FACTS ABOUT STRESS-TRAUMA-THE BRAIN
Compiled from: ‘The Body Keeps the Score’ by Dr. Bessel Van Der Kolk

“If I enter your class in pain, you WON’T heal my pain with superior curriculum instruction.”

“If kids come to us from strong, healthy functioning families, it makes our job easier. If they do not come to us from strong, healthy, functioning families, it makes our job more important.”

Barbara Coloroso

1. By far the **most important predictor** of how well one **copes with life’s disappointments/setbacks** is the level of security established with the primary care giver during the first 2 years of life.
2. We are **hard-wired with 6 emotions**-All others must be taught. Emotions such as empathy, compassion, guilt are soft-wired during the first 2 years with consistent supportive reciprocal interaction with primary care-giver.
3. **Broca’s Area**-small white spot in the left frontal lobe-one of the **speech centers** in the brain. **Broca’s Area goes off line** when flashback of trauma is triggered. **Without it, you cannot:**
   * put thoughts/feelings into words.
   * identify cause/effect and grasp long-term effects of actions.
4. **Fragments of trauma** such as sounds, smells, physical sensations are **registered separately** in the memory file from the trauma itself. Similar sensations often trigger flashbacks, seemingly unmodified by the passage of time.
5. The stress hormone of people with trauma **takes much longer to return to baseline** and **spikes quickly and disproportionately** in response to mildly stressful stimuli. High cortisol cancels cognition.
6. Being able **to move or do something** to protect oneself is a **critical factor** in determining whether or not a traumatic experience will leave long-lasting scars.
7. **Limbic system**-(Seat of emotions), monitors danger, judges what is pleasurable or physically/emotionally scary, decides what is important for survival purposes.
8. When circuits fire repeatedly, it can become a **default setting** to the response most likely to occur. If one feels safe and loved, the brain becomes specialized to exploration, play, cooperation. If one feels frightened/unwanted, it specializes in managing feelings of fear and abandonment.
9. **Mirror Neurons** pick up another person’s emotional state/intentions. It makes us vulnerable to other’s negativity, anger, depression.
10. The **more intense** the visceral, sensory input from the limbic system is, the **less capacity** the rational brain has to put a damper on it.

‘The Classroom is the stage where the heart and soul of the teacher is projected.’

Michael Bonner
Trauma increases the risk of misinterpreting whether a particular situation is dangerous or safe. This leads to blowups or shutdowns in response to innocuous comments or facial expressions. Young children and teens are horrible at interpreting facial expressions and associated meanings.

11. The Thalamus is the gatekeeper or filter of continual incoming stimulus. It decides what stimulus to let in and which to ignore. This increases ability to focus, concentrate and learn new information. Trauma causes the Thalamus to function less efficiently with less ability to filter stimulus, causing continual sensory overload.

12. In ideal situations, the Amygdala (Smoke detector) and the Medial Prefrontal Cortex (Watchtower) communicate as danger is detected by the Thalamus. The amygdala’s ‘danger signal’ triggers release of cortisol and adrenaline, preparing for fight or flight. MPFC job is to access danger sent from the amygdala, decide the severity and choose rational ways to respond while controlling animalistic impulses of the amygdala. Trauma reduces the communication between amygdala and MPFC (Watchtower), making it harder to control emotions and impulses. When the system breaks down, we respond like conditioned animals.

14. 3 Key takeaways from Polyvagal Theory (by Stephen Porges):
* A kind face or soothing tone of voice can dramatically alter the way we feel
* Knowing that we are seen and heard by the important people in our lives can make us feel calm and safe
* Being ignored or dismissed can precipitate rage reaction

15. Human beings are astoundingly attuned to subtle emotional shifts in the people (and animals) around them. Our bodies make internal adjustments to whatever we notice.

16. Humans respond to harsh voices with fear, anger or shutdown. Yelling at kids from trauma is devastating. Yelling at a child who is already out of control will only lead to further dysregulation.

17. Trauma devastates the social engagement system and interferes with cooperation, nurturing and the ability to function as a productive member of the clan.

18. For our physiology to calm down, heal and grow, we need a visceral feeling of safety. This ability to feel safe with other people is probably the single most important aspect of mental health. The critical issue is reciprocity—the feeling that we are held in someone’s mind and heart.

19. Kids from trauma/abuse are highly sensitive to changes in voices and faces, especially anger and flat affect—they tend to respond to them as threats instead of cues.

20. The amygdala responds to a real OR perceived threat 80-100 times faster than the rational brain. We feel before we think and react before we know why.

**EMOTIONS ARE THE FASTLANE TO THE BRAIN.**

Educational institutions too often bypass the emotional-engagement system of human beings and focus instead on recruiting the cognitive capacities of the mind. You CANNOT get to Blooms without going through Maslow.