**Student Engagement, Professional Development**

**Autumn 2017 Abstract**

Human behavior reduced to the simplest terms is this: absorbing information from the environment through the five senses, processing that information creatively as a means of working to manipulate it to our benefit and survival, and then acting out into the environment based upon that processing. The purpose of this professional development will be to offer teachers the opportunity to learn about the cognitive and behavioral connections that factor into student performance and classroom management. The focus will be on the biology of the brain within young people across the age spectrum as it pertains to K-12 education. The content of this PD session will be on the relationship between key structures of the brain – primarily the lower brain centers responsible for impulsive behavior (the amygdala and hypothalamus); those responsible for responses to reward and punishment (the basal ganglia for rewards, and the cingulate gyrus for aversion to physical and emotional pain); the upper brain centers responsible for sensory processing, cognition and impulse control (the cerebral cortex – specifically, the prefrontal cortex). The application portion will be toward a mindful understanding on the part of teachers that students, in spite of what their behavior or words might communicate, are innate learners, who unconsciously desire to learn as a means of receiving rewards and avoiding consequences. From there, teachers will be encouraged to implement systems of reward and consequence that communicate to the developing brain at age appropriate levels.