

Links for Brain Research

First 2000 Days

- <http://first2000days.org/first-2000-days/brain-research/#.VKL1Q0DzYPc>

University of Washington I-LABS: Institute for Learning & Brain Sciences

- Brain Development
- <http://ilabs.washington.edu/key-areas-research>
- Ready Mind Project

Study from University of Wisconsin and University of NC School of Medicine

- Children in poor families lagged behind in the development of parietal and frontal regions of the brain
- Deficits that help explain behavioral, learning and attention problems

Study from Washington University School of Medicine

- Poverty appears to be associated with smaller brain volumes in areas involved in emotion processing and memory
- Poverty at early age also appears to result in smaller volumes of white and cortical gray matter as well as hippocampal and amygdala volumes

[Study from Harvard University-Center on the Developing Child](#)

- Healthy development can be derailed by excessive or prolonged activation of stress response systems in the body and the brain.

Brain Research information taken from Eric Jensen's "Teaching with Poverty in Mind", 2009 and "Teaching with the Brain in Mind", 1998

- New brain cells grow every day (Neurogenesis)
- Brains CAN change and Teacher CAN influence the brain
- Ways to help brain development:
- Learning and changing your students' brains requires continual engagement. If they're not engaged, time is wasted. (Jensen, 4-4-14)
- Direct instruction time guideline for K-2 is 5-7 minutes (Jensen, 1998)
- The brain needs 8 to 12 glasses of water a day for optimal functioning. Dehydration is a common problem in school classrooms, leading to lethargy and impaired learning" (Jensen, 1998)

Physical activity can increase the production of new brain cells, a process highly correlated with learning, mood, and memory (Pereira et al., 2007)

The arts can improve attention, sequencing, processing and cognitive skills (Gazzaniga, Asbury & Rick, 2008)

Music enhances self-discipline, wide brain function, and verbal memory (Chan, Ho, & Cheung, 1998)