

# **BRAIN-FRIENDLY ACTIVITIES**

No one single activity is going to turn all your students into Albert Einstein or Margaret Thatcher. But taken as optional increments of a brain-based learning program, you can expect to get small, consistent and purposeful improvements. The following suggested activities are based in broader **fundamentals** of brain-compatible learning which include:

- \* Absence of threat
- \* Respecting the uniqueness of learners
- \* Engagement of emotions
- \* Understanding the brain's attention span
- \* Active, relevant choice-driven learning
- \* Complex, real-life learning
- \* Nutrition and hydration
- \* Specific immediate feedback
- \* Utilization of patterns in learning

## **The Powers of Music**

Brain research out of the University of California at Irvine tells us that music can charge and energize the brain. Here are some practical suggestion for when and who.

- Play positive energizing music before the start of class (movie themes work well here).
- Play specific compositions in moments of emotional highs (trumpets, Olympics music, Rocky, etc.
- Play special Romantic or Classical Sections for dramatic prose or for reading (Beethoven's Piano concerto #1, Symphony Fantastic by Berlin, etc.)
- Play low volume background baroque to soothe, calm, relax (Handel's Water Music, Four Seasons by Vivaldi, Bach's Brandenburg Concertos)
- Play Mozart's Piano Sonata in D Major before tasks involving spatial temporal reasoning.
- Play special music selections to close class (wonderful World, I've Had the Time of My Life, Happy Trails, simply the Best)

## **The Brain's Natural Learning Orientation**

Biologically, the human brain is designed for survival through learning. But it is not at all designed for formal instruction. With practice, a teacher can switch from being a content-provider to becoming a **catalyst of learning**,

- Allow students more control over their own learning.
- Get them involved in their own assessment criteria.
- Allow them to work cooperatively and learn from each other.

## **Build Brain Maps and New Learning Patterns**

Our thinking processes are both linear and random. Individual connections from one cell to another through dendrite branching will enrich learning.

- Make connections from old learning to new learning through novel devices.
- Help students create a huge conceptual map of what is to be learned, leaving blanks where necessary (to be filled in later)
- Teach students the art and science of graphic organizers, mapping and mindscapes.
- Provide global overviews before the beginning and at the end of a unit.

## **The Value of Chaos**

As instructors we strive to have control of our classrooms. But the brain is not designed to work in an environment of constant equilibrium. States of anticipation, excitement, uncertainty, challenge and suspense and release are the emotions that enhance attention, meaning and memory.

- Use more learner generated role-plays and presentations.
- Allow for more open-ended discussions, take occasional tangents.
- Ask learners to make presentations so often that little preparation is necessary and the feeling is impromptu.
- Organize guest speakers with new activities.

## **Learners Should Know That They Know**

Learning something is not the same thing as knowing you know it. How can you trigger this state of "knowing"?

- Give learners a chance to review learning in multiple modalities.
- Insure that learners get a chance to reinforce learning several times (use peer coaching).
- Help learners know what they know through multiple types of review. (mind-mapping, building models, questioning,etc.)
- Student assessment should include an understanding of learning styles, preferences, and cognitive strategies--students will seek to maximize their own learning process.

### **JEWELS FROM "BRAIN BASED LEARNING"...**

- Feedback is best when it comes from reality, rather than from an authority figure.
- The big picture can't be separated from the details.
- Cognitive and affective aspects of learning also cannot be separated.
- Learner control is important before, during and after learning.
- "Left brain processes" are enriched and supported by "right brain processes."
- Hope, Purpose and determination have electrochemical connections that play a large part in the workings of the immune system.
- What happens in the brain affects the body and what happens in the body affects the brain.
- People must be taught **how to** do higher order thinking.
- Students going through exams have lowered levels of helper T cells, which are a part of the immune system.
- Relaxation techniques have been shown to reverse immune suppression.
- Memory loss is associated with chronic stress.

### **SPECIAL NEWS BROADCAST.....**

WHEN LEARNING IS INHIBITED BY PERCEIVED THREAT, LEARNERS DOWNSHIFT--THEIR RESPONSES BECOME MORE AUTOMATIC AND LIMITED, AND THEY ARE LESS ABLE TO ENGAGE IN COMPLEX INTELLECTUAL TASKS. DOWNSHIFTING, IN LARGE PART, IS THE REASON STUDENTS FAIL TO APPLY THE HIGHER LEVELS OF BLOOM'S TAXONOMY. DOWNSHIFTING IS ACTUALLY ONE ASPECT OF DISTRESS.

## QUESTIONS TO ASK MYSELF...

- Are students involved and challenged?
- Is there clear evidence of student creativity and enjoyment? Are students dealing appropriately with dissonance?
- Are students' life themes and metaphors being engaged?
- Is there any sign of continuing motivation or student interest that expresses itself above and beyond the dictates of the class?
- Is the physical environment being used optimally?
- What sort of group atmosphere is emerging? Do students have opportunities to reorganize content in creative and personally relevant ways?
- Are there opportunities to reflect in an open-ended way on what does and does not make sense?
- Are students given the opportunity to apply the material in different contexts?
- Do students deliberately examine their performances, achievements, and do they appreciate their own strengths and weaknesses?