

UNDERSTAND THE MIDDLE SCHOOL BRAIN

1. Yes Middle School students actually do have a brain and believe it or not a Middle School brain, like an adult brain, can only do what it's capable of doing

- The prefrontal cortex (alertness, attention, planning, forethought, priority setting, impulse control) does not develop until the age of 25.
- During the Middle School years, the cerebellum (balance, language, motor coordination, attention) is in a state of re-construction
- At birth, our brains have an operating system loaded and primed for growth. In a baby, each neuron (a cell that transmits electric signals) has around 2,500 synapses; These synapses are the wiring that allows our brains to send and receive information. From years 1-3 this number of synapses increases to around 15,000. Until recently, scientists thought this huge surge in brain wiring happened only once. They were wrong. Scientists have now discovered that there's another huge surge that takes place right before adolescence. This means only a baby in its first month of life trumps the developmental level and speed of a middle school student
- this explosive "brain growth" is followed by a process of "pruning" those connections (called Synaptic Pruning) in a kind of use-it-or-lose-it strategy. In the middle school brain what is repeated is strengthened and what is not used is pruned away.
 - Whatever teens choose to learn or experience is hardwired into their brains.
 - We either need to convince them to want to learn or create an experience that they can't help but remember
- Metacognition (the ability to have an inner conversation in your own mind) switches on around age 11. Imagine how terrifying it is to all of a sudden start having mental conversations with yourself for the first time.

2. We can expect the changes and struggles in Middle School because IT'S NATURAL, not because there is a problem.

- Ever feel like dealing with a middle schooler is like Jekyll and Hyde? One reason for this is that Dopamine levels in a middle school brain are not yet at optimal levels.

- Dopamine is the chemical messenger that allows us to do constant triage in day-to-day life, so we can figure out what to pay attention to and what is background noise. Without adequate levels, life can be a disaster. It's like: I'm crossing the street. OMG THERE'S A TRUCK ABOUT TO HIT ME...oh, look at the cute doggy!

- Scientifically speaking the following things should be expectations, not problems to be fixed
 - struggle with identity
 - moodiness
 - feelings in actions over words
 - friendships
 - less affection to parents
 - restlessness and moving around
 - invincibility
 - risky behavior
- "So what's sometimes seen as the problem with adolescents — heightened risk-taking, poor impulse control, self-consciousness — shouldn't be stigmatized. It actually reflects changes in the brain that provide an excellent opportunity for education and social development."

3. Middle School is a time of realization, action, and reaction

- Middle school students are developmentally schizophrenic
- Middle School students are more likely to express emotions through action than words
- They realize...
 - The world does not revolve around them.
 - Their parents are not perfect. They begin to lose trust in their parents.
 - They are not perfect. They lose trust in themselves.
 - Others have ideas that are just as important as theirs.
 - They ask themselves for the first time. Do I really believe in mom and dad's God?
- With immature emotional brains, students misread adult expressions and seemanness or anger when none was intended. They hear yelling when voices are barely raised. Middle school brains often make bad choices and decisions