

What Comes First? The Chicken or the Egg?

This work is licensed under a Creative Commons CC BY-SA 4.0 License

Time Frame 70-85 minutes

Essential Question(s)

How can our thoughts and beliefs about failure affect our success in school and life?

Summary

What came first, the chicken or the egg? Oftentimes, Positive Mental Attitude (PMA) and Growth Mindset seem as if they are one and the same. During this activity, students will explore the importance of developing a Positive Mental Attitude (PMA) in order to establish a Growth Mindset and will finally answer the question, "What came first, Positive Mental Attitude (PMA) or Growth Mindset?"

Learning Goals

1. Research ways to develop a consistent Positive Mental Attitude (PMA).
2. Explore how brain development contributes to the development of a Positive Mental Attitude (PMA).

Attachments

- Activity Slides- What Comes First, The Chicken or The Egg..pptx

Materials

- Activity Slides (attached)
- "A Little Disconnect Goes a Long Way to Learn Motor Tasks, Brain Study Says" (optional; linked; one per student)
- Sticky notes
- Note cards
- Pens
- Chart paper
- Markers, crayons, colored pencils, etc.
- Student devices with internet access
- Printer access for students to print some images as needed

Engage

Teacher's Note

This activity can be used in conjunction with the "What's Mindset Got to Do with It?" lesson.

Prior to this activity, draw a line across your board or on chart paper to represent a rope or continuum for the Tug-of-War activity. On the left side of the line, write “Positive Mental Attitude” and on the right side of the line, write “Growth Mindset.”

Use the attached **Activity Slides** to guide the activities and instruction.

Move to **slide 3** and share the instructional strategy Collective Brain Dump with students. Pass out sticky notes and have students write down everything they think they know about Positive Mental Attitude (PMA). Each new thing they write down should go on its own sticky note.

After students have written down as many things as they can think of, display **slides 4-5** to share the Essential Question and Learning Objectives with students. Review these with the group to the extent you feel necessary.

Explore

Next, have students consider what they already know about Growth Mindset. Move to **slide 6** and ask them if any of the items they wrote down match with their prior knowledge on Growth Mindset? Instruct students to sort through their sticky notes and create a pile that describes Growth Mindset and a pile that describes Positive Mental Attitude.

Use **slides 7-8** to share the meaning of Growth Mindset and Positive Mental Attitude with students. Ask students to revisit their piles and consider whether they need to make changes. If so, have them do that now.

Display **slide 9** and share the instructional strategy Tug-of-War with students. Have students look at their sticky notes that describe Positive Mental Attitude and order them from strongest characteristics, which they will place under the label "PMA," to weakest characteristics which should be placed under the center point of the line. Once they have finished adding their PMA sticky notes, have them do the same for Growth Mindset.

Move to **slide 10** and posit the questions, "What comes first, the chicken or the egg?" and "What comes first, Positive Mental Attitude or Growth Mindset?"

30 minutes

Explain

Move to **Slide 11** and play the video.

Embedded video
https://youtube.com/watch?v=-qLchg4xkOY

Use this video as a launching point to their poster design activity. Remind students that positive mental attitude includes self-talk and habits that affect our frame of mind. List the seven key ideas of PMA on **slide 12** and the instructions for the poster activity.

1. Believe in success.
2. Develop confidence in yourself.
3. Avoid thinking in extremes.
4. Don't overgeneralize.
5. Celebrate your success.
6. Stop believing your inner idiot.
7. Stop thinking of perfection.

Divide students into seven groups: one for each key idea. Each group will create a motivational poster for the assigned key idea of a positive mental attitude provided to them.

Each group should explore their assigned key idea and plan their poster so that it encourages a positive mental attitude based on that key idea. They may include tips, tricks, quotes, and photos, and/or drawings to achieve this goal. Let students know that the final results will be posted around the school in key places with a lot of traffic to encourage a mindset change (based on the strategy, Anchor Charts).

Move to **slide 13** and revisit the tug of war activity. Ask students if they would want to make any revisions to their original sort.

15 minutes

Extend

Display **slide 14** and have students write down one note of positivity and fold it up.

Move to **slide 15** and split students into two groups, instructing them to bring their positive notes with them.

Have them stack all of their notes together in one pile and then line up with each group facing the other.

1. The first student in the line will be a sensory neuron. The last student will be a motor neuron. Everyone in between will be a relay neuron.
2. Have students raise their right hands and wiggle their fingers. These will be their dendrites. They can place this hand at their side. Have them then raise their left hands and wiggle them. These will be their axons.
3. Students will place their left hand on their head. Instruct the first student, the sensory neuron, to reach with their right hand and read one of the notes in the pile to themselves before transferring the note to their left hand on their head.
4. Then move their left hand (axon) to transfer the note to the next person's (relay neuron) right hand (dendrite) without touching their hand.
5. Each relay neuron passes the note along the same way but does not read the note.
6. When the note gets to the motor neuron, they will take the note with their right (dendrite) hand and can read the note aloud to the group. The sensory neuron will confirm that they read the correct note.
7. Have students repeat the process over and over until they have read all of the positive notes aloud to the group.

Once students have completed the activity, spend some time debriefing and discussing how this relates to practicing and developing a Positive Mental Attitude.

1. How hard did you have to think about what you were doing the first time you passed a note compared to the last time?
   As they repeated the relay, they should notice that it got easier, and they got faster at it. This is like the myelination process where the more a neural transmission pathway gets used, the more protected and efficient it becomes at sending signals.
2. How do you think this relates to Positive Mental Attitude and Growth Mindset?
   Just like practicing riding your bike or playing an instrument, with repetition, practicing a positive mental attitude and growth mindset thought patterns will help them to come naturally over time.

Teacher's Note

If you find students are interested in the brain-based science behind this activity, you can share with them the following article: "A Little Disconnect Goes a Long Way to Learn Motor Tasks, Brain Study Says."

15 minutes

Evaluate

Now that students have a better understanding of Positive Mental Attitude and the importance of practicing it each day, display **slide 16** and have them reflect on something that would remind them to keep a positive mental attitude every day. Whatever comes to mind, students should write or draw this on a small note card that they can keep somewhere they will see it every day.

Have students share out their visual cues and explain in their own words how this visual cue will help their neural pathways grow and strengthen their Positive Mental Attitude.

Research Rationale

Regardless of the focus of the extracurricular activity, club participation can lead to higher grades (Durlak et al., 2010; Fredricks & Eccles, 2006; Kronholz, 2012), and additional benefits are possible when these clubs explore specific curricular frameworks. Club participation enables students to acquire and practice skills beyond a purely academic focus. It also affords them opportunities to develop skills such as self-regulation, collaboration, problem-solving, and critical thinking (Allen et al., 2019). When structured with a strong curricular focus, high school clubs can enable participants to build the critical social skills and "21st-century skills" that better position them for success in college and the workforce (Allen et al., 2019; Durlak et al., 2010; Hurd & Deutsch, 2017). Supportive relationships between teachers and students can be instrumental in developing a student's sense of belonging (Pendergast et al., 2018; Wallace et al., 2012), and these support systems enable high-need, high-opportunity youth to establish social capital through emotional support, connection to valuable information resources, and mentorship in a club context (Solberg et al., 2021). Through a carefully designed curriculum that can be implemented within the traditional club structure, students stand to benefit significantly as they develop critical soft skills.

Resources

- Allen, P. J., Chang, R., Gorrall, B. K., Waggenspack, L., Fukuda, E., Little, T. D., & Noam, G. G. (2019). From quality to outcomes: A national study of afterschool STEM programming. *International Journal of STEM Education*, *6*(1), 1-21. https://doi.org/10.1186/s40594-019-0191-2
- Durlak, J. A., Weissberg, R. P., & Pachan, M. (2010). A meta-analysis of after-school programs that seek to promote personal and social skills in children and adolescents. *American Journal of Community Psychology, 45*(3-4), 294–309. https://www.eccnetwork.net/sites/default/files/media/file/Durlak_A_meta-analysisof_after_school.pdf
- Fredricks, J. A., & Eccles, J. S. (2006). Is extracurricular participation associated with beneficial outcomes? Concurrent and longitudinal relations. *Developmental Psychology, 42*(4), 698–713. https://doi-org.ezproxy.lib.ou.edu/10.1037/0012-1649.42.4.698
- Hurd, N., & Deutsch, N. (2017). SEL-focused after-school programs. *The Future of Children*, *27*(1), 95–115. http://www.jstor.org/stable/44219023
- K20 Center. (n.d.). Anchor charts. Strategies. https://learn.k20center.ou.edu/strategy/58
- K20 Center. (n.d.). Collective brain dump. Strategies. https://learn.k20center.ou.edu/strategy/111
- K20 Center. (n.d.). Tug of war. Strategies. https://learn.k20center.ou.edu/strategy/98
- Kronholz, J. (2012). Academic value of non-academics: The case for keeping extracurriculars. *Education Digest, 77*(8), 4-10. https://www.educationnext.org/academic-value-of-non-academics/
- Los Angeles Times. (2015). A little disconnect goes a long way to learn motor tasks, brain study says. https://newsela.com/read/brain-learning/id/8508/
- Pendergast, D., Allen, J., McGregor, G., & Ronksley-Pavia, M. (2018). Engaging marginalized, "at-risk" middle-level students: A focus on the importance of a sense of belonging at school. Education Sciences, 8(3), 138. https://files.eric.ed.gov/fulltext/EJ1200547.pdf
- Wallace, T. L., Ye, F., McHugh, R., & Chhuon, V. (2012). The development of an adolescent perception of being known measure. *The High School Journal*, *95*(4), 19–36. http://www.jstor.org/stable/23275415
- S
  olberg, V. S., Park, C. M., & Marsay, G. (2021). Designing quality programs that promote hope, purpose, and future readiness among high need, high risk youth: Recommendations for shifting perspective and practice. *Journal of Career Assessment, 29*(2), 183–204. https://doi.org/10.1177/1069072720938646