

Brain Development and Literacy 101

Suffice it to say, there are differences between the male and female brain. Really? Shocker! Mars and Venus. Waffles and Spaghetti. We joke, but there's actually over 100 biological differences, so here are some key research/facts:



- **The Corpus Callosum is less developed in a boy at the age of 5 years old than in a girl.** Why's that important? The Corpus Callosum is the "bridge" between the left and the right hemispheres in the brain. It's also a very important part of reading, since reading requires the use of both sides of the brain. So when kids are starting kindergarten at 5, a girl may be ready brain developmentally, but a boy is about a year to a year and a half behind... so he struggles. When he struggles, the inner debate in his mind is "I can't do this" (i.e. "I'm a failure") OR "I won't do this" (i.e. "I hate reading"). He'd rather say he hates it than admit he can't do it. [Side note, the Corpus Callosum is important for so many other left/right functions, and reading just happens to be one of the best ways... and most useful to everyday life... to develop it.]
- Girls have 15-20% more neural activity going on at any given time.
- **Boys have more "gray matter" which keeps brain activity focused in one place;** girls have more "white matter" which spreads brain activity around. This lends to the cliché of why women are able to multitask while men do one thing at a time developed.
- **Boys have more neural centers that focus on how objects move around physical space.** This is seen in the boy who is tapping his fingers, bouncing a ball or staring out the window during class. The teacher thinks he's not paying attention (and he might not be) but often, by channeling physical energy somewhere, it's actually allowing his brain to focus on what's being said. He's paying attention, just channeling his physical energy.
- **Boys' brains "shut off" and enter rest more times a day than girls'.**

Some practical implications of these differences are that boys more often need to be led to emotional/motivational/purposeful experiences by mentors to learn how to function purposefully.

They also "do" before talk, so boyhood experiences are often based on trial and error.

As it affects reading, we as parents, teachers and librarians need to engage boys in reading, which requires AND encourages "fuller usage of brain". A lot of interpersonal, social... general life skills, are greatly benefited by this fuller usage of the brain, and while reading is not the only way to develop it, it's definitely one of the most "useful" and necessary to the rest of life.

There's much, much more... and if you're one of those people who finds this kind of thing fascinating, just stop in and ask to speak to our children's librarian! But we hope explaining some of these brain development differences helps you see there are some legitimate differences as far as boys and girls reading.

For further reading on this topic, check out Pink Brain, Blue Brain by Dr. Lise Eliot