

Triple Highlighting Strategy and the Ten Brain Principles

Patterns, Strategies and Engagement

- Step one:
 - Read the article on Accessing the Brain for Success on D2L. Highlight in *yellow* what YOU determine is important information that you do not already know about the Brain Principles.

- Step two:
 - During the lecture and power point, use the *blue* highlighter to record what your instructor emphasizes.

- Movement helps the brain make more efficient connections
- Brain research confirms:
 - exercise + movement = new neurons
- Aim for 30-60 minutes of exercise per day

Principle 1: Exercise and Movement

- Form supportive study and social groups
 - Re-evaluate current friendships and groups – prioritize your time
 - Look for good mentoring and team-building opportunities in order to increase the number of brain cells
 - Develop positive teacher-to-student interactions. Your instructor should know your name!

Principle 2: Social Conditions

- Neuroscience has discovered that the brain is malleable
- Neuroplasticity – the ability of the brain to rewire and remap itself
 - Influenced by skill building, reading, critical thinking skills – our college success skills!
- We can practice focusing skills, memory skills and processing skills:

<http://www.happy-neuron.com/games/#memory>

Principle 3: the Brain Changes

- Dangerous stress loads are becoming more common
- Chronic stress negatively affects memory, social skills and cognition
- Need to increase our sense of control
- Practice coping skills:
 - deep breathing
 - daily physical exercise

Principle 4: Chronic Stress

- We share 99.5% of the same DNA, but brains are unique because of life experiences and gene-expression
- It is important to recognize and celebrate our unique talents, abilities and interests

Principle 5: Brains are Unique

- Learn content in small “chunks” – the working memory can hold 2-4 items
- Learning and memory consume physical resources such as glucose
- Study difficult material in small chunks
- Process the information and then rest the brain

Principle 6: Small Chunks

- Art and music boost attention, working memory and visual spatial skills
- Get some kind of art experience 30 to 60 minutes a day, three to five times a week

Principle 7: Impact of the Arts

- Emotions influence cognition and behavior
- Only six emotions are “hard-wired” at birth:
 - Anger
 - Disgust
 - Fear
 - Joy
 - Sadness
 - Surprise

These emotions must be taught– anticipation, curiosity, suspicion, confusion, patience, attention, empathy. If not, students may not be ready academically.

Principle 8: Emotions

- Learning disabled students can learn better with consistent skill building strategies based on their learning styles
- Important to identify your personal learning style

Principle 9: Learning Disabilities

- Memories are not fixed; each time a memory is retrieved, it changes
- Need to continually review previously learned material
- Connect new material to previously learned material
- Frequent review is important – use study groups so information is not confused or corrupted

Principle 10: Memory

- Step three:
 - Now that we have reviewed the information, identified what you see as important, and what your instructor sees as important, highlight in *pink* the answers to the following questions.

- 1. What is neuroplasticity?
- 2. What are 2 things that cause brains to be unique?
- 3. Movement helps the brain to make more _____
_____.
- 4. According to new research, how many chunks of information can the brain realistically hold at one time?
- 5. What are 3 examples of targeted, planned, diverse social groupings?
- 6. Why should students continually review previously learned material?
- 7. Which 3 activities increase one's sense of control over his/her life?
- 8. What has research shown can boost attention, working memory and visual/spatial skills?
- 9. Learning disabled students learn better with skill-building strategies based on their _____.
- 10. List 3 emotions that are not hard-wired at birth but must be learned in order to be a better student.