



Curriculum Units by Fellows of the National Initiative  
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## **Mathematics and the Brain: Easy as 1-2-3 Simple Like A-B-C**

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*The goal of learning is not just to acquire knowledge, but to be able*

to use that knowledge in a variety of different settings that **students**

see as relevant.

David A. Sousa

Students are often successful with computational problems, whereas they experience significant difficulty when required to solve and analyze multi-step word problems. Why does this occur? What brain functions are vital for students' successful comprehension of math concepts? What parts of the brain produce student achievement in mathematics? These are essential questions that were researched, evaluated, and presented within this curriculum unit intended for grades fifth through eighth.

The foundation to achieve these objectives is through student exploration of meta-cognition activities to help them critically reflect on their learning. Also, the unit incorporates multiple intelligences and brain-based learning theories, because according to research it is imperative that we create classrooms that engage the whole brain. Therefore, my goal is to offer students an in-depth explanation and strategies regarding how the brain works in processing mathematical concepts.

(Developed for Math, grades 5-8; recommended for Math, Literacy, and Science, grades 5-8)

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