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Since beginning this course, I have been implementing growth mindset strategies in my classroom. Even though it is the end of the school year, I am seeing improvements in learning in most of my students. To help students adopt a growth mindset and learn how the brain learns, I used the Brain Boot Camp strategy from *Mindsets in the Classroom* (Ricci, 2013). I began my Brain Camp with a pre-assessment—what did my students know about the brain? I used Figure 7 on page 100 of Ricci’s text to have my kids draw what their brain looks like, as well as write down anything they knew about their brains. I was amazed with what some of them knew! I then moved on to pre-assess their knowledge of growth and fixed mindset using the given questions in the text on page 106. I had them do a heads down, eyes closed, thumbs up-thumbs down showing so it would be more honest. About 70% of my kids agreed that some kids are born smarter than others. This vote helped me set my focus on teaching my students about brain plasticity.

The next day, I taught Learning Task #1: The Brain is like a Sponge (page 106). I introduced the lesson by letting my students know that they would be using the background knowledge housed in their brains to figure out what is in the box. They became very excited. I used the Second Grade attributes on page 109, but I mixed up the order to make it a bit more challenging. I had my students secretly record what they thought I was describing in their journals. When I finished and had the list posted on my InterWrite Board, they had to write down or highlight from the list *why* they chose the answer they did. I had them partner up and share their answers and reasoning. We discussed how our brains “worked” to help us solve the mystery, as well as how our brains *are* like a sponge. I then presented them with the activity on page 110 of wetting the sponge. I saw several faces light up when I modeled and explained that as we learn more and challenge our learning(adding more water), our brains grow bigger (sponge grows bigger). I even had some parents talk to me about it the following day, as their kiddos were so intrigued!

The third day, we dove into Learning Task #2: Building a Neural Network (page 110). To pre-assess, I asked my students what is inside the brain. A couple of kids hesitantly replied, “Neurons?” I told them they were right on! We viewed pictures of neurons and then built them using pipe cleaners. From there, some students became neurons. We made thin connections (string) first based on the math concept of area (something we are still learning). We then made thicker connections (heavy yarn) as we based it on multiplication. The kids and I discussed that as we practice concepts more and more, connections become thicker. Thus, because connections can become thicker, change happens in the brain and they have made themselves smarter. I passed a worksheet similar to Figure 17 on page 115 and had my students assess their “Strong and Not Yet” neural connections. Some replied, “Now, I know what I need practice to help my brain grow!” We also discussed the Road Map and Visualization analogies.

On day four, I had my students draw and write all that they have learned about their brains. We then revisited the three statements (page 106) and discussed that people are not “born” smart, but instead make themselves smart through challenges, learning new things, perseverance, and failure. We created a poster of positive things we can say to ourselves when we get frustrated or feel we cannot do something (“You got this,” “You can do it,” “Hang in there,” Don’t give up,” “I don’t have it YET, but I will keep trying”), thus fostering and reinforcing the growth mindset mentality.

Since teaching the Boot Camp, I have been helping my students set daily goals—both short-term and long-term. A section of their writing journals has been designated as their “brain journal.” Every afternoon, my students and I review the day’s learning targets. I ask them to think about a goal they could create to stay on track toward achieving it, steps they could take to help themselves find success, and if necessary, what other information or help they may need to get there if they are “not yet” there. During the final 15 minutes of the day, we do a pair-share and a group-share about our thoughts. This helps to open our brains up to helping each other grow. I believe that even my kids who are fixed mindsets are beginning to see that feeling “not yet” is OK; practice, effort, and analyzing setbacks and struggles are really opportunities for learning. Brain journals have further developed our concept of being team. We are there for each other to help and support one another. Collaboration is part of the learning process and growing our brains. When we are faced with a challenge, reflecting on what we learned, which mistakes taught us something, and what we tried hard at will lead us on the right path to becoming growth mindsets.

I feel that this lesson went well, overall. The kids thoroughly enjoyed learning about their brains during the Brain Camp. The pre-assessment allowed me to visually see what they thought parts of their brain did for them, such as talking, multiplication, division, writing, be safe, respectful, responsible, and a learner (our behavior initiatives). They all showed some understanding of brain functions.

The “Your Brain is a Sponge” activity sealed the fact that the brain can grow. One student replied, “Just like when the sponge is soaked, it cleans better, our brains work better and think better when it grows and gets stronger.”

This comment sparked quite the conversation about the growing brain, and lead to a great Segway into Building a Neural Network. The incorporation of a manipulative (yarn) and movement created several “a-ha’s” on how the brain actually grows and gets stronger with each connection. One student commented that her brain could grow so much in one day when they have to work through challenging math problems or reading responses.

I even had kids refer to our poster of positive things we can say to ourselves when we get frustrated or feel we cannot do something. I heard one group who got “stuck” working on a fraction word problem say, “We aren’t there yet, but I think we got this. We just need to rethink our steps and try something else.”

Student Brain Journals have also served to be helpful, reflective tools for my students. I am surprised of my kids who feel they are “not yet” there on a learning target, who respond with a positive remark, aiming to work harder, try new strategies, and not give up. The students have also “piggybacked” off of others’ responses comparing their own thoughts. Some students are also offering helpful feedback and strategy suggestions for helping kids grasp the target(s). All the while, I am pleased to say, that the kids are very accepting of the feedback and often reply, “Thank you for sharing that with me.” I have even viewed kids helping those who are “not yet” there, the following day, coach those students to understand the concepts without just telling them the answers.

Informing our students *how* their brains work and that learning *is* possible is invaluable. I am hopeful that my students will persevere and challenge their brains to grow bigger and stronger. I am also pleased that they are using setbacks and challenges as learning opportunities and not feeling badly about “not yet” understanding a concept. “Hanging in there” and trying new strategies will get them there, and their brains will be bigger and stronger because of it.

References

Dweck, C.S. (2016). *Mindset: The new psychology of success. How we can learn to fulfill our potential.* New York: Ballantine Books.

Ricci, M.C. (2013). *Mindsets in the classroom: Building a culture of success and student achievement in schools.* Waco, Texas: Prufrock Press, Inc.