

# Math Anxiety in the Classroom

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## Concept

The official definition of math anxiety is “feelings of tension that interfere with the manipulation of numbers solving math problems.”<sup>2</sup> This means students struggle when using the left side of their brain which deals with math.

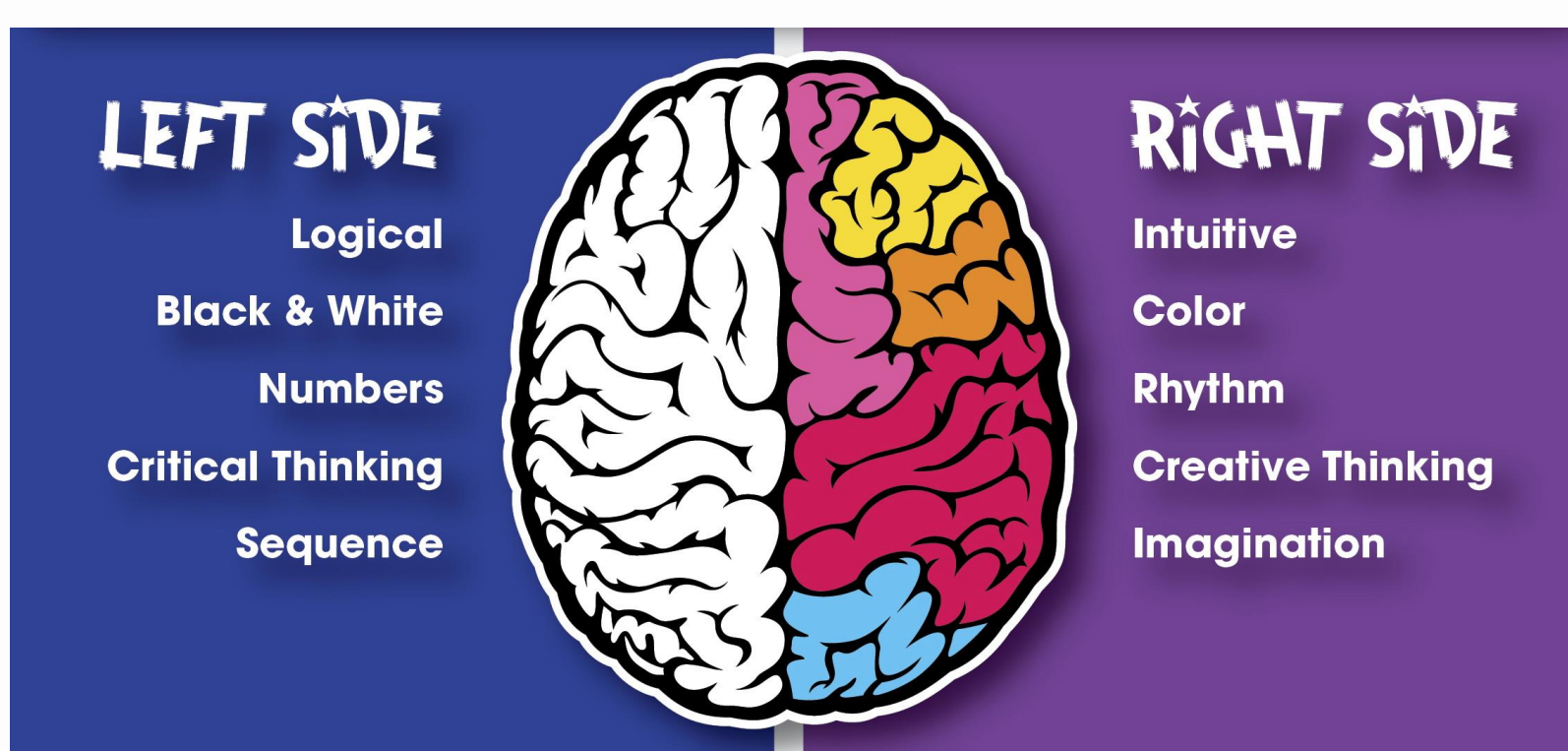


Figure 2. A diagram of the left and right side of the brain.

## Teacher Support for Students

Many students may believe they have a limit to their math abilities. Teachers can combat this with the educational strategies listed below.

## Educational Strategies

- Incorporate all learning styles by using elements that engage all parts of the brain
- Modify assessment practices and grade based on correct processes rather than answers
- Acknowledge student-initiated connections, accept different processes, avoid singular-method expectations

### References:

1. Carter, C., & Erna, Y. (2017). Math anxiety in the science classroom. *The Hoosier Science Teacher*, 40(1), 27-32. doi:http://dx.doi.org/10.14434/thst.v40i1.23273
2. Finlayson, M. (2014). Addressing math anxiety in the classroom. *Improving Schools*, 17(1), 99-115. https://doi.org/10.1177/1365480214521457
3. Figure 1. photograph. Retri Gardner's Theory of Multiple Intelligences. (2021). VeryWell Mind. eved March 25, 2022, from https://www.verywellmind.com/gardners-theory-of-multiple-intelligences-2795161
4. Figure 2. Whole Brain. (n.d.). Math Genie. photograph. Retrieved March 25, 2022, from https://www.mathgenie.com/everyday-math.

## Causes

Internal	External
<input type="checkbox"/> Self-confidence issues	<input type="checkbox"/> Poor instruction in the past
<input type="checkbox"/> Unable to handle stress	<input type="checkbox"/> Lack of encouragement
<input type="checkbox"/> Lower mathematical intelligence	<input type="checkbox"/> Negative views of math from outside sources

## Theory of Multiple Intelligences

Psychologist Howard Gardner proposed the theory of multiple intelligences in 1983. He said that a person's intellect can be measured using nine different areas of intelligence, one of which being mathematical/logical intelligence.

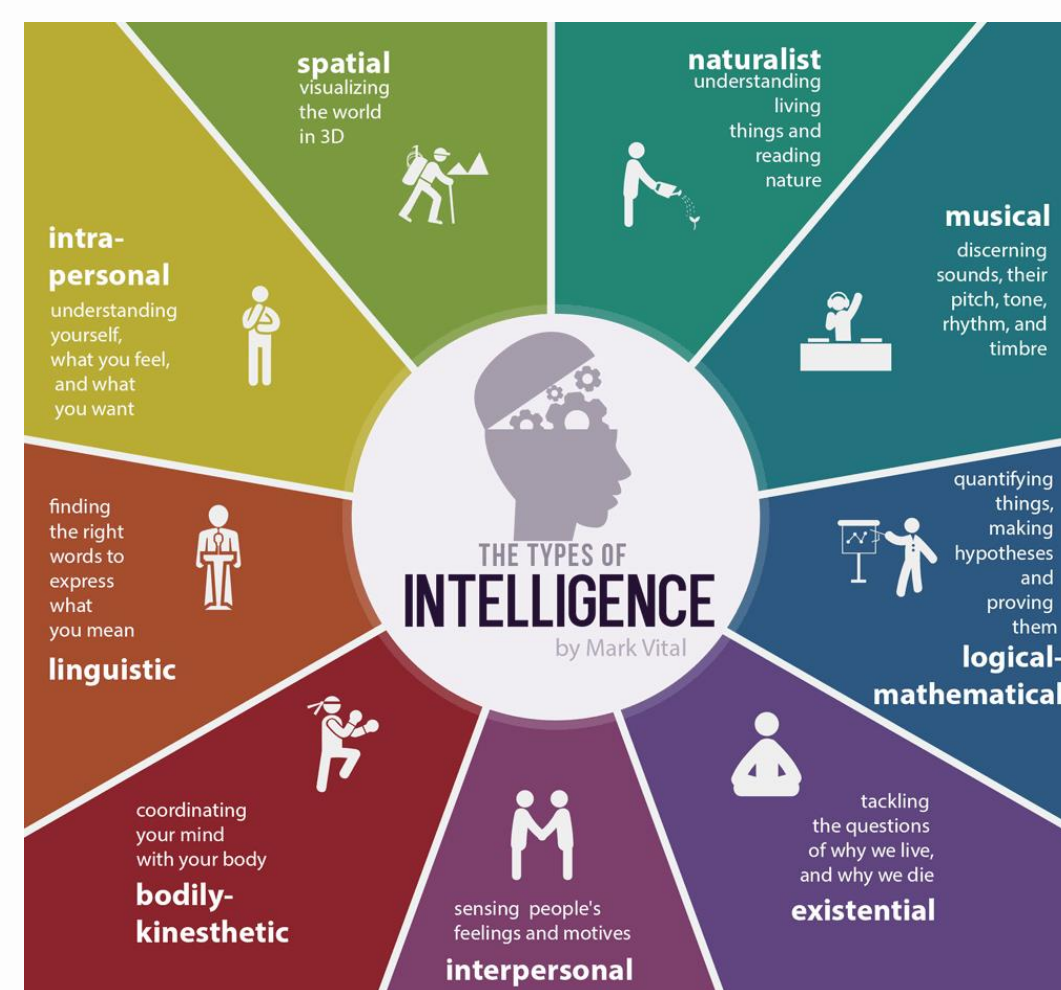


Figure 1. Gardner's Theory of Multiple Intelligences

## Learning Styles

- Visual: These learners use visual representations to gain understanding. Materials that will benefit them are diagrams, pictures, tables, graphs, etc.
- Auditory: These learners use their hearing to gain understanding. Materials that will benefit them are audiobooks, music, lectures, etc.
- Tactile: These learners use physical touch to gain understanding. Materials that will benefit them are 3D models, practice problems, etc.