Brain Basics

Did you know that your brain generates enough electricity to power a light bulb? It’s true. Our 100 billion microscopic brain cells, called neurons, produce enough electrical signals to power a small light bulb.

Although facts like this may seem frivolous, brain research is an important element in the SuperCamp curriculum. Here are the four Brain Basics we apply in our teaching and share with SuperCamp participants.

Brain Basic #1: **Neurons that fire together wire together** highlights the importance of repetition in multiple ways for creating pathways of neurons working together, and growing stronger and faster.

Brain Basic #2: **Attention is necessary for learning** may seem obvious, but when teachers and students stay aware of this fact, and attention and interest are sharp, learning is enhanced.

Brain Basic #3: **Students make meaning by connecting new learning to existing knowledge** emphasizes the need for students to look for meaningful personal connections in order to solidify learning.

Brain Basic #4: **Mental imaging supports understanding** relates to the important step of creating mental images of what we’re learning to increase understanding and recall.

And here are a few more basic brain facts that will serve you well as you learn . . .

- **Use color when taking notes and studying.**
  Contrasts in color help stimulate your brain and cause a higher frequency in electrical activity in the memory centers of the brain. This will result in greater recall and retention and will save you time in the process of learning.

- **Be aware of brain plasticity.**
  You are in the process of creating for yourself a brain of high, medium, or low quality. Your brain is being hard wired based on what you are doing and how you are using your brain. You are literally making new neural connections as you learn. FYI, the brain of a high school graduate may have millions of additional connections compared to the brain of a student who did not get a high school education.

- **There is no short-term or long-term memory unless working memory is focused on the content being learned.**
  The process of learning starts with working memory. Remember to use music and other state management strategies such as proper environment, a positive attitude, and working with your physical state such as posture to help focus your attention. The three aspects of state include mental, emotional and physical state. You can choose how you show up in class, and take charge of managing your own learning state. This state management is part of the This Is It! and the Ownership Keys of Excellence.

- **The amygdala and emotions can affect your ability to use your working memory to learn content.**
  Stress and anxiety can interfere with your learning. If you feel you’re experiencing stress that may be affecting your learning, try to deal with whatever it is that’s bothering you (consider whether OTFD or the Four-Part Apology might help) and let it go. If that doesn’t work, speak to someone you trust about getting some help.