



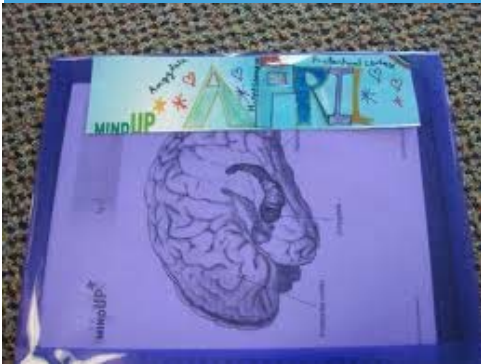
MindUP™

*Promotes academic
and social and
emotional growth*



August 2011

www.thehawnfoundation.org



The science behind MindUP™

- Happy brains work better! (p. 2)
- Should students really be studying social and emotional skills at school? (p. 3)
- What's positive about positive psychology? (p. 4)
- Just breathe...how mindfulness helps students' social, emotional and academic growth (p. 5)

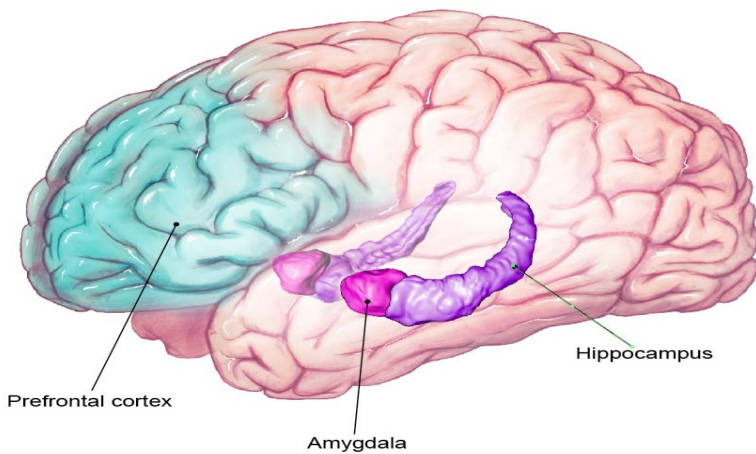
Why are schools choosing MindUP™?

MindUP™ is an evidence-based teaching model and curriculum for students in kindergarten through grade eight. It is aimed at fostering children's social and emotional competence and psychological well-being.

Development of MindUP™ was based on the latest research in **neuroscience, social and emotional learning, positive psychology and mindfulness.**

A recent study on the MindUP™ program conducted at the University of British Columbia by Dr. Kimberly Schonert-Reichl and Molly Lawlor found that:

- 82% of students who participated became more optimistic and thought more positively
- 81% of students learned to make themselves happy
- 87% were more accepting of others perspectives
- 58% tried to help others more often
- 88% felt they could use at least one thing they learned in MindUP™ at home or at school



Happy brains work better! (Adele Diamond, neuroscientist, 2009)

Getting to know and love the brain

From the MindUP™ poster – *Fascinating Facts about the Brain*

Students who participate in the MindUP™ curriculum learn about three important parts of their brain that helps them think and react to everything around them. These parts include the:

- **Prefrontal Cortex** – the prefrontal cortex uses important information to focus, decide, compute, analyze, and reason –it is our thinking part of the brain and helps us to make good decisions! **Here’s the catch:** it only receives information when the amygdala is calm.
- **Amygdala** – Have you ever felt like you want run, freeze or fight? That was the amygdala. The amygdala is programmed to keep you safe at all costs! It regulates and blocks information from going to your prefrontal cortex so you can react in an instant. The challenge is it can’t tell a stressful situation from a true emergency and it can cause you to react without thinking.
- **Hippocampus** – What are your favourite memories? The most useful facts you know? The hippocampus creates, stores, and process all important facts and memories the prefrontal cortex passes on to it. It is like a library system for the brain.

The STRESSED brain...

The brain’s response to stress is linked to the amygdala. When we’re calm and peaceful, this filter is wide open and information flows to the prefrontal cortex. When we feel negative or stressed, our ability to think and make good decisions are inhibited.

Information stays in the amygdala and doesn’t flow to our prefrontal cortex so we can think about how to react. Fear and anxiety actually shut down our ability to think about how to best assess and approach situations.

Over time, the hormones released while stressed can stop the healthy growth of certain cells. When cells stop growing they are in a mode that conserves resources for future threats. According to Eric Jensen, an educator and brain expert, this may not only stop children from developing but may also cause damage to areas that control emotional development.

The HAPPY brain...

Research is showing that when we are engaged in activities we find interesting or pleasurable, our brain is flush with dopamine. Dopamine helps:

- lubricate our information filter
- rev up high powered thinking in our prefrontal cortex
- get our brain ready for peak performance

Dopamine is highest when students are:

- fully engaged in learning
- experiencing positive feelings like optimism, gratitude, hope and an overall sense of well being.

Classroom activities that prompt the release of dopamine include:

- making choices and solving problems
- participating in acts of kindness and collaborating with peers
- engaging in physical activity and enjoying creative efforts such as music, art, drama, reading and storytelling.



Social and Emotional Learning

Should students really be studying social and emotional learning at school?

All research points to YES! According to reliable studies and review conducted by the Collaborative for Academic, Social and Emotional Learning (CASEL) through the University of Illinois in Chicago, participation in social and emotional learning (SEL) programs improves students' positive behavior and reduces negative behavior.

Benefits of SEL programs

Students and classrooms that participated in SEL programs showed improved:

- social-emotional skills
- attitudes about self, others, and school
- positive classroom behavior
- standardized test results

Studies also show classrooms and students that engage in a SEL program show a decrease in:

- Conduct problems
- Aggressive behavior
- Emotional distress

CASEL finds that SEL promotes health, well-being **AND** academic success while preventing problems such as violence, alcohol and drug use, truancy, and bullying (from www.casel.org).

Preparation for success in adulthood

Social and emotional learning programs prepare children for adulthood by helping students become:

- good communicators
- cooperative team members
- effective leaders
- caring and concerned members of their communities

SEL teaches students how to:

- set and achieve goals
- persist in the face of challenges

Academic achievement results

- research shows an 11 point percentile gain on standardized tests of those students who participated in an SEL program

For more information on the importance of SEL in schools please go to www.casel.org

What's positive about positive psychology?

Studies suggest that fostering positive attributes such as optimism and gratitude may buffer against negative experiences such as poor school performance and psychological difficulties.

What's encouraging is that by participating in a SEL program, students can adopt a more optimistic and positive outlook versus a negative outlook through engaging in a series of brain-based behavioral strategies such as practicing gratitude and optimism and focusing on happy experiences, all lessons found in the MindUP™ curriculum.



Grateful Words...

A lesson taught in MindUP™ is Expressing Gratitude.

Gratitude is a feeling of thankfulness and joy we feel in response to something we've received, whether the gift is tangible or intangible.

Research confirms that those who keep a gratitude journal or list feel more optimistic and make more progress toward their goals.

Young people who engage in daily gratitude activities have displayed:

- higher levels of alertness,
- greater enthusiasm,
- more determination and attentiveness, and
- increased energy.



The three components of positive psychology:

- 1 Positive psychological experience:**
well-being; contentment; satisfaction (past); hope and optimism (future); and flow and happiness (present)
- 2 Positive psychological traits:** the capacity for love and vocation; courage; interpersonal skills; aesthetic sensibility; perseverance; forgiveness, originality; future-mindedness; spirituality; high talent; and wisdom
- 3 Positive Institution:**
Enable the first two to occur and promote citizenship; responsibility; nurturance; altruism; civility; moderation; tolerance and work ethic

Just breathe...how mindfulness helps students' social, emotional and academic growth



By focusing or *being mindful* of our senses and our breath, we have the capacity to change the structure of our brains.

A definition of mindfulness...

Mindfulness (being “mindful”) is a state of being aware of your own mind, at any given moment. It means to pay attention in a particular way: on purpose, in the present moment and without judgment.

(Jon Kabat-Zinn, 1990)

How can breathing help the brain?

Want to calm your amygdala when you feel stressed? Breathe deeply. Deep, full breathing calms your amygdala and helps you think and remember clearly.

Breathing helps calm the body by:

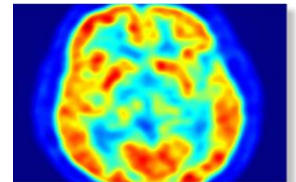
- Slowing your heart rate
- Lowering blood pressure
- Sharpening your focus

When your body and mind are calm, learning is much easier! The more controlled breathing is practiced, the more self-managed and mindful children can become. When children are able to manage their emotions and think about their decisions, their ability to work collaboratively and to build and maintain friendships improves.

www.thehawnfoundation.org

While participating in the MindUP™ Program, students learn to mindfully pay attention to their breathing AND to what they see, hear, taste, feel and smell.

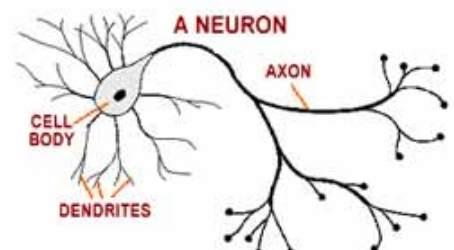
Dr. Sara Lazar and Dr. Richard Davidson have used neuro-imaging to study the brains of adults who have a mindfulness practice and found that they have a denser prefrontal cortex.



The prefrontal cortex is the area of the brain that enables us among other things, to reason, make decisions, take perspective and focus.

The repeated action of focusing of paying attention in a particular way while practicing mindfulness creates and strengthens neuron connections. Branch-like receptors called dendrites increase in number and size, enabling a more efficient passage of information along neural pathways. This is one of the many ways in which the structure of the brain is flexible and ready to grow.

(MindUP™ Program Grades 6 to 8)



References and Resources:

Collaborative for Academic, Social, and Emotional Learning. (2005). *Safe and Sound: An Educational Leader's Guide to Evidence-Based Social and Emotional Learning (SEL) Programs, Illinois Edition*. Chicago, IL: Author.

Davidson, R. J., Kabat-Zinn, J., Schumacher, J., Rosenkranz, M., Muller, D., Santorelli, S., Sheridan, J. F. (2003). Alterations in Brain and Immune Function. Produced by Mindfulness Meditation. *Psychosomatic Medicine*, 65, 564-570.

Diamond, A. (2009). *SoundSeen: In the room with Adele Diamond*. NPR. November 19, 2009. Retrieved from: <http://being.publicradio.org/programs/2009/learning-doing-being>

Grossman, P., Niemann, L., Schmidt, S., & Walach, H. (2004). Mindfulness-based stress reduction and health benefits: a meta-analysis. *Journal of Psychosomatic Research*, 57, 35–43.

Jensen, Eric. *Tools for engagement*. Thousand Oaks, CA: Corwin Press.

Kabat-Zinn, J. (1990). *Full catastrophe living: The program of the Stress Reduction Clinic at the University of Massachusetts Medical Center*. New York: Dell Publishing.

Lazar, S. W., Kerr, C. E., Wasserman, R. H., Gray, J. R., Greve, D. N., Treadway, M. T., Fischl, B. (2005). Meditation experience is associated with increased cortical thickness. *NeuroReport*, 16(17), 1893-1897.

Lawlor, M. S., & Willis, J. (2009). *MindUP™*. Vancouver, BC: The Hawn Foundation.

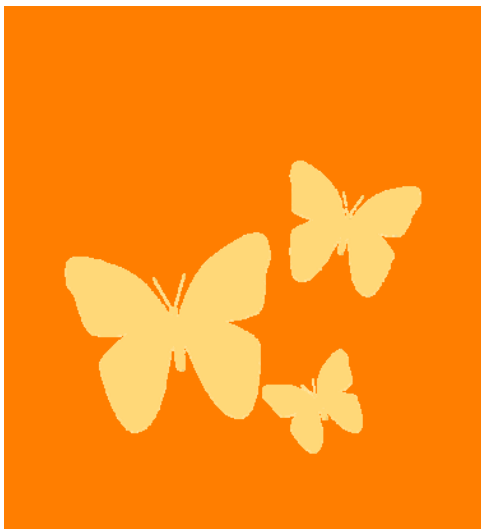
Lawlor et al., (2011). *The MindUP™ Curriculum Grades 6-8: Brain-Focused Strategies for Learning—and Living*. New York, NY: Scholastic Inc.

McCullough, M. E., Kilpatrick, S.D., Emmons, R. A. & Larson, D. B. (2001). Is gratitude a moral affect? *Psychological Bulletin*, 127, 249-266.

Payton, J., Weissberg, R.P., Durlak, J.A., Dymnicki, A.B., Taylor, R.D., Schellinger, K.B., & Pachan, M. (2008). The positive impact of social and emotional learning for kindergarten to eighth-grade students: Findings from three scientific reviews. *Collaborative for Academic, Social, and Emotional Learning*.

Schonert-Reichl, K. A., & Lawlor, M. S. (2010). The effects of a mindfulness-based education program on pre- and early adolescents' well-being and social and emotional competence. *Mindfulness*, 1, 137–151.

Siegel, D. (2007). *The mindful brain: reflection and attunement in the cultivation of well-being*. New York: Norton.



This document was created by Jennifer Erickson, Vancouver Teacher,
MindUP™ Facilitator and UBC Masters Student.