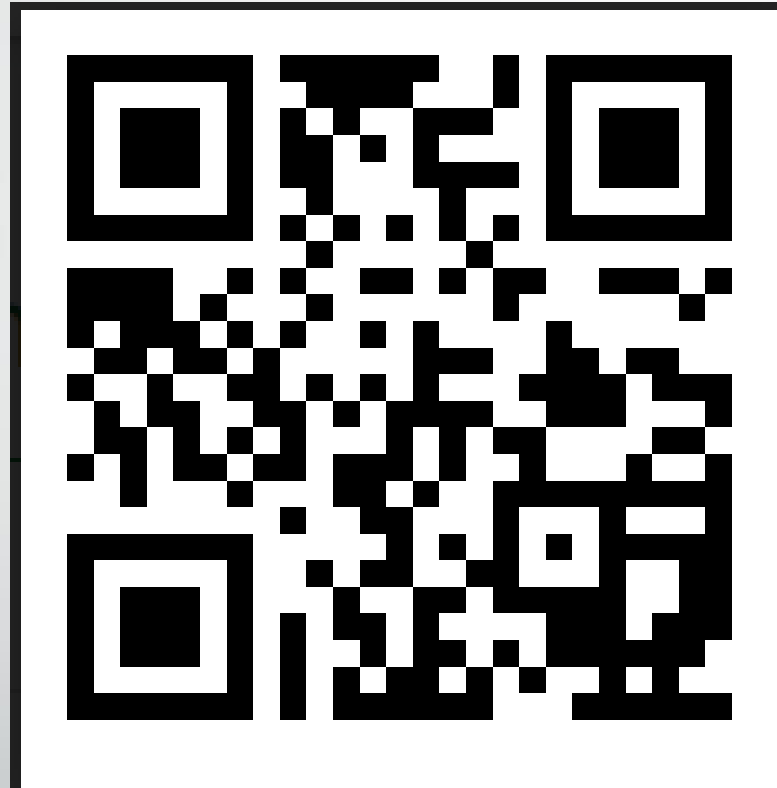




Critical and Creative Thinking

ACADEMIC SUPPORT Center - Valdosta State University

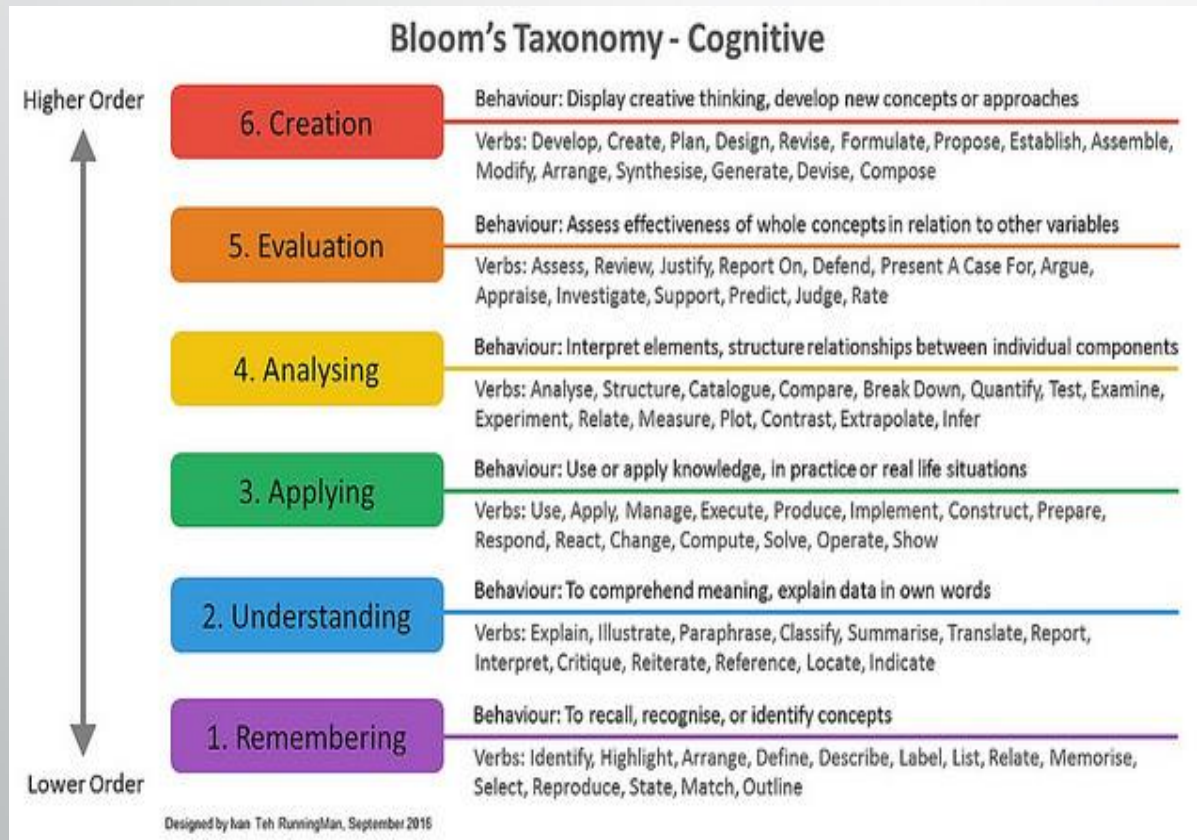
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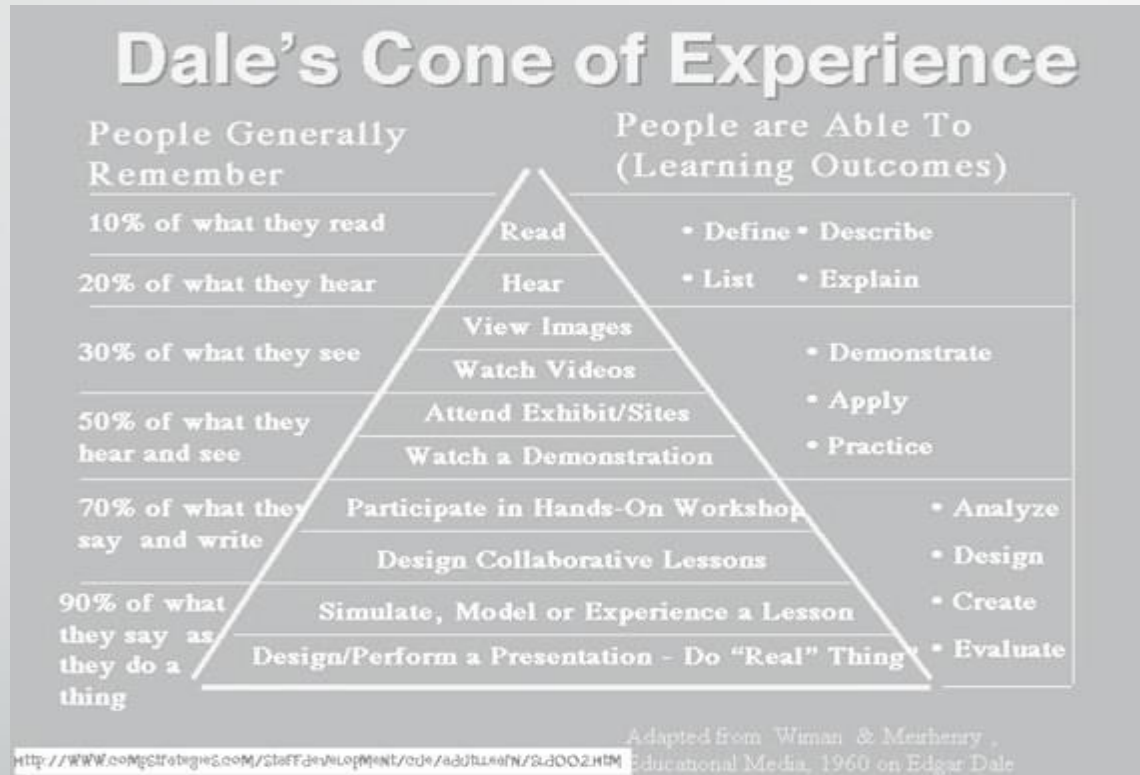
Objective

- Blooms' Taxonomy & Dale's Cone of Knowledge
- Define Critical Thinking
- What are the standards
- Importance of Critical Thinking Skills
- Critical thinking about Your Decisions Activity
- Collaboration and Critical thinking
 - 4 Aspects of Critical Thinking – (highlight creative thinking)
 - Brainstorming Activity
 - Fact or Opinion
 - Fun Critical Thinking Activity
 - Fun Creative Thinking Activity (imagery)
 - Think BIG

Blooms' Taxonomy



Dale's Cone of Knowledge



What is critical thinking?

- **Definition:** The process of independently analyzing, synthesizing, and evaluating information as a guide to behavior and beliefs.
- The American Philosophical Association has defined critical thinking as "the process of purposeful, self-regulatory judgment. The process gives reasoned consideration to evidence, contexts, conceptualizations, methods, and criteria" (1990). Critical thinking is sometimes broadly defined as "thinking about thinking."

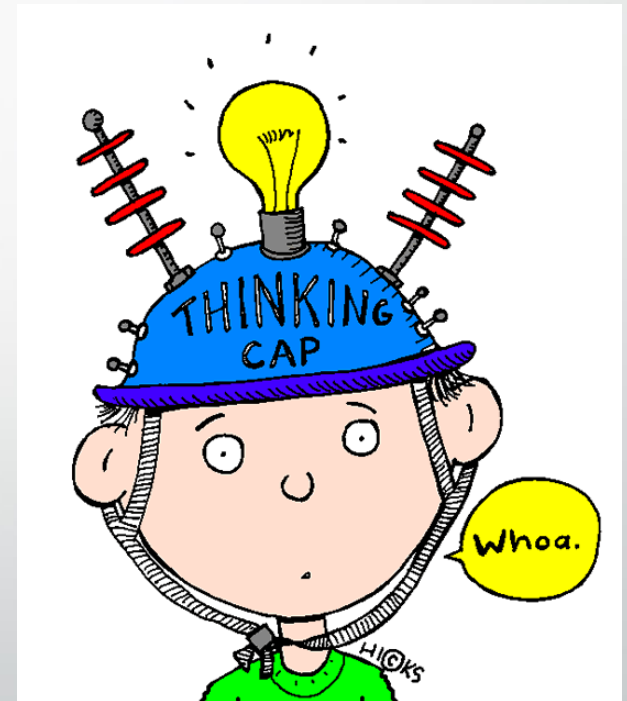
What are the standards?

- Clearness
- Accuracy
- Importance and Relevance
- Precision



clearness

- What does it mean?
 - Easily understood; readily apparent
- What is unclear thinking?
 - Obscure; ambiguous; confused
- Clearness is context dependent
 - Audience
 - Field or Discipline
 - Stage of thinking
- Overcoming Impediments
 - Saying what you mean
 - Being clear in your own mind
 - Anticipating what others will not understand



Accuracy

- What does it mean?
 - Describe the way things actually are
- What it doesn't mean.
 - You aren't accurate because you believe it to be true
 - Accuracy isn't just about facts as facts can be distorted
- Accurate vs. "True"
 - *We hold these truths to be self evident...*
- Impediments to accuracy:
 - Inertia
 - Denial and wishful thinking
 - Generalizations



Importance, relevance

- It is important if and only if it is pertinent to the discussion
- Can something be relevant but not important?
- Impediments
 - Losing sight of your purpose in order to win
 - Ignoring context
 - Missing the forest for the trees
 - Speaking just to be speaking
 - Emotional attachment, feeling threatened

Precision

- Specific and detailed as needed
 - Not beating around the bush
- Precision in context
 - Clearness
 - Purpose
- Impediments
 - Overlook the importance of precision
 - Takes work to be very specific on an issue
 - Difficult to see trees for forest

Importance of critical thinking skills

- Authors John Gardner, A. Jerome Jewler, and Betsy Barefoot (2007) stated that lack of critical thinking skills may lead to the following behaviors:
 - You try to reach a classmate on the phone to ask a question about tomorrow's quiz. When you can't reach him, you become so anxious that you can't study or sleep.
 - You are asked to read two news articles about the presidential election. One article claims the electoral college system is outdated; the other defends that system. After reading them, you can't see how both sides can be right. You don't even know which one is wrong.
 - On the day an important paper is due, a heavy snowstorm rolls in. You brave the cold to get to class. When you arrive, no one-including the teacher-is there. You take a seat and wait for class to begin
- What would you do in each scenario ?

Critical Thinking About Your Decision

- Describe a major decision you face in your life right now.
- Describe how you have made decisions in the past.
- List five specific suggestions and or methods that you think can help you make your decisions.

Collaboration fosters critical thinking

- Dr. Anuradha A. Gokhale at Western Illinois University (1995) stated that “students who participated in collaborative learning performed significantly better on test requiring critical thinking than students who studied individually.
- Four components of critical thinking
- Abstract thinking: Using details to discover some bigger idea
- Creative thinking: Seeking connections, finding possibilities, rejecting nothing (brainstorming, mind mapping, etc.)
- Systematic thinking: organizing the possibilities and

Brainstorming Activity



- Part A
- Develop 10 ways that you as a student are similar to a peanut
 - Brainstorming Rules
 - Quantity is more important than quality
 - Do not censure your ideas or the ideas of others.
 - See if you can generate ten ideas in five minutes.
 - Feel free to be wild and crazy.
 - When brainstorming in a group, you may build on other people's ideas and combine them in new ways.
 - Select your best ideas when you are finished.
- Part B
- What characteristics is most like you?

Fun Critical Thinking activity

• The Candle Problem is a classic test of creative problem solving developed by psychologist Karl Duncker in 1945. Subjects are given a candle, a box of thumbtacks, and a box of matches, and asked to fix the lit candle to the wall so that it will not drip wax onto the table below. The test challenges functional fixedness, a cognitive bias that makes it difficult to use familiar objects in abnormal ways.



Fun Critical Thinking activity

1. How do you put a giraffe into a refrigerator ?
2. How do you put an elephant into a refrigerator?
3. The Lion King is hosting an animal conference. All the animals attended except one. Which animal does not attend?
4. There is a river you must cross but it is used by crocodiles, and you do not have a boat. How do you manage it?

Fun with creative thinking

- Imagery exercise – for this exercise you will need to close your eyes and use your imagination.

Think BIG: What's the Next Invention

- You can think of the next big invention. What are some things that you are altering to fit your life and your needs. I like to drink tea, it would be really cool to have the following invention:

