GATE Group Lesson: Oct. 16, 2015

**Our “Elastic” Brain Lesson**

**Learning Target: I can understand that the brain has “plasticity” which means that the brain continues to grow and change based on practice and effort, in our daily life experiences.**

1. **Review the major parts of the brain and their functions, that were discussed in our last session.**

 a. **Cerebrum**-largest part and helps us think and speak

    b. **Cerebellum**-small part at the back of the brain that helps your muscles to coordinate your movement and balance, so that you can walk, ride a bike, or play tag.

    c. **Prefrontal Cortex**-the part of your brain behind your forehead that lets you make plans and decisions

    d. **Hippocampus**- is at the center of your brain and works like a file cabinet to help you store and find memories.

    e. **Amygdala**- is a tightly-packed group of cells deep within the center of the brain that controls your emotions.

1. **Label the major parts on the students’ “Brain Maps**”, but students will use the opposite hand that they normally write with. This will lead to the understanding that engaging both hemispheres of our brain will make stronger connections.
2. **Physical Activity—Cross Crawls-**This is a contra-lateral exercise, similar to walking in place. Students alternately move one arm and its opposite leg and the other arm and its opposite leg. This “Cross Crawl” exercise accesses both hemispheres of the brain at the same time.
3. **Orange/Rubberband Activity**-In this last part of our session, each student was given an orange and various sizes of rubber bands. The students were asked to attach the bands onto the orange. While they were attaching the bands, the discussion revolved around these questions:
4. What bands were easiest to stretch onto the orange? Why?
5. Which were more difficult? Why?

The goal was to have students understand that the large bands correspond to areas in our brain in which we are already more skillful, and thus those connections are more plentiful and fuller (more elastic).

The smaller, tighter bands are areas where we want to grow. We need more effort to get those tight bands on the orange. Thus in life, we need to put in more effort in skills that we aren’t as skilled in as yet. The tighter bands need stretching and practice, so this part of our brain will grow.

1. **Conclusion: We reviewed the learning target and the students shared what area(s) they would like to see grow in their brains.**