

# Nature deficit disorder – how could school(garden)s help?



ÚjNemzedék 

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*"If there's no game console, how do you keep score?"*

## Nature deficit disorder

- *Defined by Richard Louv (2005) – in the book titled „Last Child in the Woods”*
- Nature deficit disorder is not a formal medical diagnosis, but a kind of problem approach on the effects of alienation from nature:
  - reduced use of sensory organs;
  - attention deficit disorder;
  - an increase in the proportion of mental and emotional illness.
- Lack of nature can be demonstrated in personal, family and community spaces.

# Nature deficit disorder

- Lack of time spent in nature due to urban lifestyle
- It could contribute to
  - Attention disorders
  - Increasing stress-level
  - hyperactivity
  - obesity



# Nature deficit disorder

- It is difficult for the human neural system to deal with artificial environments continuously
- Human neural system is „optimised” for natural environments
- 70-80% of pupils could accommodate well to urban environments, but time in nature is good for them too.

***Time in nature is not leisure time; it's an essential investment in our children's health.***

*(Richard Louv )*





# Research and results

## *Gill, T. (2011): Children and Nature*

- Review of related studies shows evidence, that nature helps to develop:



- physical and mental health including emotional regulation, sensory and motoric development
- more positive attitude toward nature in adulthood.
- more natural science literacy
- healthier eating habits.



# Research and results

- **Some more positive effects:**
  - Bigger self-confidence
  - Better language and communication skills
  - Better Social skills
  - Stronger communities



## Research and results

- Office workers are less frustrated if they can see trees from the office
- Relaxation time in nature is more relaxing than reading, or music or walking in a city
- Holiday: nature is more relaxing than cities
- Time in nature decreases the symptoms of Attention Deficit Hyperactivity Disorder (ADHD) and depression



# Why is nature so useful for human development?

- Nature gives opportunity for non-focused attention too, which is very rarely used in artificial environments
  - All sense is stimulated (visuals, sound, smells, touches, heat)
  - Balance between focused and non-focused attention and different kind of senses
- *Andrea Dúll*



# Pedagogical experiences



## Forest schools

- Children become calm and quiet till the third day in nature
- Often the most problematic children in the schools enjoy nature the most. There are lot of things to do and to explore for them

# Sensory integration as therapy

- *“The neurological process that organises sensation from one’s own body and from the environment and makes it possible to use the body effectively with the environment” [\(Jean Ayres 1972\)](#)*
- Nonverbal, motoric form of (psycho)therapy
- Planned and controlled stimuli
  - increasing the level of organization of brain mechanisms
  - Developmental spiral
  - Self-healing mechanism
  - play
- Nature: lot of opportunity for sensory integration

*Kiss, T. C.*



# Prevention: Time spent in nature

- Excursions, walks
- Forest schools
- Outdoor learning
- Gardening
- Outdoor play, sport
- **Free, unstructured time**



## In service teacher training about nature and learning

- 30 hours, accredited course
- Half time indoor – half time outdoor
- Lessons on Nature deficit disorder and its prevention
- Tips for outdoor activities ([based on Joseph Cornell's work](#)):
  - Attention games: (look for the most windy space)
  - Collection games: (find colours, smells, shapes etc. in nature)
  - Creativity games: write a poem about the nature
- Tips for nature-related themes for talent management
  - Natural materials and themes in arts
  - Biomimcry: Innovation Inspired by Nature (sharkskin – swimming suit)

## Teachers learning in a garden



And enjoying themselves ...



# Thank you for your attention!

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