# **Virtual Kit: Brain Research In Early Childhood**

**Kit QT**

At birth, children's brains are in a surprisingly unfinished state. Newborns have all of the billions of brain cells and neurons they will need for thinking, communicating and learning for a lifetime, but those neurons are not yet connected. A child's brain development is significantly influenced by their interactions with the world around them and with those adults who care for them. As young children are exposed to their world through a variety of experiences, talked to, and cared for in a loving environment, neuron connections are made. The more connections a child has, the more ways he must process information. Those connections happen quickly and by the time a child is 3 years old their brains are twice as active as that of an adult. While learning continues throughout our lifetime, infancy and early childhood provide unique "window of opportunity" for learning certain skills when the brain is malleable and able to absorb information quickly and make huge developmental leaps that do not occur later in life.

Because every child's development is unique and all children vary in their approach to learning, experiences can powerfully impact brain development at this age. It is important as early childhood caregivers and educators to know basic information regarding brain development and how it gathers information. By knowing the basics of how the brain works, childcare providers and educators and create brain friendly atmospheres that allow opportunities for children to manipulate their environment and construct meaning through real life experiences. In turn, if presented appropriately, those experiences powerfully impact each child's individual brain development. This kit was designed to provide resources and information to professionals to guide them as they work with young children to ensure a brain friendly atmosphere that promotes learning and provides safety and nurturing for every child.

#### What does this look like in practice? (I have a little more time to read about this.)

* [Connecting Neurons, Concepts, and People: Brain Development and Its Implications: Preschool Policy Brief Issue 17 (2008)](http://nieer.org/policy-issue/policy-brief-connecting-neurons-concepts-and-people-brain-development-and-its-implications), by Ross A. Thompson.
* [National Scientific Council on the Developing Child's](http://developingchild.harvard.edu/index.php/activities/council) website offers a variety of working papers and briefs related to brain development in young children
* [From Neurons to Neighborhoods](http://www.nap.edu/openbook.php?isbn=0309069882) full text

#### What does ECRC have on this topic?

Dodge, D. T., & Heroman, C. (2000). Building Your Baby's Brain; A Parent's Guide to the First Five Years. Washington, DC: U.S. Dept. of Education.

Jensen, E. (2005). Teaching with the Brain in Mind (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

Sousa, D. (Ed.). (2010). Mind, Bran, and Education; Neuroscience Implications for the Classroom. Bloomington, IN: Solution Tree Press.

Sousa, D. (2011). How the Brain Learns (4th ed.). Thousand Oaks, CA: Corwin Press.

Sprenger, M. (2008). The Developing Brain: Birth to Age Eight. Thousand Oaks, CA: Corwin Press.

Tate, M. L. (2011). Preparing Children for Success in School and Life; 20 Ways to Increase Your Child's Brain Power. Thousand Oaks, CA: Corwin Press.

[Visit KITS ECRC for a complete listing.](http://opac.libraryworld.com/opac/signin?libraryname=KITS%20ECRC)

#### How can I find training on this topic?

Visit the KITS Collaborative Calendar to find out if there might be an upcoming training related to this topic.

#### What if I still need help?

To request technical assistance, contact [KITS](mailto:kskits@ku.edu).

#### If you thought this kit was helpful you might also like….

* [Brain Development in Infants](https://srcd.onlinelibrary.wiley.com/doi/abs/10.1111/1467-8624.00120)
* [NAEYC 's Developmentally Appropriate Position Statement](http://www.naeyc.org/positionstatements/dap)

Evaluation

Please take a minute to complete a brief survey on the Virtual Kits page on the website to let us know what you think about this virtual kit, and what other topics you would like to see addressed in the future.