Inner Explorer
Beyond The Program for Teachers
June 2015

supporting our
teachers
an inner EXPLORER publication

Brain Power

Dear Inner Explorer Teachers,

The finish line is oh so close! We know you are busy finishing up your year and all of us at Inner Explorer want to thank you for all you do for kids every day. Through your hard work, you are changing lives one at a time. We are so grateful for your dedication.

Great news! Mindful awareness works! In the last weeks a teacher from Ohio wrote us, “56.5% of my students were below grade level and after Inner Explorer, only 4.3% are." Another teacher lowered her blood pressure from 147/115 to 121/85 in ten minutes at the doctor’s office using what she learned through Inner Explorer. That’s all great news, but guess what? Practicing daily is what enables these kinds of results to occur.

So what to do? Summer is coming and your kids won’t be in school to practice and neither will you. Everyone will have to create the discipline to practice on their own. Choosing a regular time of day will be immensely helpful in reminding you to practice daily. You can try practicing 5 minutes a day and working up to 20. When one practices regularly, one’s brain and body changes for the better. (Not just saying this; 40 research papers are published monthly. Mindfulexperience.org)

We would recommend practicing first thing in the morning, because once you are up doing your day, things happen and get in the way of good intentions. Find a place where you will not be interrupted and leave your phone in another room. Use a timer and if you live with others let them know you will not be available during your mindfulness time. We are attaching calendars for June, July and August and recommend that if you post the calendar in your bathroom and make a commitment to yourself not to go to bed until you practice, you may soon find that you have created the discipline to practice daily. You may want to print the calendars and give them to your students to take home for the summer.

In addition to maintaining a formal mindfulness practice (which, by the way, would be huge!) may we remind you about some other topics we have covered in this newsletter that could be useful to you. A gratitude practice; writing or stating things you are grateful for every day can make your days much more pleasant; you may start noticing how things are going right instead of looking for what’s wrong. If you notice a tendency towards negativity, catch yourself in the moment and ask “Is this thought helpful?” Try something new this summer; it could be anything, a new recipe, an art or music class, a new sport or outdoor activity; you may discover a new talent you weren’t aware of. Check out activity #2 below, people tell us it has changed their lives. And don’t forget to STOP (Stop, take a breath, observe and proceed) a few times each day to help you get into the present. It’s often quite a lovely place to be.

Enjoy your summer and we look forward to joining you in the fall!

Summer Activities

1. Distribute calendars to your students for June, July & August (click months to view attachments). Encourage them to practice daily. Have a focused discussion on how best to

make that happen. Let them give each other ideas.

2. Remind kids that they don't need to wait for Thanksgiving to be grateful. They can start a gratitude journal or ask their families to start each meal by stating something each person is grateful for.

3. Try eating mindfully for one minute a day. Notice the color, size, texture and taste of your food. Do this without the television on or talking with others.

4. Go for a mindful walk, somewhere you have walked before. Leave your phone behind. Notice your feet as you pick one up and put the other down. Look and listen and see if you can notice things you've never noticed before.

5. Try a new genre of book or magazine. Perhaps you think you don't like non-fiction, or mysteries. Pick one up and look with new eyes. You may be surprised!

6. Try doing a body scan each night before you go to sleep. Start with your feet and move towards your head noticing sensations in each body part before you move to the next. You may find lots of neutrality and that's fine. If you typically fall asleep when doing body scans, see if you can stay awake for another body part or two.

7. A favorite. Listen to a song that you love to sing. See if you can get through the entire song without thinking, being present for every word! If you find it difficult, which many of us do, keep trying! It's really fun.

8. This is one of our teachings that people find the most helpful. Really try it and see if your life feels better. If you have a particular worry that regularly bothers you, when you notice it arrive, pat yourself on the back and say, "Oh, there's that _____, (feeling, concern, relationship, etc). Thanks for noticing _____(your name). Soon you may find that thought not reoccurring so much. Every time it comes, do the same. You are training your mind to go where you want it to go, or at least not to go where you don't want it to go.

NEUROSCIENCE OF DAILY PRACTICE

When we practice mindfulness, we are aware. When we are aware that we are aware we are connecting neurons from our brain stem, limbic system and prefrontal cortex. Doing so creates brain integration and the best-regulated levels of physical, emotional and cognitive activation. Quoting Donald Hebb, a Canadian neuropsychologist, “Neurons that fire together wire together” and by practicing mindfulness over and over we are able to create enduring traits of calm and regulation. Attached please find an in-depth description of Integrating the Three Areas of the Brain, notes from a presentation by learning specialist Pam Nicholls from Berkeley, CA, based on the work of Daniel Siegel The Brain, MD.

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MY MINDFULNESS LOG – KEEPING TRACK OF WHEN I PRACTICE – JUNE, 2015

◄ May 2015		~ June 2015 ~				Jul 2015 ►
Sun	**Mon**	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	**Notes:**			

MINDFULNESS INSTRUCTIONS:

•Try to practice mindfulness at the same time and the same place every day.

•Keep track of your practice on the calendar. Make a check on every day you practice. You can write how many minutes you practice and what you do. For example, 5 minutes mindful breathing, or mindful eating, or mindful walking.

•Find a place to practice where you will have the fewest interruptions.

•Sit in a chair and keep your feet flat on the floor

•Start off with five minutes and see if you can get to twenty! Using a timer will help!

•Practice without judging your practice.

MY MINDFULNESS LOG – KEEPING TRACK OF WHEN I PRACTICE – JULY, 2015

◄ Jun 2015			~ July 2015 ~			Aug 2015 ►
Sun	**Mon**	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	**Notes:**

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MY MINDFULNESS LOG – KEEPING TRACK OF WHEN I PRACTICE – AUGUST, 2015

◄ Jul 2015		~ August 2015 ~				Sep 2015 ►
Sun	**Mon**	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
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Integrating the Three Areas of the Brain

Notes from a presentation by Pam Nicholls, based on the work of Daniel Siegel, MD

Touch your forehead on and above your eyebrows. Beneath your hand, on the other side of your skull, is your prefrontal cortex. When you are *aware that you are aware*, your prefrontal cortex is activated. This is a very good thing. The prefrontal cortex's activation and involvement in brain function are necessary for well-being.

When the brain is observed on brain scans during mindfulness practice, the prefrontal cortex's activation is observable. It is "lit up." It is this process of activation that leads to an integrated and regulated state in the practitioner. Through this activation, mindfulness cultivates the essential qualities of well-being. Here's an introduction to how it happens.

We can think of the brain as including three main sections.

1. Brain stem:

- known as the ancient "reptilian brain"
- coordinates basic bodily functions: heartbeat, swallowing, breathing
- regulates states of wakefulness and sleep, alertness and arousal
- mediates fight, flight, freeze
- takes in data from the outside world – external data from the perceptual system, except smell
- takes in data from the inside world, information from the body

(The reticular formation, located in the brain stem, filters this external and internal data, choosing what gets through and what doesn't, allowing us to focus on "what's important.")

2. Limbic area, located in both the left and the right hemispheres:

- mediates emotion
- generates motivational states
- specializes in detecting and analyzing the internal states (emotions) and motives of other mammals -- and of ourselves
- coordinates our internal states with the environment, especially our social environment
- enables us to create balance in the body, adapt to environmental demands, and create meaningful connections with others

Two of the important regions of the limbic system:

- Amygdala: Generates our fear, and perceives others' fear. Mediates a range of other emotions too (anger, sadness, joy). Creates our facial expressions, and interprets others'. Involved with implicit memory, which is not conscious. Bypasses conscious awareness to bring immediate attention to any threat. Signals the release of adrenaline.

(One way to remember "amygdala" – "Oh no, it's *Amy* – I'm afraid of her . . .").

- Hippocampus: mediates explicit and autobiographical memory. Note that stress blocks the functioning of the hippocampus, which is what makes it hard or even impossible to learn under duress. In fact, long-term stress actually shrinks the size of the hippocampus. (How to remember "hippocampus" – "You must remember when the *hippo* was on *campus*!")

3. Neocortex, also known as cerebrum or cerebral cortex, with a left and right hemisphere:

- processes sensory information and motor response
- acts as center of higher thought processes, such as reasoning and abstract thinking
- enables flexible thinking
- uses words to communicate

The Goal: Integrating these three areas

Each of these areas of the brain makes an essential contribution. For our well-being, it is necessary to integrate their functions. "Integrated" means "brought together into a functioning whole." Another key word is "regulated," meaning "controlled and brought to the desired level." Integration of the three areas of the brain produces the best-regulated levels of physical, cognitive, and emotional activation.

The prefrontal area of the neocortex is key to brain integration.

The prefrontal cortex area of the neocortex is:

- the feeling part of the thinking brain, closely connected to the limbic system
- activated during mindfulness practice, and actually thickens as brain cells (neurons) develop as a result of practice
- the link and coordinator among the three parts of the brain, that together address cognitive, emotional and somatic (body) processes, and our functioning in the social world
- the provider of a fundamental regulatory role, which is a component of "executive function." The involvement of the prefrontal cortex makes it possible to bring physical, cognitive and emotional activation to a desired level. When you hear that someone "can't self-regulate," that's a reference to the person's difficulty keeping their behavior, their cognition/thinking, and/or their emotions, at a level appropriate to the demands of the setting. Lack of appropriate self-regulation arises from being in a non-integrated state.

Integration occurs when neurons from the prefrontal cortex connect with neurons in the limbic system and brainstem. The linking of the areas, through the firing of neurons, creates neural pathways. Repeated return to the state of integration causes those neural pathways to strengthen and become permanent. "What fires together gets hard-wired."

- *integrated* can be thought of as being on the "high road," in which functions are connected and we can self-regulate, choosing flexible responses to life events
- when we're in an integrated state, we are far more likely to be able to regulate our own behavior, thinking, and emotions, so that we can remain stable, operating on the flexible "high road"
- *nonintegrated* can be thought of as being on the "low road," in which brain functions are cut off from each other, leaving us caught in a cycle of habit, without the freedom to regulate our responses
- stress and fear cause the limbic system to trigger the release of hormones (including adrenaline and cortisol) that actually sever the connection between the prefrontal cortex and the rest of the brain, causing a state of nonintegration – the disconnect among the sections of the brain.

Activating the prefrontal cortex makes possible an integrated state.
Over time, with repeated activation, that integrated state becomes a trait –
an enduring personal characteristic. This is a potential outcome of mindfulness practice.