Multimodal movement can increase body awareness in children, adolescents and adults
BODY AWARENESS

Understanding one’s body and the relationship to its parts.

Key: awareness of center
What makes us move is what makes us think

The brain processes movement sequences and patterns the same way it processes thought patterns and sequences

1. Front to back (motor cortex)
2. Side to side (copus collasum)
3. Up and down (brain stem-frontal lobe)
Executive function is a cognitive process that involves
• Planning
• Organizing
• Scheduling
• Working memory
• Multitasking
(Foster, Rosenblatt, 2011)
The exact same processes are used when humans carry out functional movement skills!

For example: juggling, jumping hurdles, tossing and catching a ball (plan, organize, schedule, work, memory, multitask)
• Finger Hover
• Mirror Mirror
Visual Awareness

• 80% of the information we perceive is derived from visual feedback (Gambetta)
• Visual awareness is closely tied to spatial awareness
• It regulates many other senses
• Heighten other awareness by simply closing your eyes
• If you hear my voice…
• Send then beat around the room
Auditory Awareness

• Discriminate
• Interpret
• Associate
• Gotcha
• Group Gotcha
• Super Group Gotcha
Temporal Awareness

• The timing mechanism of the body
• Knowing **when** to move can be as important as knowing how to move
• Balance and read
• Balance and pick up
• Balance and close your eyes
• Balance and turn
• Balance and bounce a ball
• Balance and toss a ball
• Cross walk
Vestibular Awareness (Balance)

• The balance mechanism of the body allows brain processes to smooth out – reroute
• Categories
• Partner Pat
• Bounce through the window
Rhythmic Awareness

- Movement is simply a series of synchronous and asynchronous rhythms linked together
- All human beings respond to rhythm!
- Heart beat, breathing, walking, dancing, language
- Repetitive rhythmic movements balance brain chemicals and neurotransmitters that release dopamine and cortisol that can help regulate behavior
• Walk on a line
• Backward
• Sideways
• Zig zag
• Walk and toss
• Cross walk
• jump
Directional Awareness

• Laterality: being aware of the left and right sides of the body
• Directionality: having a sense of where we are going and how to get there
• Up, down, right, left, forward, backward
• Circle 3
• Circle 4
Spatial Awareness

• General space – the space we share with others
• Personal space – the space our bodies occupy (for most people: hula hoop)
Think of a client or student you work with...

- Visual
- Auditory
- Temporal
- Vestibular
- Rhythmic
- Directional
- Spatial
Stress inoculation: multi modal movement creates stress in mild doses. It has the same effect on the brain similar to that of vaccines on the immune system. In limited doses, it causes brain cells to overcompensate and thus strengthen against future demands.
Neuroplasticity

The ability of the neurons to change structurally and functionally and to adapt to the demands of the environment.

By increasing movement skills in small but effective doses, we are able to strengthen our brains response to the challenge: the synaptic response is strengthened (Ratey)
• Movement can promote well-being by buffering the negative effects of psychological stress on hippocampal function.

• Movement enhances the activity of the brain-derived neurotropic factor (important for neural growth and protects against damage) (Clow, Edmonds)
Things to consider

• Movement needs to be what the person needs, values or wants to do
• Purposeful movement is not the same as physical activity, aerobic conditioning or working out – it allows clients to reconnect the brain/body
• Not everyone has like abilities or goals
The Movement Hierarchy

Level 1
Move as an individual
Move with a trusted adult

Level 2
Move with a peer partner
Move within a small group
Move in a group game or activity

Level 3
Move within a large group
Move in an activity with an audience
Move in an activity with an uncontrolled result
What does it look like for us so far at Ed. and T. Alt.?

- Cross your Midline
- Brain Boosters
- Vestibular Fun
- Self Regulation
- Juggling
- Noodles
- Tennis Ball
- Playground Ball
- Bean Bags
- Hoops
- Tires
- Steps
- Isometric Holds
- Coming soon…. Cup stacking and group games
Check us out...

- Jacob@uscart.org