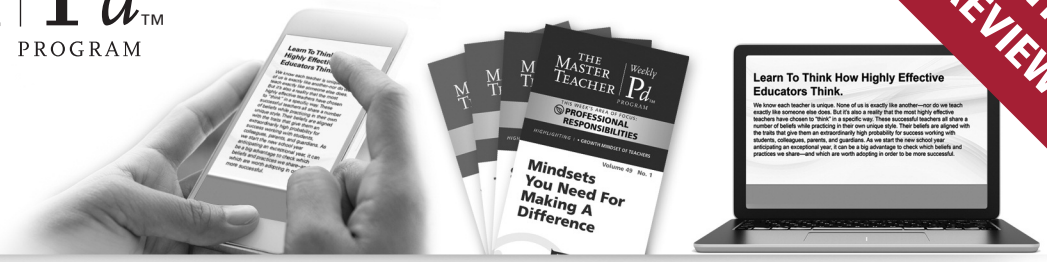
THE MASTER TEACHER Weekly Pd™ PROGRAM

*Every week of the school year, your teachers will receive a lesson similar to this online and in print.*




# Five Strategies For Leading Brain Friendly Learning

We have learned quite a bit about how our brains work and how we can position learning to take the best advantage of this powerful and complex organ. Of course, not everything discovered in research is ready for or applicable to the classroom. We need to be careful not to overreach what is ready for our use with learners. What we have learned about how the brain works reinforces many of the best instructional and learning strategies we have known for a long time. Equally important, what we are learning about the brain also can help us avoid practices that interfere with efficient brain operation.

## We can begin by creating a brain friendly classroom environment.

When you think about making your students' learning experiences brain friendly, a good place to begin is with the classroom environment. Research points to several key factors. Students need to feel safe. Low levels of fear and stress are crucial for their brains to focus and stay focused on learning. Clear procedures and consistent classroom rituals can prevent distractions and free their brains to focus and access working memory. Opportunities to make choices invite their brains to problem solve and take ownership of learning activities. Flexibility and time to respond to questions and complete work further reduce stress and allow students needing more or less time to process information to have their needs met.

When it is time to engage in instruction and learning, you can begin by trying to capture three things: student interest, student attention, and student emotion. You might tell a story, ask a question, or share an interesting fact. The key is to give students a reason to focus their attention in the direction of what you want them to learn. Remember, you are asking students to make an investment of time, attention, and effort. If you give them a reason to do so, you are more likely to have access to their brains.

Once you have students' attention, move from external stimuli to internal stimuli and personal connections. Learning requires the brain to find some relationship or connection to what is *already known* as a place to begin the process. You can support this shift by giving students a relevant question to consider, by asking them to reflect through journal writing, or even by challenging them to find connections with what they already know or have experienced.

## To be brain friendly our instructions should respond to what students can retain.

Brain friendly learning also has implications for our presentation of information. Remember, lecture and direct instruction often is revealed as not being an effective instructional strategy. And presentation of information can be crucial to building a foundation to support future learning. The key is to select information that matches what students are ready for, organize the information to make it easily digestible, and restrict the amount of information and the length of time spent presenting it. Lengthy lectures can actually work against student understanding and retention. A good guideline is this: the number of minutes you expect students to focus should match their age. As an example, ten year olds typically can focus for ten minutes, not forty.

Regardless of the means used to expose students to content or skills to be learned, their brains need time and opportunities to contextualize, connect, and organize what they have seen, heard, and experienced. You can facilitate this process by having students explain the new content in their own words or engage in a brief task to demonstrate their new learning. However, it's crucial for teachers to position themselves so they can reinforce intended learning and provide corrective feedback where students are confused or have misconceptions. Failure to support students at this crucial transition in the learning process can have long-term negative consequences. When confusion and misconceptions are allowed to persist or are repeated as part of independent practice, they can become difficult to undo and correct. Remember, learning it wrong can have big

*(continued on back)*

consequences. Providing students instruction and then assigning practice as independent work without first checking to be sure students can do the work is an unwise practice.

The next step in supporting brain friendly learning processes is building competence and confidence through *formative assessment*. During this learning phase, students might be asked to construct a "mind map" to show their understanding of a concept, components, and connections. Students might write about processes and discuss implications of what they have learned. They might even "micro-teach" to another student. The purpose is two-fold: First, to see the path and progress of learning to provide feedback and support students to take the next steps. Second, when students engage in organizing, presenting, and demonstrating what they've learned, their learning becomes more deeply embedded in memory.

**The Master Teacher provides students with learning experiences that go beyond following directions to fully own their learning.**

The Master Teacher understands the importance of what we know about the brain and learning and uses what is known to support both brain friendly learning environments and instructional approaches. He or she is committed to providing students with learning experiences that go beyond following directions to fully own their learning.

The Master Teacher is committed to continuing to learn and to adopt practices that are consistent with what we know about the way our brains work when learning. However, the Master Teacher is careful to make sure that new research is "classroom ready" and avoids wholesale adoption of unsupported approaches.

*–Founder and Author*

## THE RESEARCH

Burns, M. (2017, May 24). 5 ways teachers can improve student learning based on current brain research. *Eschool News*. Online: www.eschoolnews.com/2017/05/24/teachers-plastic-brain-research

Wilson, D. (2015). Put working memory to work in learning. *Edutopia [website by George Lucas Educational Foundation]*. Online: www.edutopia.org./blog/put-working-memory-to-work-donna-wilson.

## Inspirational Quote

*"The brain is wider than the sky."*

**—Emily Dickinson**

## Tips For: Teaching Techniques and Skills

Inevitably, some students will lack the background knowledge necessary to benefit from the instruction you are ready to provide. While it might be tempting to go ahead and teach the lesson, hoping that students will find connections or grasp the concept or skill you are teaching, this approach is likely to leave some students lost and disengaged. Rather than accept this outcome, consider how you might build the necessary background knowledge. It's better to offer a short video, a relevant website, a mini-lesson targeted at the concept, or even an analogy that might connect with something that they do know. Filling in the gaps will bring learning success within reach.

An understanding of and ability to use key vocabulary can dramatically increase student learning rates and success. Consider a four-part instructional process. First, preview key vocabulary words before the lesson. Remember, the goal at this point is familiarity rather than mastery. Second, when key words come up during the lesson, remind students of the definition and how it fits in context. Third, give students multiple opportunities to interact with the words, such as by defining them in their own words and using them in context. Fourth, have students create non-linguistic representations, such as pictures, graphics, or symbols, to convey their meaning.

"Help sheets" can be useful tools to help students who struggle or lack confidence to find success while developing independence. We typically think of "help sheets" as notes to covertly assist assessment performance. Yet, they can provide key support as students practice new skills and processes. Consider providing and helping students develop their own "help sheets" to provide scaffolding support until they are confident enough not to need them.

## Points to Ponder...*privately or with colleagues*

1. **In Context:**
In what ways does the organization of your classroom environment support brain friendly learning? What improvement might you make?

2. **With Content:**
How can you position the content or skills you want students to learn in order to best stimulate their brains and gain their attention? Provide an example.

3. **With Colleagues:**
Discuss with colleagues strategies they employ to help students contextualize, connect, and organize their learning.