

7. Twelve Ways to Make Information Stick in Students' Brains

“When information is presented to students, it goes into the working memory of their brain,” says teacher/writer Bill Page in this *Teachers.Net/Gazette* article (featured in *Education Digest*). The information is likely to evaporate unless something moves it into long-term memory. How can teachers make that happen? Page shares 12 strategies:

- *Make it personal.* Pairing students, having them work in small groups, and orchestrating interactive activities all help to link new information to each student's prior knowledge and experiences.
- *Make it interesting.* “Teachers must find another way to teach those who did not learn the lesson the first time,” says Page. The best way to do that is to hook students' interest.
- *Help students construct meaning.* “If new information does not connect or relate to existing knowledge, the brain will not accept it,” says Page. Teachers need to listen carefully as students process new information and involve them in constructing their own meaning. “Students learn more by answering their own questions of ‘why’,” he says, “than by someone giving them reasons for ‘why’.”
- *Make it meaningful.* “The *why* is more important than the *what* in learning,” says Page. New information has to make sense to students.
- *Have students apply new knowledge.* Students “use it or lose it,” says Page. “Pairing and small-group discussions are crucial to learning.”
- *Engage emotions.* “We learn in direct proportion to the strength of our feelings,” says Page, “—especially our likes and dislikes... Emotions are why we remember the person who sat behind us in the 7th grade, but can't remember the name of someone we met yesterday.”
- *Maximize the use of the senses.* The brain's neurons take in information from hearing, seeing, smelling, tasting, and touching, says Page: “The more neurons that are affected by stimuli from different sources, the stronger and longer lasting the memory and recall ability will be.”
- *Make it social.* “What we value in learning depends on what those around us are learning,” says Page. “We learn from the company we keep.”
- *Apply the laws of learning.* Teachers need to be savvy to predictable patterns of attention, memory, retrieval, and forgetting, says Page. One way is to make connections to children's interests, including sports and holidays.
- *Use associations.* “The brain works by linking things to other things,” says Page. “Memory relies on patterns, concepts, meaningfulness, relevance, and associations.” That's why using similes, metaphors, and well-chosen examples is so helpful.
- *Teach concepts.* Once students grasp a general concept, the facts related to it fall into place and are much easier to remember.
- *Climb Bloom's ladder.* About 95 percent of teaching and testing is at the lowest Bloom levels – knowledge and comprehension. Disconnected bits of knowledge are the easiest to “teach” (*Memorize the 50 state capitals*) but the hardest for students to commit to long-term memory. When teachers “put facts in meaningful groups or concepts,” says Page, “they're more easily learned.” And that means getting students applying, analyzing, synthesizing, and evaluating.

“12 Things Teachers Must Know About Learning” by Bill Page in *Teachers.Net/Gazette*, February 2010, <http://teachers.net/gazette/wordpress/bill-page/12-things-teachers-must-know/> (spotted in *Education Digest*, April 2010, Vol. 75, #8, p. 54-56) reprinted with permission from The Marshall MEMO <http://www.marshallmemo.com>