Body and the Brain...How Movement Affects Learning

Neurons that Fire together Wire together
Realizing There is a Need for Movement
Statistics show a need to adapt the way we facilitate learning:

❖ Today there are over 16 million children in the United States diagnosed with neurobehavioral learning challenges.

❖ Just 10 years ago 1 out of every 10,000 children were born with Autism. Now 1 out of 150 children will be on the spectrum upon entering school.

❖ ADD (inattentive or hyperactive) is the leading childhood disorder in the world while Ritalin is the most widely prescribed medication for children.

❖ This year alone, 1.5 million children entering school – that’s 1 out of every 5 – will be diagnosed with some type of neurological disorder that affects their ability to learn and socially interact and learn.

❖ Currently there are 4.4 million children between the ages of 3-17 that are diagnosed with anxiety.
Kids need to move! Intentional movement is a vehicle to...

- Engage cognitive functioning
- Focus the areas of the brain that regulate attention and executive functioning skills
- Develop mind-body awareness
- Teach emotional regulation skills
- Build social skills
Our Goals Today

- Gain an understanding of the need to incorporate movement and learning through movement daily.

- Gain *some* knowledge of the science behind student success.

- Learn specific types of movement that facilitate neurological and social/emotional growth.

- Learn how to incorporate specific movement throughout the day to increase student success and self regulation.
Movement to

Engage Cognitive Functioning
Naperville School District P.E. Teacher took the Lead

PUMPING UP THE BRAIN
CONNECTING BETWEEN EXERCISE & LEARNING
Quick Sensory Motor Evaluation

Everyone on your feet!

- Jumping Jacks
- Hop 3xs right and 3xs left – repeat
- Criss-Cross
- Fine Motor finger touch – opposite body-part
- Balance right foot then left foot

Try Something NEW! Sample alternative seating options, wiggle boards, etc
The Effects of Movement on The Brain

After 20 minutes of sitting quietly

After 20 minutes of walking

Research/scan compliments of Dr. Chuck Hillman, University of Illinois

Our 6th graders produced videos to make sure that each classroom utilizes specific exercise to stimulate neurological Growth, Focus, Stamina and Retention on a daily basis!
Core muscles and Vestibular Sensory Motor Learning
Sensory Movement Activities
Movement to

Focus and Develop Executive Functioning Skills
Walk Stop Wiggle Sit

At first the commands mean exactly as they sound, when I say walk you walk, when I say stop you stop, when I say wiggle you wiggle, and when I say sit you sit.

After playing for a few moments, tell the kids that you’re going to make it a little tricky and switch walk and stop.

So now when I say walk you stop and when I say stop you walk, keep wiggle and sit the same.

See if they can keep up and then increase the challenge again by switching wiggle and sit.

So now when you say walk they stop, when you say stop they walk, when you say wiggle they sit, and when you say sit they wiggle.

Add Variations!
Super Brain and Body Workouts
Meeting of the Minds

- Face your partner and count by multiples of 2 to 20 while crossing your body to high five your partners raised hands. Right to right and left to left. Once one partner completes the task, switch roles and the other partner does the same, but counts backwards. Then both partners count together going forward!
Alternate Nostril Breathing for Refocusing
Cross-lateral Movement

❖ The midline is the line that naturally occurs between the two hemispheres and continues down the center of the body.

❖ Crossing the midline physically with extremities forces both hemispheres to work together making neurological connections.

❖ Continued repetition of cross-lateral exercises strengthens those connections so that the signal between the neurons becomes stronger!

❖ Cross-lateral movement facilitates neurological growth resulting in more efficient hemispheric communication and sensory processing.
Brain strength relates to processing speed!

RIGHT SIDE
- Nonverbal Information
  - Music
  - Images
- Drawing
- Construction
- Voice Tones
- Creative
- Intuitive
- Spatial Relationships
  - Faces
  - Shapes
  - Maps
- Concrete

LEFT SIDE
- Spoken and Written Language
  - Sequencing
  - Word Analysis
  - Filling Forms
  - Numbers
  - Letters
  - Analytical
  - Logical
  - Abstract

Thinks in the Present

Thinks in the Past and Future
Movement to

Develop Mind-Body Awareness
I am so STRONG

Pinch your pointer finger and your thumb together, then middle finger and thumb together, then your ring finger and thumb together, then your pinky finger and thumb. While doing this, say "I am so strong/brave/focused, etc. Come up with one on your own to help you feel empowered!"

IDEA: Cross the midline by using your right hand to gently pinch your left ear. Change for each word in "I am so STRONG"
Focused movement can:

- Support academic success
- Increase focus and attention
- Actively engage students
- Enhance proprioception
- Relieve stress

But it can also...

- Create a calm classroom
- Heighten emotional awareness
- Support positive social interactions
Teach Emotional Regulation Skills
Self Regulating Seating Choices
SWAG: 10 Basic Lessons Each with 5 Key Elements

Developed with a FISEF Grant

Breathe

Connect

Move

Focus

Relax
Emotional Regulation through Movement
Movement to

Develop Social Skills
Building Social Skills through Movement
Now you try!

- Mountain Pose
- Upward Salute
- Forward Fold
- Standing Forward Half Bend
- Tree Pose
Fit Brains Learn Better

Memory
Attention
Processing Rate
Sequencing
1, 2, 3... a, b, c...
Table Talk

How do you use movement to support learning in your district?

Record table answers on large chart paper.
Takeaways 3-2-1

Bright Pink: Three interesting things you heard/learned today

Blue: Two ideas you want to try/follow up on

Light pink: One thing you would to know more about
Now Give One/Get One

1. Put your Green Post it on the chart paper labeled “We want to know more!”
2. Find someone you haven’t talked to yet and give them one of your three yellow post-its. Discuss.
3. Get one of theirs from them. Discuss.
4. Continue until time is called
Breath of Joy

Start in Mountain Pose and take a few deep breaths to get ready for this energetic and very fun activity. Breathe in three short quick breaths through your nose and then breathe out through your mouth while making and ahhhhhhhh sound. Next move your arms at the same time as your three short quick breaths in, first straight out in front of you, next straight out to your sides, and finally straight up over your head. As you breathe out and make the ahhhhhhhh noise, let your hands flop back down to your sides and fall into a forward fold. Repeat 5 times and see if you can go faster or slower and what that feels like. Notice a difference in your mood after this activity compared to prior to starting it.
Questions?

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