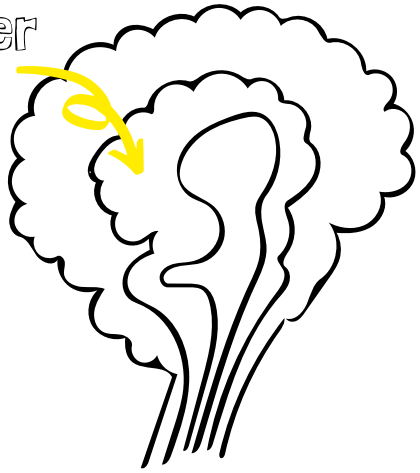
Why Explorer Mindset?

by Kelly Koller

The Explorer Mindset is an outlook where students view themselves as explorers. It is based on the Learning Framework from National Geographic, which was developed by National Geographic staff, educators and child development experts. Viewing yourself as an explorer in learning and life can have a powerful positive impact as explained in three scientific areas: Neuroevolutionary Science (how our brains evolved), Cognitive Science (how we learn) and Positive Psychology (the study of effective human functioning).

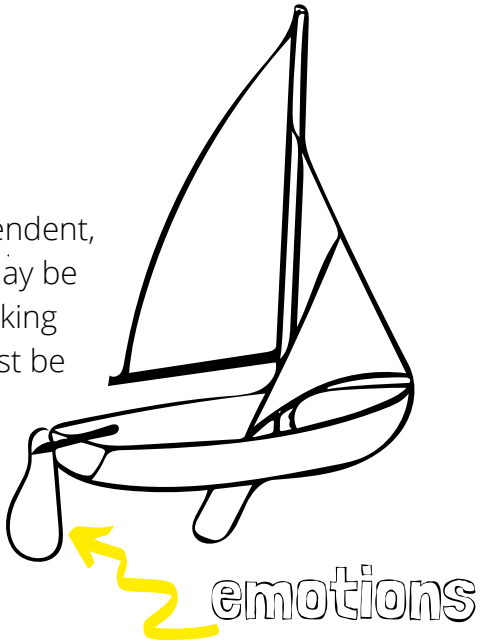
Neuroevolutionary Science



- The human brain evolved in three major levels--the reptilian, which controls our basic body processes, the mammalian, which houses our primal emotions and the neocortex, which includes our higher-order problem-solving skills
- The mammalian level contains hard-wired, primal emotional systems; every mammal has them. One of these is the emotional system of "Seeking", a persistent exploratory curiosity .
- Like all emotional systems in the mammalian level, the Seeking system has abundant connections to the neocortex, it energizes human creativity and intellectual understanding. By learning in the context of exploration, and honoring the pivotal role humans have as pathfinders in their own quest for understanding of the world, we are harnessing Seeking, this innate emotional system, to benefit students' feelings about learning. This not only serves to support their emotional wellness, but expands the breadth and depths to which academic understanding is achieved.
- The Seeking system keeps us going through through challenges because it provides a positive affect (feeling) that counteracts the negative, and, depressive feelings emerge when the Seeking system is chronically under-active
- "When in the service of positive emotions, the SEEKING system engenders a sense of purpose, accompanied by feelings of interest ranging to euphoria...We seek many things and in many ways, as this system guides diverse kinds of anticipatory learning....When the SEEKING system is aroused, animals exhibit an intense, enthused curiosity about the world."*

**information in this section summarized from: Panksepp, J., Biven, L., & Siegel, D. J. (2012). The archaeology of mind neuroevolutionary origins of human emotions. New York, N.Y: Norton. Quote, pg 34*

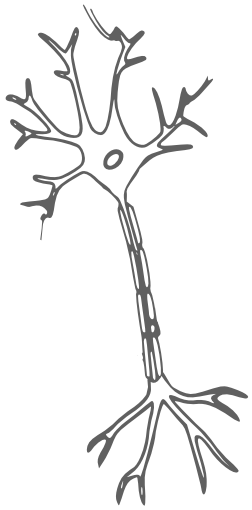
Cognitive Science



- Emotions and gaining knowledge are interdependent, not independent, neural processes. Even in subjects like math and physics (that may be considered "unemotional"), deep understanding depends on making emotional connections between concepts; their experiences must be meaningful and subjective to be remembered.
- For school-based learning to be effective, and produce deep understanding, emotions must be honored, respected, and harnessed because that is how brains work--emotions and new knowledge work together to create meaning and understanding.
- Primary emotions, like Seeking, control global states of the brain; making conditions right (or wrong) for learning.
- In short, learning is an emotional and cognitive process; "emotions are the rudder that steers thinking"*

**information in this section summarized from: Immordino-Yang, M. H., Gardner, H., & Damasio, A. R. (2016). Emotions, learning, and the brain: Exploring the educational implications of affective neuroscience. New York ; London: W.W. Norton et Company. Quote, pg 28*

Neuroscience & Positive Psychology



- Neuroplasticity is the brain's ability to re-wire itself, build new connections or strengthen existing connections. We have often heard about having a growth mindset about learning new skills. But this applies to our mindset, our attitudes as well, too.
- We can coach our attitudes, our thoughts and ideas about something, by giving ourselves positive affirmations. Practicing mindfulness, focusing on gratitude, reducing stress and taking care of our physical well being, all help support the growth of positive connections in the brain.
- Positive emotions flood our brain with the chemicals serotonin and dopamine, which promote higher order thinking skills in the neocortex. The more this occurs, the stronger the neural pathways become.
- "Instead of narrowing our actions down to fight or flight as negative emotions do, positive ones broaden the amount of possibilities we process, making us more thoughtful, creative and open to new ideas"*

**information in this section summarized from: Anchor, S. (2018). The happiness advantage: how a positive brain fuels success in work and life. New York: Currency. Quote, pg 44*