



The Six Essential Developmental Stages and the Growth of the Brain

Source:

Greenspan, S., & Shanker, S. (2004). *The first idea: How symbols, language and intelligence evolved from our primate ancestors*. Cambridge, MA: Da Capo Press

<i>Developmental Level</i>	<i>Required Experiences</i>	<i>How the Brain Supports and Grows in Response to Each Developmental Stage</i>
Stage One: Being Calm and Interested in All the Sensations of the World	Help the baby look, listen, begin to move, and calm down.	Neuronal connections are occurring in the areas of the brain that process sensory information and help the baby initiate movements (i.e., primary sensory-motor cortex, thalamus, brainstem, and cerebellar vermis) and in the areas that support emotional interest in the world (i.e., amygdala, hippocampus, and cingulate cortex).
Stage Two: Engagement (falling in love)	Woo the baby into engaging with you with pleasure and delight.	Further activity in the areas supporting emotion, integration of visual, sensory, and motor areas, and right-sided neuronal connections supports the recognition of patterns (sights, movements) and promotes

<p>Stage Three: Affective Intentional Two-Way Communication</p>	<p>Follow the baby's lead and challenge him to exchange gestures and emotional signals with you about his interests.</p>	<p>emotional relating expressiveness, and signaling (i.e., parietal, temporal, primary visual cortical regions, frontal eye fields, basal ganglia, cerebellar hemispheres beginning of cerebral cortex as well as continuation of limbic system).</p> <p>As the baby processes patterns and initiates more selective responses to environmental clues, growth in areas that support sequencing and reading and expressing gestures and emotion (two-way communication) are more active (i.e., increases the frontal cortex, including dorsal prefrontal areas).</p>
<p>Stage Four: Multiple Reciprocal Affective Interactions to Solve Problems and Discover a Sense of Self</p>	<p>Become an interactive partner with the toddler as he learns to use a continuous flow of gestures with you to pursue his interests and meet his needs.</p>	<p>Cerebral cortex is more active and continues so. Left-sided neuronal branching surges as toddler sequences sounds and occasional word(s) to problem-solve. Right-sided growth continues together with the ability to figure out larger patterns in the world and interact with a wider range of emotions.</p>
<p>Stage Five: Creating Symbols (Ideas)</p>	<p>Enter the child's make-believe world as a character in his dramas. Engage him in long conversations about his interests, desires, and even his complaints.</p>	<p>Left-sided neuronal branching becomes denser as child comprehends, uses, and sequences more words and masters some of the basics of grammar. The visual-imaging parts of the brain grow as the child begins to engage more and more in pretend play. Both sides of the brain are becoming more specialized as language is rapidly being acquired.</p>
<p>Stage Six: Building Bridges Between Symbols (Ideas)</p>	<p>Challenge the child to connect his ideas together by seeking his opinion, enjoying his debates, and negotiating for things he wants.</p>	<p>Brain undergoes growth spurt, metabolizing glucose (sugar) at twice the adult rate. Increased activity occurs in areas of the brain that deal with the creation and comprehension of words, and connections among words. Increased activity continues throughout childhood and then gradually shifts to adult rate</p>