

# What happens in my child's brain?

By Katja Fleck

Phoenix Centre Manager

In the last few decades Neuroscience has gained a much deeper understanding about how our brains develop throughout the life span. These findings are particularly interesting regarding the developing brain during childhood and adolescence. To know about the brain can help us to understand our children better and relate to them in a more supportive way. This is an excerpt from the workbook of the Mindful Parenting Course (more info on DSJ website or directly at the Phoenix Centre).

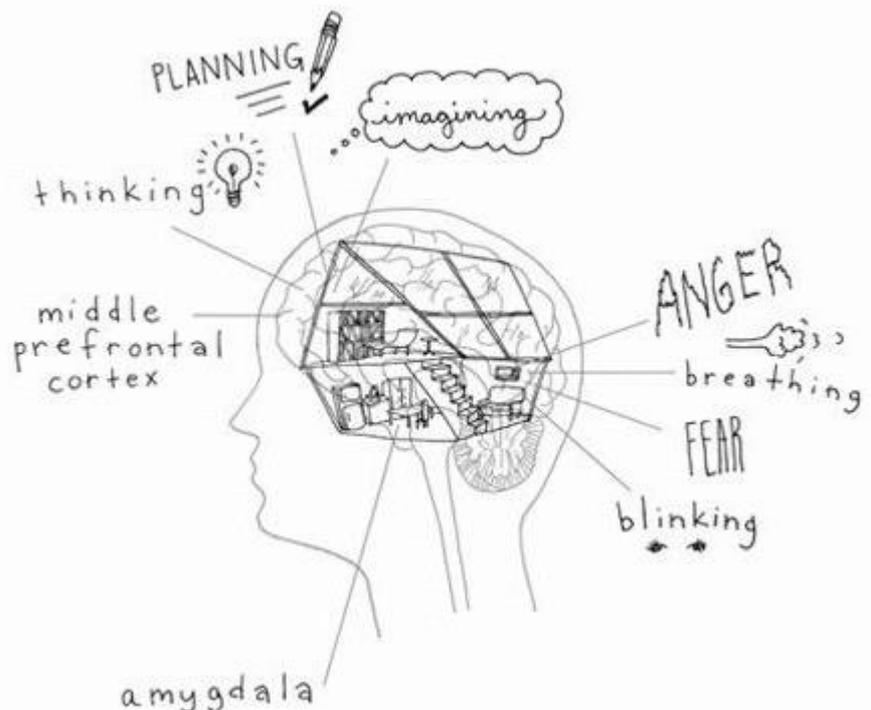
**On a nutshell:** We are born with a not yet fully developed brain. We still need to develop our prefrontal regions which are related to focus, attention, and emotional control. The prefrontal cortex is the control centre of the brain. We also still need to develop our logical thinking (in the left hemisphere). When we are born, we are “ruled” by our emotionally strong right brain and by our instinctive survival needs which originate in the older parts of the human brain. We need these basic forms of behaviour to help us to survive in an (for an infant) unsurvivable world. In the older regions of our brain, we find the oldest “ready to act” short circuits which help us to survive threat and danger. The magic word in the process of our ongoing brain development is “integration”. When the parts of our brain develop, we want to help them to integrate with one another. In terms of brain structures this would mean forming connections between the right and left brain as well as between the lower older brain regions and the prefrontal cortex. This allows us to access and identify emotions, thoughts and bodily sensations. Once we can identify these we can focus on them, attend to them and, consequently, regulate them. We can explain this integrating to our children using the “brain house” by Daniel Siegel.

“using only the right or the left brain would be like trying to swim using only one arm. We might be able to do it, but wouldn't we be a lot more successful - and avoid going in circles - if we used both arms together?”

from *The whole brain child* (Daniel Siegel & Tina Bryson)

## The brain house

We can look at our brain like at a house. There is an upstairs and a downstairs brain with a stairway that connects the two. You can tell your children that the upstairs brain is the more complex part which is responsible for decision making, regulating emotions and body, self-understanding and reflection, empathy and morality. The downstairs brain is responsible for the stress response, autonomic functioning (breathing, blinking, instinct...), sensory memories and strong emotions (fear, anger, excitement...). Each is equally important and they need to work together in order for us to function optimally. The more we know about how our brain functions, the better we understand our behaviour and the better we can learn from it.



Another way of looking at the brain: “Dr. Dan Siegel's Hand Model of the Brain” (8 minutes)

<https://www.youtube.com/watch?v=f-m2YcdMfW>

## *Restructuring brains in adolescence*

When our children enter adolescence, a period which in western cultures we understand to lie between 12 and 24 years of age, their brains undergo a lot of physical changes. These are manifested in behavioural changes. This new behaviour might appear confusing and illogical to the adult eye and it often feels this way to the adolescent, too. However, the changes in the brain are necessary for the adolescent to become more independent, strengthen peer bonds and find their own way in life.

The aim of adolescence is eventually to leave the nest, to build their own family and to run their own lives. To be able to do that, it is necessary for them to engage in more risk taking behaviour and to be drawn more to their peers than to their parents. Otherwise, who in their right mind would leave a warm and cosy home where there is food on the table; in other words, a safe place providing shelter and protection? Think of it from an evolutionary perspective and the “safety in numbers” principle. To secure the survival of the species, we need to leave the nest and have offspring. These offspring must be formed such that the gene pool is enlarged instead of reduced. This means that we need to be drawn to and curious about the unknown. By the same token, we must start to question our parents and the established way of doing things; we need to go out there and find out for ourselves. Out of this rebellion, new and innovative ideas can arise. This creativity is considered to be the essential element in helping our species adapt to changing circumstances and finding new strategies for survival. However, it is a scary and challenging journey to leave the well-known behind and to enter into the potentially dangerous unknown. This journey can span 10 to 20 years. During this time, we need our peers: we need to be in a group where we can feel protected and safe. But the same mechanism which helps our children to leave the nest can bring them into serious danger. For example, a group of adolescents, all by themselves, and without any adult guidance might simply go overboard and thereby place themselves in precarious situations. It is important in this period for the adolescents to stay connected with adults who can guide. Often this won't be the parents. It is our responsibility to help our children to navigate through this time of great potential but also possible danger. We want to foster independence and responsibility, encourage engagement with peers and responsible adults and promote creativity all while staying within safe parameters. This calls for a new way of handling the adolescent phase. How can we do this as a parent? The principles are no different to anything we have discussed so far. Integration is still the key. To foster this, we need to stay tuned to our children by listening, showing them “I love you, no matter what”, speaking the truth, and encouraging them to listen to the wise voice inside of them (some people refer to as gut feeling). We also need to respect and acknowledge their experiences and the necessary steps they need to take to master adolescence successfully.

*A brief summary from the book “Brainstorm” by Daniel Siegel.*

Check out the video by Daniel Siegel “The Teenage Brain” (13 minutes)

<https://www.youtube.com/watch?v=TLULtUPyhog>

## *Learning through experience (How to shape the brain)*

How can we support our children in ways which will help them develop an integrated brain structure? Ways which will help them calm themselves, avoid risky behavior and make responsible choices? We can do this by helping them access the different parts of their brains in any given situation and specifically, in the more difficult ones. When we talk about the brain, we also include the body because the body has got its own wisdom which, if we learn to listen to, can make all the difference. It is not necessary to send our children on a course or specific training. They will learn through their interaction with us; from watching us and the way we relate to each other. It is in the situations which we experience as more difficult that we can teach our children the most important lessons e.g. how to remain calm and patient, how to respectfully and kindly approach each other, how to show consideration and be compassionate, how to be authentic, how to acknowledge and name emotions, thoughts and feelings, how to acknowledge that we are not perfect and that we make mistakes, too, and by apologizing if we make a mistake.

*More about Mindful Parenting: “Equanimity and a Screaming Child”* <http://leftbrainbuddha.com/mindful-parenting-equanimity-screaming-child/>