Physical Activity, Wellbeing and Academic performance
Some interesting facts......

- This is the first generation where there is a choice to move or not to move.

- The human body is a machine designed for movement - Jean Blaydes Madigan suggests that humans are meant to travel 30km a day, 10km of which is running!
SA Health predicts that by 2032, 100% of the State budget will be spent on health with this escalating after this (currently 50% of budget is spent on health).

SA Health also predicts that for the first time in history, this generation of children will have a lower life expectancy than their parents.
Physical Activity Guidelines for 5 to 12 year olds

“A combination of moderate and vigorous activity for at least 60mins a day is recommended”

Moderate= a brisk walk, a bike ride or any sort of active play

Vigorous= making kids “huff and puff” - eg, football, netball, ballet, running, swimming
PA Guidelines - cont -

- 75% of children are not achieving this!

- Children should not spend more than 2 hours a day using electronic media for entertainment (e.g., computer games, TV, internet), particularly during daylight hours.
• Why is Physical Activity Important????
Physical activity improves...

Motor Skills

Family and Community Connection

Concentration

Social Skills

Quality Of Life

Self Esteem

Sleeping Patterns

Weight Control

Learning

Risk of Chronic Disease

Confidence

Memory

Social Inclusion

Family and Community Connection
Correlation between PA and academic performance

There are now many studies showing the benefits of physical activity to learning and academic performance.
The LOOK Study

- A 5 year longitudinal study conducted by Professor Dick Telford from ANU
- Recently published in the American Journal of Public Health
- 800 students, 30 Primary Schools
- 400 control group, 400 intervention (Blueearth)
LOOK Study - cont -

Findings (data after 2 years)......

- The intervention (Blueearth) children reported better fitness levels, better insulin resistance levels and well as reduced body fat levels

- Biggest findings were the intervention had much higher NAPLAN reading and writing results (approx 10%)
The Challenge for Teachers and Schools

Professor Telford “is worried an overcrowded curriculum and inadequate teacher training is hampering physical education in primary schools”.

“we’re now realising there is a mutual development process between brain and other tissues like muscles..”
Brain science - in 1996 it was found that movement facilitates brain function

Neural plasticity - brains can and do change - “exercise grows brain cells”

Children learn 10% better standing than they do sitting
- The chair is the least effective environment for learning
- With exercise, anything you have learned in the last 48 hours will be strengthened
- Action based learning - movement with intention
- 85% of schools based learners are kinaesthetic learners - ie, learn by doing, felt sense

- Recommended to get kids up every 20 mins for some activity
How does this work?

- There is an actual physical change that takes place in your brain when you become active.

- Cerebellum - motor skills, coordination etc
- Frontal - information
- Pre-frontal - paying attention
- Occipital - process vision
- Temporal - process and decode information, listening, language and hearing
New brain neurons are grown and neural pathways are strengthened with exercise.

Movement facilitates cognition - the cerebellum and prefrontal cortex are connected - the cerebellum puts patterns into a sequence - studies have shown this fires first when doing things like reading and therefore cognitive function is able to increase.
Cooper study 2009 - physically fit children achieved better scores, better behaviour recorded and also higher levels of attendance.

Hellman satellite study - 2000 - Year 4 children - compared brain function sitting compared to walking on a treadmill - found that there was a much more active brain from those involved in the PA.
A little bit on nutrition…..

- Nutrition, exercise, water and sleep - all have huge impacts on learning
- Links between the Western diet with the prevalence of ADHD
- Omega 3 fatty acids - found in fish, almonds, walnuts, avocados - research is compelling - Alzheimer's patients on diets high in Omega 3s slowed the process significantly, in some cases it completely halted the process!
What can YOU do?

- Whole school approach/commitment to PA and HE

- Standing work stations????

- Blueearth!!!! - engaging quality approach to teaching PA

- Action based learning - incorporate movement in to your teaching
English and Movement

Writing letters- partner then small group

Silly sentences

Songs with verbs

“I bet you can’t” challenges
Resources

www.abllab.com
Energizing brain breaks
www.energizingbrainbreaks.com

Blueearth Foundation - TRC
www.blueearth.org