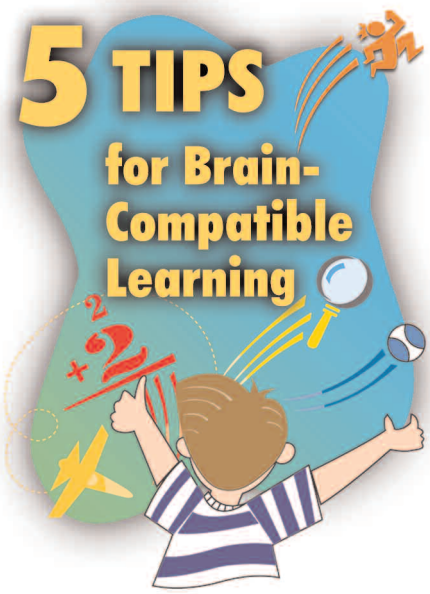

The more we understand the brain, the better we'll be able to design instruction to match how it learns best. – *Patricia Wolfe*

Five Tips for Brain-Compatible Learning

Becoming knowledgeable about the latest discoveries in brain research and its practical application is a logical necessity for educators. The following are five tips for brain-compatible learning.

1 Keep threat and stress low. The human brain is designed to help us survive. When threats and stress are present, chemicals that produce the fight or flight response are released in the brain. Memory, learning, and decision making are affected because the brain's focus is on survival. A classroom environment that builds positive relationships between the teacher and students and among the students themselves creates a secure and supportive environment where students feel safe enough to take risks that will lead toward optimal learning. On the other hand, an environment that is intimidating, antagonistic, overwhelming, and negative interrupts the learning process.

2 Make connections with familiar ideas. The brain is designed to help us make sense of the stimuli that constantly bombards us. Because we are exposed to massive amounts of information that is often irrelevant, the brain tries to make sense of what it takes in by detecting familiarity and patterns. When introducing new concepts, try to connect them to prior learning. This will give the learner something on which to hook his or her new learning.

3 Use novelty to your advantage. As the brain tries to make sense of its environment, novelty is a big attention-grabber. Our ancestors used this information to protect themselves from predators as novel stimuli caught their attention. Teachers can take advantage of this phenomenon by presenting information to students in a novel way. Too little novelty can create boredom. Too much novelty can create stress and chaos. A dynamic classroom environment that offers social, fun, and relevant novelties will lead to greater attention and engagement. Even the most subtle, unexpected changes, such as moving a lesson to different location, adding music, bringing in a guest speaker, speaking with a foreign accent, wearing a costume, or moving classroom furniture around can lead toward more attention, thus fostering greater learning.

4 Utilize memory tools to promote learning. Patricia Wolfe says that memory is what enables us to learn by experience. There are numerous strategies that teachers can use to help students improve their memory, including having students consciously make *associations* (connections) such as analogies, similes, and metaphors. *Chunking* information into smaller components also helps to improve memory. To understand the second phenomenon, look at this series of letters that appear random and try to memorize them in 14 seconds: IB MJ FKTW AUS ACD. When the letters are chunked together in a more meaningful way, they are easier to recall: IBM JFK TWA USA CD. A third strategy is to teach students to use *mnemonic strategies* — a highly effective teaching practice. Using such devices as acronyms, acrostic sentences, rhymes, songs, and phrases can be valuable. Is a student having difficulty spelling a word? Sing the spelling to a familiar tune. Trouble remembering all of the great lakes? Use an acronym.

5 Promote good brain care with your students and their parents. Both students and their parents would benefit from knowing what the brain needs in order for optimum learning to occur. Proper nutrition, adequate amounts of sleep, exercise, and sufficient water intake are critical factors in maintaining good brain health.

This issue was written by Cathy Marziali, a teacher at Naples Elementary School in Naples, Italy. She has taught first grade Italian immersion for the last three years and is teaching Spanish FLES (Foreign Language in Elementary School) for grades K-1 this year. Naples Elementary School is a DODEA school.

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