writing instruction for vocational college students. *English Language Teaching*, *3*(3), 136-144.

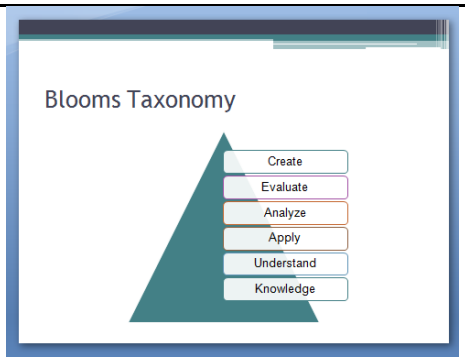
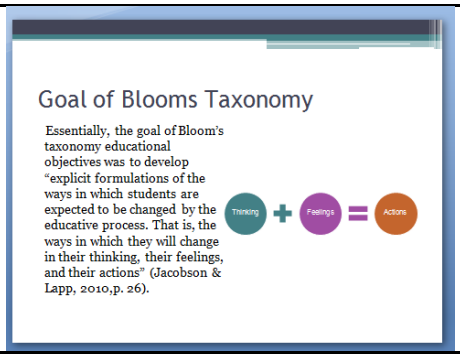
Webb, N. L. (2007). Issues related to judging the alignment of curriculum standards and assessments. *Applied Measurement In Education, 20*(1), 7-25. doi:10.1207/s15324818ame2001_2

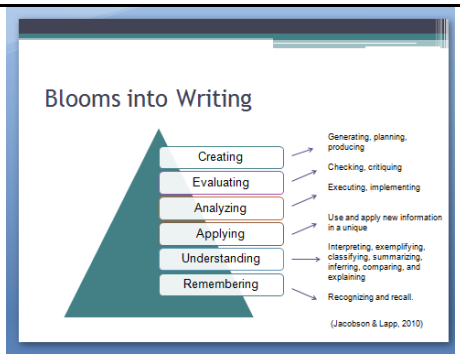
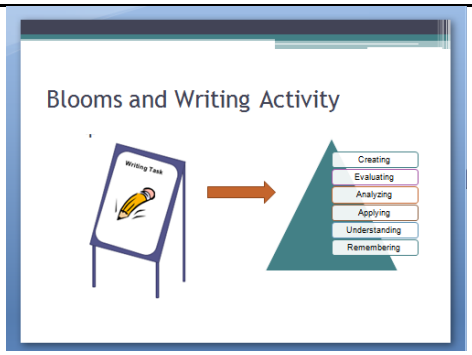
Wei, Z., Shang, H., & Briody, P. (2012). The relationship between English writing ability levels and EFL learners' metacognitive behavior in the writing process. *International Journal of Academic Research in Progressive Education and Development, 1*(4), 154-180. Retrieved from http://www.hrmars.com/admin/pics/1271.pdf

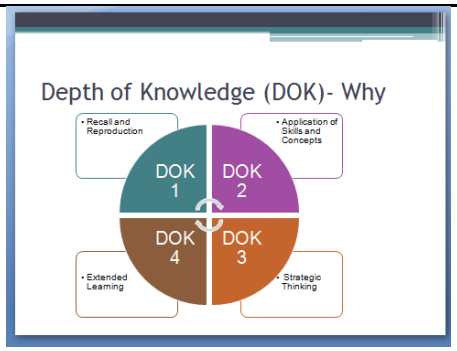
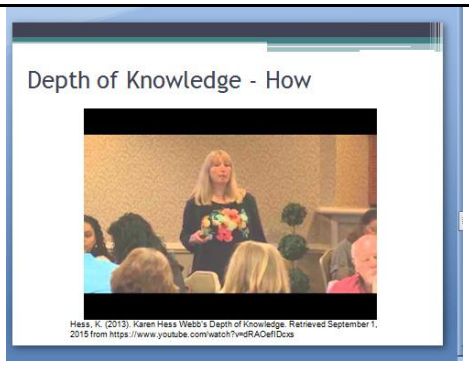
Day 3 Presenter Notes

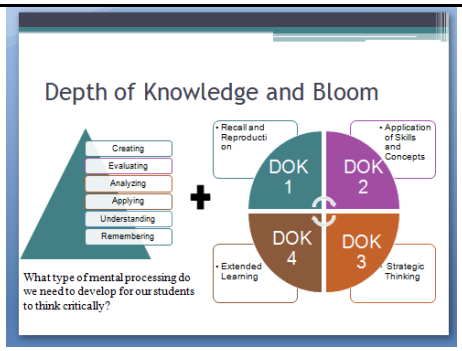
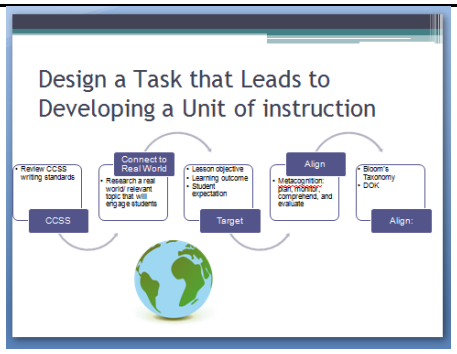
Slide	Presenter Notes	Time
	Welcome to day three of the professional learning program, "Critical Thinking in Writing."	8:00 a.m.-8:01a.m.
	During day three we will begin developing critical thinking in writing units and tasks. Allow a few minutes for participants to reflect.	8:01 a.m.- 8:05a.m.
	Today we are focusing on developing procedural awareness. During this stage, we will apply what we learned about critical thinking and metacognition into writing instruction.	8:05a.m-8:07a.m.
	This is the agenda for today. We are going to do a recap on metcognition, unit and task design with blooms taxonomy and depth of knowledge in mind. You will also have the opportunity to begin designing your own unit and task.	8:07a.m.-8:10a.m.

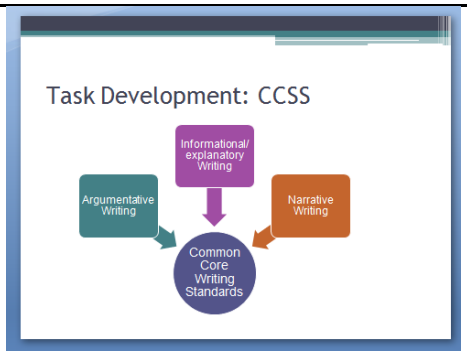
	As you look around the room, you will notice that there are a variety of writing tasks. You will be numbered 1-4. All the numbers will go to poster 1. All the number 2's will go to poster number 2 and so forth. On each poster, you will read the task with your group and determine a metacognitive strategy that you can use to help students do the following: 1. Devise a plan, 2. Monitor thinking, 3. Comprehend the task, 4. Evaluate thoughts and actions. You will have 25 minutes to discuss with your groups and write down a strategy for each. Each group will present their task and strategies.	8:10a.m.-10:00a.m.
	Read statement This linguistic demand of academic writing assists students in understanding the process of written composition. Educators who have knowledge and understanding of the linguistic demands of academic writing can assist students in planning, translating, and reviewing their work through metacognitive monitoring (Lv & Chen, 2010; Wei, Shang, & Briody, 2012). This metacognitive process helps writers synergize their writing until they reach a level of satisfaction (Glaser & Brunstien,	10:00 a.m.-10:10 a.m.

	2007; Lv & Chen, 2010). For this process to takes place, educators need pedagogy, self-determination, and time to plan effective lessons, implement the lessons, and determine areas of student strengths and weakness in writing. This is why today and tomorrow we will have time to develop unit and task alignment with the intent to enhance critical thinking in writing.	
Break		10:10 a.m.-10:20 a.m.
	Before we begin to design writing tasks and units, we are going to examine how the revised Bloom's taxonomy and Norman Webb's Depth on Knowledge is part of curricular design. Bloom is known for the development of a higher-order thinking taxonomy that targets classification of educational outcomes. Bloom's taxonomy is used by numerous researchers and has been adapted into many writing models. Jacobson and Lapp (2010) used a revised version of Bloom's taxonomy to develop a framework for modeling writing and critical thinking.	10:20 a.m.-10:30 a.m.
	By using Bloom's taxonomy or a revised version, students become actively engaged in writing which results in growth in writing proficiency (Jacobson & Lapp, 2010). The ability to write at a proficient level is necessary for students.	10:30 a.m.-10:35a.m.

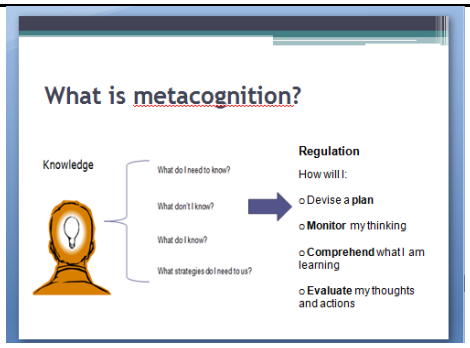
	Writing is an integral part of college success and career readiness. To prepare our students to become critical writers we need to understand how the revised Bloom's can help us in designing tasks. Let's take a look at each: Within this framework, six of Bloom's cognitive process dimensions were incorporated: "(1) Remembering (recognizing and recalling), (2) Understanding (interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining), (3) Applying (executing, implementing), (4) Evaluating (checking, critiquing), (5) Creating (generating, planning, producing" (Jacobson & Lapp, 2010, p. 34). The six dimensions can assist students to conceptualize and build cognitive structures that will support their writing (Jacobson & Lapp, 2010). As educators our task will be to develop tasks that help students reach the higher end of Bloom's Taxonomy.	10:35 a.m.- 10:45 a.m.
	We will now go back to the posters we worked on this morning. There is a stack of sticky notes near each poster. As a group, you will reread the task and determine which level of Blooms taxonomy the task addresses. You will have 5 minutes to do this. At the end of five minutes you will rotate to the next task. We will do	10:45 a.m.- 11:20 a.m.

	this until everyone had a chance to determine the level for each. You will end at your first station. Each group will share the level of Blooms Taxonomy for each poster. A collaborative conversation will take place.	
	Now we will take a look at Depth of Knowledge by Norman Web. Norman's Webb depth of knowledge curriculum alignment tool addresses the different ways one can interact with content. Norman Webb's (1997) Depth of Knowledge (DOK). Norman Webb developed a process and criteria that helped educators identify the cognitive complexity within standards, curriculum and assessment (as cited in Michigan Department of Education, 2009). The criteria were divided into four levels; one was the lowest cognitively demanding descriptors and four was the highest. DOK is not about difficulty but going deeper with content. It is developing the complexity and mental processing of a given task.	11:20 a.m.- 11:30a.m.
	Now we are going to watch a video on Depth of Knowledge. As you watch the video, I want you to take notes of key points and examples on the left side of the note taking guide. Watch video (12 minutes) Discussion: Now that you watched the video, talk with your group	11:30 a.m.- 12:00pm.

	about how to incorporate DOK in writing. You will have 4 minutes per DOK level. Have a discussion on each DOK level. Remind participants that it is not about going from one to the next but about developing tasks and units that allow students to develop their understanding at a complex level.	
Lunch		12:00 p.m.- 12:40p.m.
	What type of mental processing do we need to develop for our students to think critically? Each table group will have 3 minutes to discuss question. Take five minutes to have each group to share out. Before lunch we discussed how Blooms Taxonomy and DOK can be used to develop and align tasks for a deeper level of complexity. Both are a set of tools that will help us target the complexity of a given task.	12:40 p.m.- 12:50p.m.
	For the afternoon and tomorrow. You will be designing a writing task that will lead into a unit of instruction. The different stages of the task design are presented in the slide. I will walk you through each step through the design process. We will start with the common core state standards in writing and connect the writing genre with a real world problem.	12:50 p.m- 12:55p.m.

	As a group, you will design the target of the task, align metacognitive steps, and ensure that Bloom's taxonomy and DOK are present throughout. Once these steps are completed, you will begin to backwards design all the instruction needed to ensure that the task created provides students with both the content and critical thinking needed for them to succeed in college and career readiness.	
	Provide each group with one of the writing forms. You will now be regrouped into new groups where you will stay for the remainder of today and tomorrow. Count people off by 4. Once you are in your group. Take the next ten minutes and read the CCSS writing standard that is in the center of the table. Each group should have a form of writing. Two groups will have the same : Group 1: Argumentative Writing Group 2: Informational/Explanatory writing Group 3: Narrative Writing Group 4: Argumentative writing After reading the standard, highlight verbs within the standard. Allow each group time to discuss the standard, verbs, and implication it has on college and career readiness. Have each group	12:55 p.m.-1:15p.m.

	briefly share out the groups understanding of the standard. Participants will use these highlighted words as they begin to develop their task.	
	The next step is to connect the standard to a real world connection. In order to develop intrinsic motivation among students, tasks must be relevant and worth the work for students. You can connect to the real world by identifying: As a group you will have 30 minutes to research and establish a connection to the real world. You can download articles/research in primary or secondary sources. You can also have multiple sources for students.	1:15p.m.-1:45p.m.
	The next task is to identify the lesson objective, student expectations, and overall learning. A lesson objective is what we want students to be able to do. Take the next five minutes and discuss the lesson objective. You will need to look at the writing standard and the connection to the real world problem you just researched. Now that you have established a lesson objective, you will develop student expectations. Student expectations are what we expect our students to act and think as	1:45 p.m.-2:05p.m.

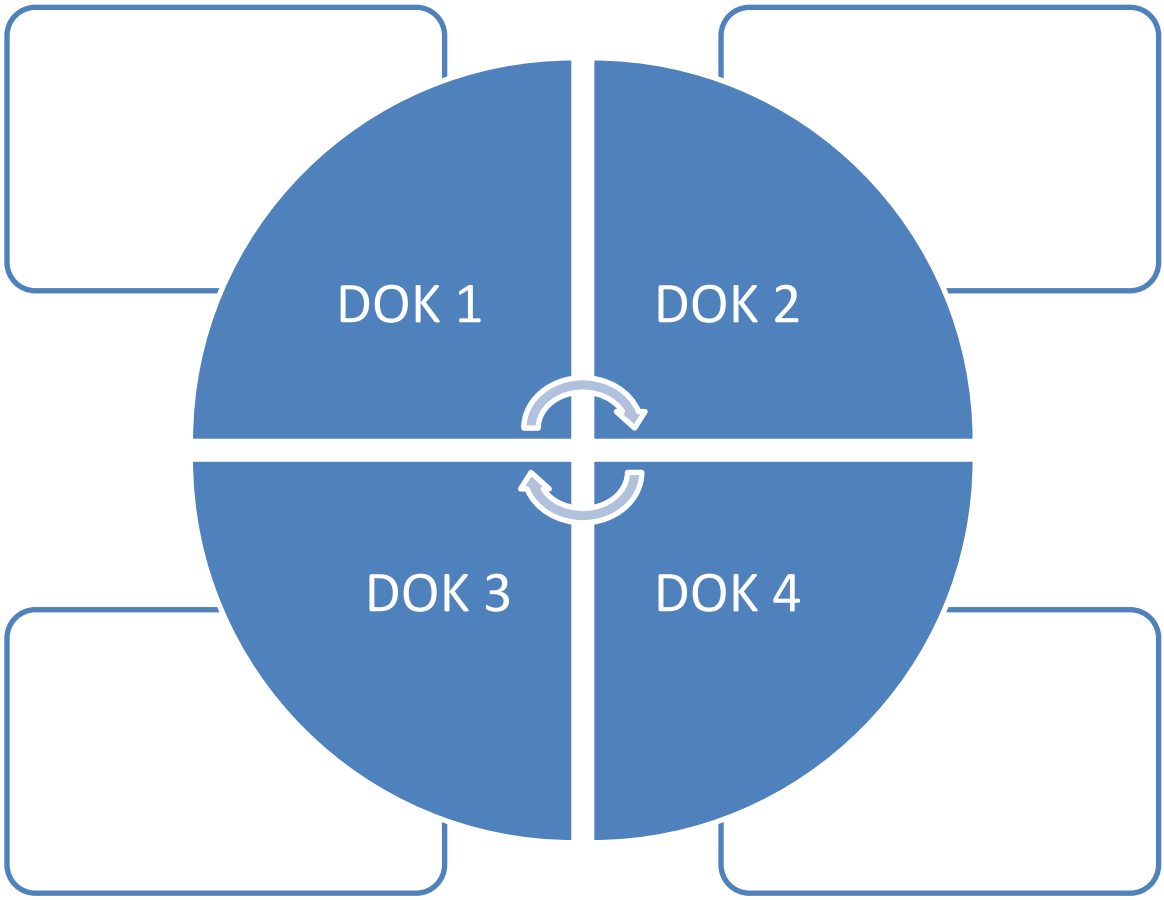
	they tackle a task. For example: Students are expected to preserve as they read multiple texts. Take the next five minutes and establish student expectations. Now that we have established lesson objectives and expectations, develop the overall target for this task. For instance, an overall target is for students to be able to compare multiple texts and write an argumentative essay comparing the authors meaning.	
	This afternoon, you had the opportunity to analyze a given writing form, connect it to real world problems, establish a lesson objective, student expectations, and now you will work on developing a students metacognition. Yesterday we went over the different components of regulating ones thinking. As a group, develop steps for students to: - Devise a plan - Monitor their thinking - Comprehend the text and writing task - Evaluate their thoughts. You only have 45 minutes left of the day. If your group does not finish you will have an addition 30 minutes tomorrow morning. This is central component of developing task. As teachers, we have to teach our students how to regulate their thinking.	2:05p.m.-2:50 p.m.

Day 3 Handouts

Video Note Taking Guide

DOK 1	DOK 2	DOK 3	DOK 4	Notes

DOK in Writing Brainstorming Guide



Additional Notes:

Note Taking Guide

Topic	Key Points

Appendix B: Tentative Letter of Cooperation

June 26, 2014

Dear Monica Murray,

Based on my review of your research proposal, I give permission for you to conduct the study entitled Barriers High School Teachers Encounter in Teaching Critical Thinking in Writing within my school sites. As part of this study, I authorize you to interview ELA teachers. Individuals' participation will be voluntary and at their own discretion.

We understand that our organization's responsibilities include: providing a list of ELA teachers who may possibly teach critical thinking in writing. We reserve the right to withdraw from the study at any time if our circumstances change.

I confirm that I am authorized to approve research in this setting.

I understand that the data collected will remain entirely confidential and may not be provided to anyone outside of the research team without permission from the Walden University IRB.

Sincerely,

_____

Authorization Official

Walden University policy on electronic signatures: An electronic signature is just as valid as a written signature as long as both parties have agreed to conduct the transaction electronically. Electronic signatures are regulated by the Uniform Electronic Transactions Act. Electronic signatures are only valid when the signer is either (a) the sender of the email, or (b) copied on the email containing the signed document. Legally an "electronic signature" can be the person's typed name, their email address, or any other identifying marker. Walden University staff verifies any electronic signatures that do not originate from a password-protected source (i.e., an email address officially on file with Walden).

Appendix C: Qualitative Case Study Research Consent Form

You are invited to take part in a research study on critical thinking in writing. This study is designed to understand the perception of the barriers English language arts teachers encounter when teaching critical thinking in writing to 15 to 17 year old students. To be part of this study, you must be an English Language Arts teacher who has taught critical thinking in writing to 15 to 17 year old students. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by a researcher named Monica Murray who is a doctoral student at Walden University. You may know the researcher as an instructional support administrator but this study is not part of her role or responsibility.

Background Information

The purpose of this study is to identify the perception of the barriers English Language Arts teachers encounter when teaching critical in writing to 15 to 17 year old students.

Procedures

If you agree to be in this study, you will be asked to be part of a one-on-one semi-structured interview. The interview will take place once for a duration of 1 hour. You will be asked questions solely that pertain to the research study. The interview will be audio taped to assist me in accurately capturing your insights in your own words. If you feel uncomfortable with the recorder, you may ask that it be turned off at any time. All information disseminated will remain confidential. After I collect and analyze the data, you will also have an opportunity to review the findings and interpretations of the interview to ensure credibility. This step is called member checking.

Here are some sample questions:

- What type of support do you need to be better prepared to teach critical thinking in writing?
- What specific CT strategies do you try to include during writing? What are the instructional barriers you face?
- What are possible school-based barriers you encounter during CT in writing instruction?
- What is your level of pedagogical knowledge of CT and writing?

Voluntary Nature of the Study

This is a voluntary study. You may opt out at any time. I will respect your decision of whether or not you choose to be part of this study. No one will treat you differently if you decide not to be in this study. Declining or discontinuing will not negatively impact your relationship with the researcher. If you decide to join the study now, you can still change your mind later. You may leave the study at any time.

Risks and Benefits of Being in this Study

Being in this study may involve minor discomforts that may be present in daily life such as loss of time. Being in this study will not pose risk to your safety or wellbeing. There will be no gifts or reimbursements provided. The benefits of this study will help develop resources and additional support to teachers as well as to prepare students for 21st century thinking and writing.

Privacy

Any information you provide will be kept confidential. The researcher will not use your personal information for any purposes outside of this research study. Also, the researcher will not include your name or anything else that could identify you in the study reports. Data will be kept secured. Data will be kept for a period of at least 5 years, as required by the university.

Contact and Questions

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via email or phone. Monica Hernandez (562)419-5686, zumoh1@yahoo.com, monica.murray@waldenu.edu If you want to talk privately about your rights as a participant, you may contact Dr. Endicott via e-mail at **irb@waldenu.edu**..

The researcher will give you a copy of this form to keep.

Statement of Consent:
I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By signing below I agree that I have read and understood the above information, and would I be interested in participating in this study:

Printed Name of Participant: _____

Date of consent: _____

Participant's Signature: _____

Researcher's Signature: _____

Appendix D: Original Interview Questions

1. What do you perceive are barriers teachers encounter when teaching critical thinking in writing? Why do you believe those are barriers?

2. What type of support do you need to be better prepared to teach critical thinking in writing?

3. What specific CT strategies do you try to include during writing? How do you know if they are effective strategies?

4. What are possible school-based barriers you encounter during CT in writing instruction?

5. What is your level of pedagogical knowledge of CT? Do you feel comfortable teaching CT in writing?

6. What is you level of pedagogy knowledge on writing? Do you feel comfortable teaching writing?
7. Do you encounter any barriers in the planning process of designing a lesson that embeds critical thinking and writing?
8. How do you promote CT in writing in your classroom?
9. What is your perception of the effectiveness of your instruction when teaching CT in writing?

Appendix E: Revised Interview Questions

1. What do you perceive are the barriers teachers encounter when teaching critical thinking in writing? Why do you believe those are the barriers?
2. What are the barriers you encounter when teaching critical thinking in writing?
3. What type of support do you need to be better prepared to teach critical thinking in writing? Why?
4. What specific CT strategies do you try to include during writing? How do you know if they are effective strategies?
5. What are possible school-based barriers you encounter during CT in writing instruction? Why?
6. What specific writing strategies do you use during instruction? How do you know if they are effective strategies?
7. How do you design a lesson that embeds critical thinking and writing? What steps do you take and why?
8. How do you motivate CT in writing in your classroom? What strategies or techniques do you use and why?

Appendix F: Interview Protocol

Research study: Perception of the Barriers ELA Teachers Encounter When Teaching Critical Thinking in Writing

Time of Interview: _____ to _____

Date: _____

Interviewer: Monica Murray

Interviewee: _____

Position of Interviewee:

_____

Project Description

The purpose of this qualitative case study is to investigate the perception of the barriers English Language Arts teachers encounter when teaching critical thinking in writing. Being an effective writer requires critical thinking. With your help, this study may bring forth insight into why critical thinking in writing may be difficult for teachers to teach.

Questions:

1. What do you perceive are the barriers teachers encounter when teaching critical thinking in writing? Why do you believe those are the barriers?

2. What are the barriers you encounter when teaching critical thinking in writing?

3. What type of support do you need to be better prepared to teach critical thinking in writing? Why?

4. What specific CT strategies do you try to include during writing? How do you know if they are effective strategies?

5. What are possible school-based barriers you encounter during CT in writing instruction? Why?

6. What specific writing strategies do you use during instruction? How do you know if they are effective strategies?

7. How do you design a lesson that embeds critical thinking and writing? What steps do you take and why?

8. How do you motivate CT in writing in your classroom? What strategies or techniques do you use and why?

Appendix G: Frequency of Responses

The following table highlights the frequency of response among participants within categories.

Question	Case	Time	Student Knowledge	Technology	Vocabulary	Lack of CT	Teacher Knowledge
1 What do you perceive are the barriers teachers encounter when teaching critical thinking in writing? Why do you believe those are the barriers?	1	X	X	X	X		X
	2	X	X	X	X	X	X
	3	X	X	X			X
	4	X	X	X		X	X
	Case	Students Understanding Writing	Time	Foundational Skills			
2 What are the barriers you encounter when teaching critical thinking in writing?	1	X					
	2			X			
	3	X	X	X			
	4	X	X	X			
	Case						
		More DOK	CT Professional Development	Designing CT/Writing Lessons	Translating CT in Writing	Examples of CT in Writing	
3.What type of support do you need to be better prepared to teach critical thinking in writing? Why?	1		X	X	X	X	
	2		X	X	X	X	
	3	X	X	X	X	X	
	4		X	X	X	X	
	Case						
		Class Discussion	DOK Questions	Bloom	AVID Strategies	Constructed Response	Template/ Graphic Organizer
4 What specific CT strategies do you try to include during writing? How do you know if they are effective strategies?	1	X	X		X		X
	2	X	X	X			X
	3	X	X	X	X	X	X
	4		X	X	X		X
	Case	Low Expectation/ Low Performance	Discipline	Time	School Climate	Administration	Technology
5. What are possible school-based barriers you encounter during CT in writing instruction? Why?	1		X	X	X	X	
	2	X	X	X	X	X	X
	3	X	X	X	X		X
	4	X	X	X	X		X
	Case						
		Free Writing	Writing	Writing Process	Templates		

			Frames				
6. What specific writing strategies do you use during instruction? How do you know if they are effective strategies?	1	X	X	X	X		
	2		X	X	X		
	3		X	X	X		
	4		X	X	X		
	Case						
		7 step Lesson	Relate to Reading	DOK/Bloom	Opportunities for Discussion	Relevant prompts	Constructed Responses
7. How do you design a lesson that embeds critical thinking and writing? What steps do you take and why?	1			X			
	2	X				X	
	3		X	X	X		X
	4		X	X	X		
	Case						
		Text Annotation	Class Presentations	Collaboration	Stimulus	Relevant Material	Competition
8. How do you motivate CT in writing in your classroom? What strategies or techniques do you use and why?	1	X		X			X
	2	X	X	X	X	X	
	3	X	X	X	X	X	X
	4		X	X			

Appendix H: Critical Thinking in Writing Observational Protocol

<table>
<tr><td>Date</td><td></td><td>Section</td><td></td><td>Teacher</td><td></td><td>Content</td><td></td></tr>
<tr><td colspan="2">Instructional Objective
(Teacher)</td><td colspan="6">□ Is posted in the classroom □ Is relevant to student learning
□ Is not posted in the classroom □ Is not relevant to student learning

Comment:</td></tr>
<tr><td colspan="2">Instructional Objective
(Student)</td><td colspan="6">□ Students understand objective and task at hand
□ Students do not understand objective and task at hand

Comment:</td></tr>
<tr><td colspan="2">Level of Student Outcome
(Task Alignment)</td><td colspan="6"><table><tr><th>Remembering</th><th>Understanding</th><th>Applying</th><th>Evaluating</th><th>Creating</th></tr><tr><td>☐ DOK 1
☐ DOK 2
☐ DOK 3
☐ DOK 4</td><td>☐ DOK 1
☐ DOK 2
☐ DOK 3
☐ DOK 4</td><td>☐ DOK 1
☐ DOK 2
☐ DOK 3
☐ DOK 4</td><td>☐ DOK 1
☐ DOK 2
☐ DOK 3
☐ DOK 4</td><td>☐ DOK 1
☐ DOK 2
☐ DOK 3
☐ DOK 4</td></tr></table>
Comment:</td></tr>
<tr><td colspan="2">Metacognition in Writing</td><td colspan="6">Description:</td></tr>
<tr><td colspan="8">Next Steps</td></tr>
</table>

Principal Signature:_____

Appendix I: Critical Thinking in Writing Planning Template

<table>
<tr><td colspan="2">Teacher:</td><td>Grade:</td><td>Period</td></tr>
<tr><td colspan="2"><u>Theme:</u></td><td colspan="2"><u>Writing Focus</u>
□ Argument
□ Informational/Explanatory
□ Narrative
□ Research
□ Extended Research
□ Other:_____</td></tr>
<tr><td>Essential Question</td><td colspan="3"></td></tr>
<tr><td rowspan="5">Common Core ELA Standard (CA)</td><td colspan="3">CCSS Writing:</td></tr>
<tr><td colspan="3">CCSS Reading:</td></tr>
<tr><td colspan="3">CCSS Language:</td></tr>
<tr><td colspan="3">CCSS Speaking:</td></tr>
<tr><td colspan="3">CCSS Listening:</td></tr>
<tr><td>Task Alignment</td><td colspan="3"><table><tr><th>Remembering</th><th>Understanding</th><th>Applying</th><th>Evaluating</th><th>Creating</th></tr><tr><td>☐ DOK 1
☐ DOK 2
☐ DOK 3
☐ DOK 4</td><td>☐ DOK 1
☐ DOK 2
☐ DOK 3
☐ DOK 4</td><td>☐ DOK 1
☐ DOK 2
☐ DOK 3
☐ DOK 4</td><td>☐ DOK 1
☐ DOK 2
☐ DOK 3
☐ DOK 4</td><td>☐ DOK 1
☐ DOK 2
☐ DOK 3
☐ DOK 4</td></tr></table></td></tr>
<tr><td>End Product</td><td colspan="3"></td></tr>
<tr><td colspan="4">Lesson Layout</td></tr>
<tr><td>Declarative Awareness</td><td colspan="3"></td></tr>
<tr><td>Procedural Awareness</td><td colspan="3"></td></tr>
<tr><td>Conditional Awareness</td><td colspan="3"></td></tr>
<tr><td>Checking for Understanding</td><td colspan="3"></td></tr>
<tr><td>Closure</td><td colspan="3"></td></tr>
</table>

Appendix J: Sample Field Notes

Research study: Perception of the Barriers ELA Teachers Encounter When Teaching Critical Thinking in Writing

Time of Interview: _____ to _____

Date: _____

Interviewee: _____

Position of Interviewee: _____

Field Notes

Question	**Response Notes**	**Atmosphere and Context**
What do you perceive are the barriers teachers encounter when teaching critical thinking in writing? Why do you believe those are the barriers?		
What are the barriers you encounter when teaching critical thinking in writing?		
What type of support do you need to be better prepared to teach critical thinking in writing? Why? What specific CT strategies do you try to include during writing? How do you know if they are effective strategies?		
What are possible school-based barriers you encounter during CT in writing instruction? Why?		
What specific writing strategies do you use during instruction? How do you know if they are effective strategies?		
How do you design a lesson that embeds critical thinking and writing? What steps do you take and why?		
How do you motivate CT in writing in your classroom? What strategies or techniques do you use and why?		

Appendix K: Sample Transcripts

Research study: Perception of the Barriers ELA Teachers Encounter When Teaching Critical Thinking in Writing

Time of Interview: _____ to _____

Date: _____

Interviewee: _____

Position of Interviewee: _____

Line **Interview Questions**

Interviewer: What do you perceive are the barriers teachers encounter when teaching critical thinking in writing? Why do you believe those are the barriers?

Interviewee Response:

Interviewer: What are the barriers you encounter when teaching critical thinking in writing?

Interviewee Response:

Interviewer: What type of support do you need to be better prepared to teach critical thinking in writing? Why? What specific CT strategies do you try to include during writing? How do you know if they are effective strategies?

Interviewee Response:

Interviewer: What are possible school-based barriers you encounter during CT in writing instruction? Why?

Interviewee Response:

Interviewer: What specific writing strategies do you use during instruction? How do you know if they are effective strategies?

Interviewee Response:

Interviewer: How do you design a lesson that embeds critical thinking and writing? What steps do you take and why?

Interviewee Response:

Interviewer: How do you motivate CT in writing in your classroom? What strategies or techniques do you use and why?

Interviewee Response: