

FAMILY BRAIN MINDFULNESS

July 3, 2020

You can teach children to become brain savvy by showing them that they can organize their time with the goal of making fair decisions as they grow up to become adults. As you both learn the new brain ideas in an altruistic humanist family context, the new rational scientific insights about the brain's structures and the mind's functions can become more useful in everyday decision-making and problem-solving situations

10 MINDFUL MINUTES:

giving our children (and ourselves)
the social and emotional skills
to reduce stress and anxiety
for healthier, happy lives
by Goldie Hahn and Wendy Holden. A
Perigee Book/Penguin Group,
2011 (218 pages)

AND

A LOTUS GROWS IN THE MUD

by Goldie Hahn
G.P. Putnam's Sons/Penguin Group,
2005 (446 pages)

The first book shows how parents and educators can teach children to think about the brain's prefrontal cortex (PFC) as if it were a "Wise Old Owl."

However, on this website the metaphor has been adapted to indicate that there are actually two parts to the PFC, where higher, critical thinking happens. Therefore, the prefrontal cortex is really split into two parts or sides, and is located at the front of both sides of the cerebral cortex on both the Left and the Right Hemispheres.

Thus, the metaphor has been changed on this website to depict the brain's PFC as being divided and best represented as being "Two Wise Owls" instead of just one metaphorical owl:

**A CHILD'S PREFRONTAL CORTICES
CAN BE THOUGHT OF AS BEING
LIKE TWO WISE OWLS**

The two prefrontal cortices, which are located at the front of the cerebrum on both the Left Hemisphere and the Right Hemisphere, consist of two clumps of neurons, one above each eye about one inch under the forehead. Each clump of neurons is the size of a penny.

**FUNCTION OF THE
PREFRONTAL CORTEX**

The main "executive" function of the prefrontal cortex is that it is the source of human willpower and the ability to imagine, reason, and remember. Children can easily learn that their prefrontal cortex (prefrontal cortices, plural) can be compared metaphorically with Two Wise Owls inside their own brains. There is no mystery about its function. This scientific visualization can empower them to make rational choices and humanistic inferences within the cultural context of their own family and community institutions.

The following diagram illustrates the location of the two parts of their prefrontal cortex and the way that they are connected to the two parts of their hippocampus (hippocampi, plural) through the two neuronal signaling pathways (circuits) inside their two anterior cingulate cortices:

THE PREFRONTAL CORTEX IS CONNECTED TO THE HIPPOCAMPUS BY THE TWO CINGULATE PATHWAYS

Prefrontal Cortex Image

Since brain research has proven that "You are your memory," it is essential that children be taught to understand the connected relationship between their prefrontal cortex (the attention and critical thinking function of their brain) and their hippocampus (the memory consolidation function of their brain).

Once the details about this brain idea are memorized by children and this key information is permanently stored in their long-term memory, the abstract image of the Two Wise Owls can influence children to control their own emotions and be kind to each other. They can expect the best from their personal relationships with others by using their willpower and creative imagination skills to control their emotions; not blind obedience to authority, even the authority of their parents, if not based on good mental health principles.

FUNCTIONS OF THE AMYGDALA

The other essential part of the human brain that can be taught to children at home or in the classroom is the function of the brain's amygdala. The amygdala is the source of a variety of feelings from glad to sad: feelings of happiness and pleasure, as well as feelings of anxiety, anger, fear, depression, and loneliness.

Children need to learn how to turn their emotions on and off in all social situations by having accurate knowledge about what is actually happening inside their brains when they are experiencing strong positive or negative emotions.

This vital brain function can help children regulate their emotions when they learn that their amygdala can function like a "Guard Dog." See the picture of the Oregon State champion Bull Mastiff dog in the following diagram:

A CHILD'S AMYGDALA CAN BE THOUGHT OF AS BEING LIKE A GUARD DOG

PURPOSE OF THE AMYGDALA GLAND

The function of the amygdala gland is to activate positive human feelings, such as pleasure and happiness, or negative feelings such as anxiety, anger, fear, depression, and loneliness. It is also directly involved in many memory functions since there is a feeling component associated with all memories.

Children can use this idea about having an amygdala gland, which is symbolized by the image of a "guard dog" to empower them. This fact can be a constant reminder for children that they have a powerful voluntary brain function that can help them control their emotions. For example, they can use the idea to understand the source of their own happiness or unhappiness as well as the source of a bully's meanness.

The explicit conscious knowledge that children can control their own positive feelings about themselves and their friendliness towards others can help children cope with the hostile anger of bullies and other traumas of childhood. Children can easily learn that their amygdala glands are divided, just like their prefrontal cortices (plural for cortex).

The two parts are linked together at the bottom front of the structure of the limbic system, which is surrounded by both their cerebral hemispheres and directly connected to the insides of both temporal lobes.

The following diagram shows the location of the amygdala gland (indicated by the two #4s and two arrows) in relation to the other major parts of their interconnected limbic system:

**THE AMYGDALA GLAND IS
LOCATED AT THE FRONT OF BOTH
HEMISPHERES IN THE LIMBIC SYSTEM**

The amygdala gland is part of the limbic system, which is also known as the "emotional brain." The meaning of the relationship of the eight functional parts of the limbic system is explained in the DETAILS file linked to the back of Brain Flash Card #13.

All of those functions of the amygdala gland have interactions to the other 14 brain ideas, which you can easily find on the website Index link called: "15 Free Brain Flash Cards."

**LEARNING HOW TO
EXPRESS EMOTIONS APPROPRIATELY:
"Face-to-Face Time" vs. "Screen Time"**

Teachers and therapists are becoming more alarmed by the huge amount of "screen time" that many children devote to their smartphones and tablets, at the expense of spending more time in face-to-face conversations with their family and friends. Also, there is growing physical evidence that many children cause themselves lots of pain when they look down at their devices for prolonged periods of time. Therefore, there is a need to warn children about the excessive strain on their necks and backs when they concentrate on their devices too long at a time.

Also, it is important to teach children to discover the infinite capacity of the human brain to change enough to adapt to environmental forces and adapt nature enough to deal with the special needs of individuals within our country. Children with different abilities and those who have learning disabilities need special professional educational help.

Please see the publication data in the information box about the three books listed below: **Permission to Feel**, **Differently Wired**, and **The Body keeps the Score**, with their separate active links to detailed outlines and reviews.

instantly go to:

PERMISSION TO FEEL:
Unlocking the Power of Emotions
to Help Our Kids, Ourselves,
and Our Society Thrive
by Marc A. Brackett.
Celadon Books, 2019 (292 pages)

instantly go to:

PERMISSION TO FEEL:
Unlocking the Power of Emotions
to Help Our Kids, Ourselves,
and Our Society Thrive

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DIFFERENTLY WIRED:
Raising an Exceptional Child
in a Conventional World
by Deborah Reber.
Workman Publishing, 2018
(i-ix, 278 pages)

instantly go to:
DIFFERENTLY WIRED:
Raising an Exceptional Child
in a Conventional World

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THE BODY KEEPS THE SCORE:
Brain, Mind, and Body
in the Healing of Trauma.
by Bessel A. van der Kolk.
Penguin/Viking, 2014 hardback edition,
2015 paperback edition (445 pages)

instantly go to:
THE BODY KEEPS THE SCORE:
Brain, Mind, and Body
in the Healing of Trauma

By focusing on the importance of helping children increase their brain vocabularies as they develop their basic language skills, you will have a reliable way to measure the expansion of their self-awareness. As a parent or teacher, you have the opportunity to teach or mentor children and encourage them to have detailed conversations with you about their own brain functions.

Regardless of your information sources, the quality of your conscious experiences and the level of your ultimate success in life depend upon your language skills and the quality of your vocabulary about all subjects. This is the same for all children.

It is not the names of your brain's parts by themselves that are supremely important. It is the meanings of the names of the brain ideas and your ability to recall these meanings in their proper linguistic contexts at the appropriate times. When the brain knowledge of children

increases enough to allow them to control their own thoughts and feelings, their health and welfare can be optimized and provide them with maximum fulfillment.

Just as your conscious self-awareness depends upon the accuracy and sophistication of your language skills and vocabulary; your knowledge of your brain's structures; and your mind's functions; can be improved by increasing the size and quality of your general vocabulary and your specific brain vocabulary as well as your grammatical language skills.

The new brain vocabulary contains 15 brain ideas which explain the structure of the human brain and the functions of the mind that are caused by the brain. The new brain knowledge can empower you and your children to use your creative imagination and willpower to make better decisions every day. Then you will be using your time wisely.

In this regard, it is very important that children know the specific causes of specific brain functions so they can learn what skill-sets they need to learn in order to thrive as their personalities emerge over time. They need to memorize the fact that their conscious self-awareness is caused by their brain's prefrontal cortex (executive function), which directs intentional behavior and operates in combination with their brain's long-term memory system.

In addition, it is important for children to learn that the brain's neuroplasticity refers to the creation of new synapses whenever needed. This changes the patterns of the connections inside neuronal pathways. The synapses connect neurons to each other and to all muscles, organs, and glands.

The educational training model behind this new approach to teaching children the importance of

understanding their brain's structures and mind's functions is called "*whole brain*" thinking. It involves teaching children a specific brain vocabulary with evidence-based words, involving cognitive skill-sets easy for children to learn.

Some of them involve training children to resist the adverse impacts caused by the overwhelming distractions of commercials and entertainment options. Children can be taught to avoid useless time-consuming social behaviors. By staying focused on agreed upon family goals and plans they can avoid learning dangerous addictive habits.

The questions you ask yourself as a parent or teacher of children can make your own life more meaningful within the social relationships that you and your children maintain for health and comfort.

To be effective, you must discuss the desired childhood behaviors continuously and always model good adult behavior for children in your daily activities with them. Then, you must provide rewards, especially loving kindness, for their effort to stimulate their unique willpower and creative imagination. They need to ask questions and learn every day from both their achievements and their mistakes.

RECOMMENDATION: You may print this pdf version and read it and edit it by adding or deleting ideas. Then, you can read your edited version of these ideas according to a reinforcement schedule. This strategy can help you take advantage of the power of the spaced-repetition method of memorization. Such deep introspection can strengthen your willpower and change your adaptable self-identity to increase your self-esteem.

REMEMBER ALWAYS:
You Are Your Adaptable Memory!