



1

BACKGROUND

Children's nature 'deficit'
Ecological crisis
Nature & wellbeing research
Wellbeing for Future Generations Act (2015)
Outdoor learning curriculum



2

NATURE & PSYCHOLOGY

Nature connection/relatedness

Ecopsychology

Nature-based health services (NHS)

Eco-stress/eco-anxiety
(American Psychological Association)

Nature-deficit disorder (NDD)

Forest schools

Green prescription
(e.g., green health, green therapy, blue therapy)

3



4

5

OUTDOOR LEARNING WALES



Increased role for outdoor learning and natural environment in new school curriculum

By Sue Williams, Team Leader for Health, Education and Natural Resources
06 Sep 2022



Sue Williams, Team Leader for Health, Education and Natural Resources, tells us about the role the natural environment plays in the new Curriculum for Wales, and how her team has

7

DECLINE IN OUTDOOR LIFESTYLES

● This article is more than 1 month old

Children suffering due to lack of outdoor play, UK charities warn

Charities call on government to prioritise outside spaces for play as MPs begin inquiry into planning and children's wellbeing



❏ The charities say children want to be outside and be active, playing with friends and walking or cycling to school but they face barriers to being able to do so. Photograph: Martin Godwin/The Guardian

Children and young people are suffering huge damage to their health and wellbeing from policymakers refusing to prioritise the need for outdoor play, charities have said.

As MPs begin an inquiry into how better planning could enhance the wellbeing of children, the charities said urgent change was needed.

Monitor of Engagement with the Natural Environment 2009-19: Datasets and guidance on use (DATA001)

This record was published by Natural England on 03 September 2019.

Monitoring use and enjoyment of the natural environment Other data Teachers and students
Use and enjoyment of the natural environment

The Monitor of Engagement with the Natural Environment (MENE) survey is one of the largest of its kind, and has been collecting data on people's engagement with the natural environment for the last 10 years, culminating in almost 500,000 respondents.



The main focus of the survey is people's experiences of nature recorded through the visit they made, and collects detailed information on visit frequency, motivations and barriers to visiting and activities undertaken, among other questions.

The survey also collects information on other ways people engage with natural environment, including environmental attitudes, impacts on health and wellbeing and pro-environmental activities.

MENE is designated as an [national statistic](#) and all data is made available under the [Open Government License](#).

For further information please contact mene@naturalengland.org.uk.

8



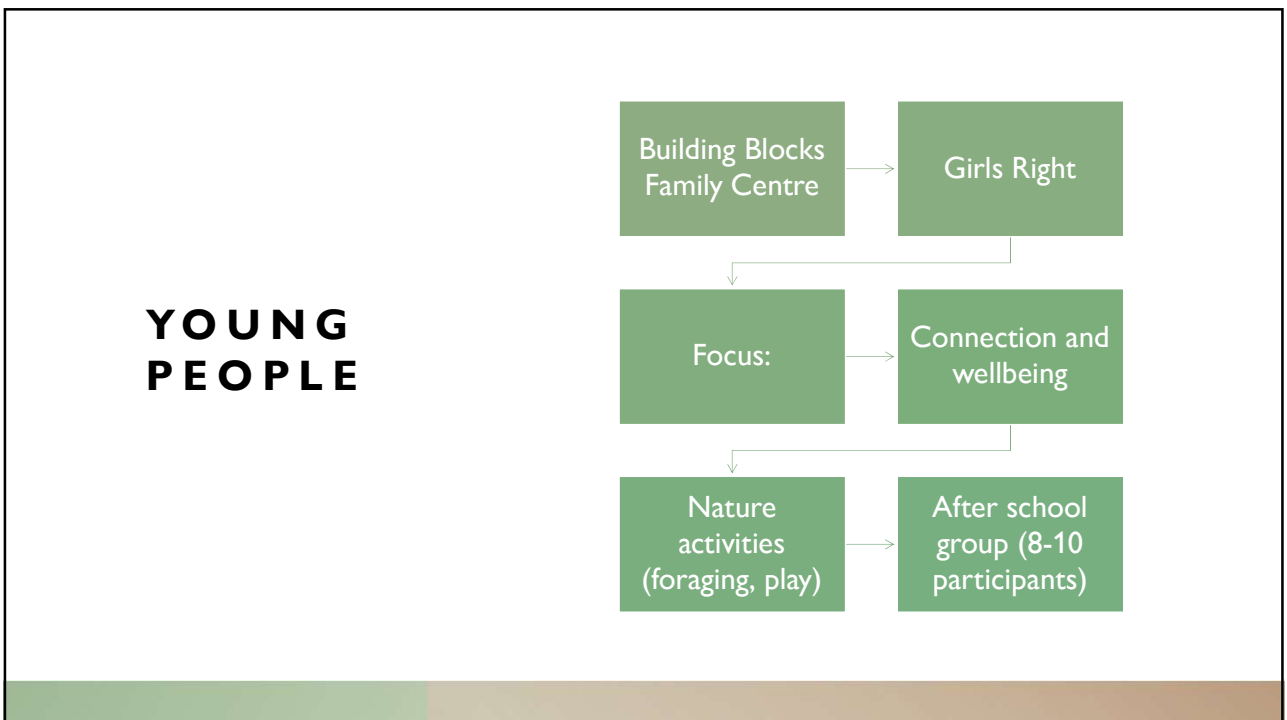
9



10

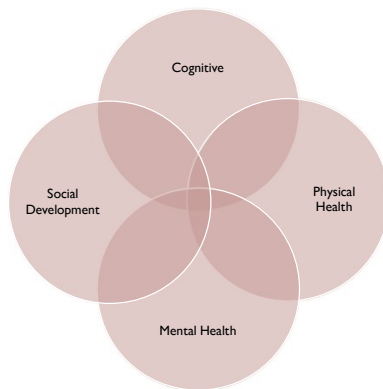


11



12

BUILDING BLOCKS(NATURE AS THERAPY)

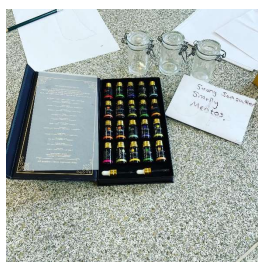


Abstract

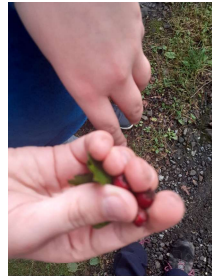
The reason of many symptoms of autistic children is sensory integration, it is the power to understand, organize and feel sensory data from the environment and body. The issues surrounding sensory integration are presented in hypersensitive and hypersensitive a reaction by children with autism to the vestibular, proprioception, tactile, audio, visual, and olfactory senses.

The aim of this paper is establishing a group of guidelines for designing a therapeutic garden for children with Autism Spectrum Disorder to treat the sensory integration problems of children with ASD by designing a sensory garden which should focus on therapeutic interference. By using the elements and principles of design, guidelines for this garden focused on producing calming effects for hyper reactive children with ASD and stimulating effects for hypo reactions.

13



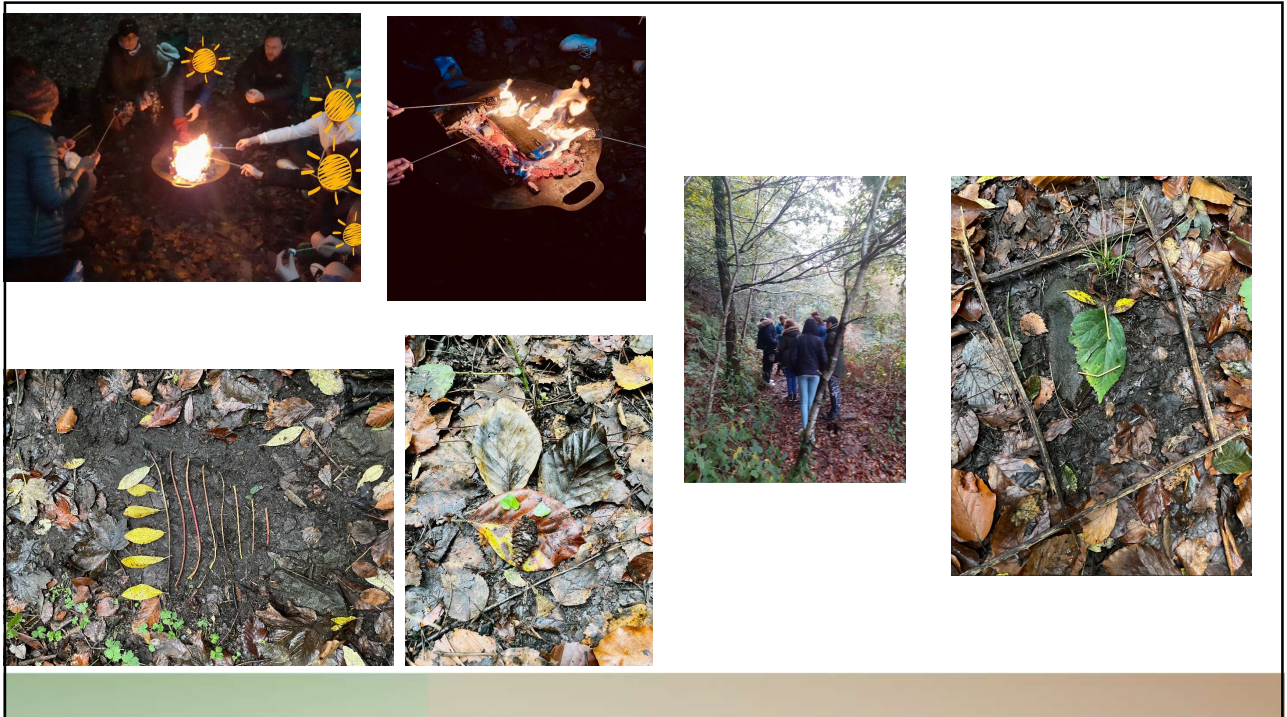
14



15



16

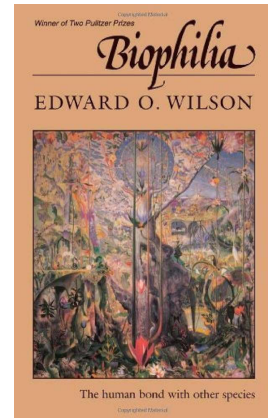
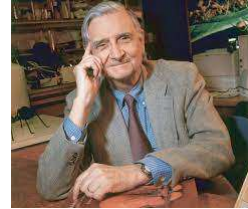
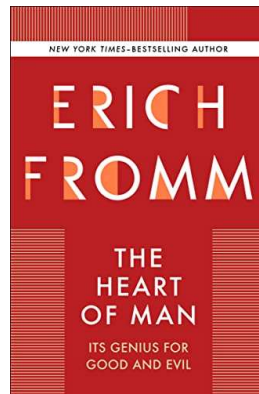


17



18

BIOPHILIA



19

BIOPHILIA HYPOTHESIS



Humans have 'an innate urge to affiliate with other forms of life' that has developed over millions of years of evolving in the natural environment.

'Whenever people are given a free choice, they move to open-tree studded land on prominences overlooking water (Savannah ecosystems). This worldwide tendency is no longer dictated by the hard necessities of hunter-gatherer life. It has become largely aesthetic' (Falk & Balling, 2010, p. 110)

20



ENVIRONMENTAL PSYCHOLOGY

- Biophilia hypothesis (Wilson, 1984)
- Restorative environment theory (Kaplan & Tablot, 1983)
- Attention restoration theory (Kaplan & Kaplan, 1989)
- Stress reduction theory (Ulrich, 1981)
- Fractal geometry (Mendelbrot, 1980)

21

ENVIRONMENTAL PSYCHOLOGY

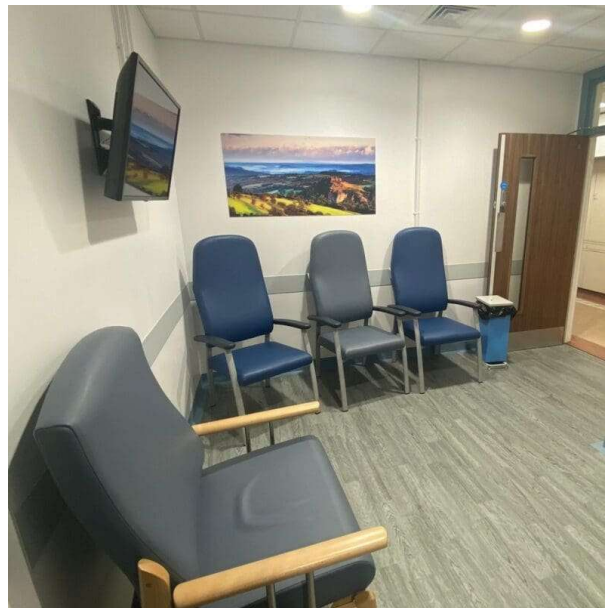


Stokols and Altman (1987): “The study of human behavior, well-being, and experience in relation to the socio-physical environment”.

22



23



24

HOW TO DESCRIBE THE (OUTDOORS)



25



26



Restorative Environment (Kaplan & Talbot, 1983)

Four critical factors of a restorative environment:

1. Allow a sense of 'being away' from mental activities that require directed attention.
2. Must stimulate fascination or interest.
3. Must have extent – 'rich enough and coherent enough....of sufficient scope to engage the mind'
4. The setting must fit what you are trying to do and would like to do (**supportive environment**)

27

Attention Restoration Theory (Kaplan & Kaplan, 1989)

- Two types of attention – directed attention and involuntary attention
- Directed attention requires mental effort and concentration, and can become fatigued if overused, resulting in some experiences being perceived as stressful when they might otherwise not be (watching TV?)
- Natural environments elicit 'fascination', promoting the use of involuntary attention, and providing an opportunity for recovery from directed attention fatigue.

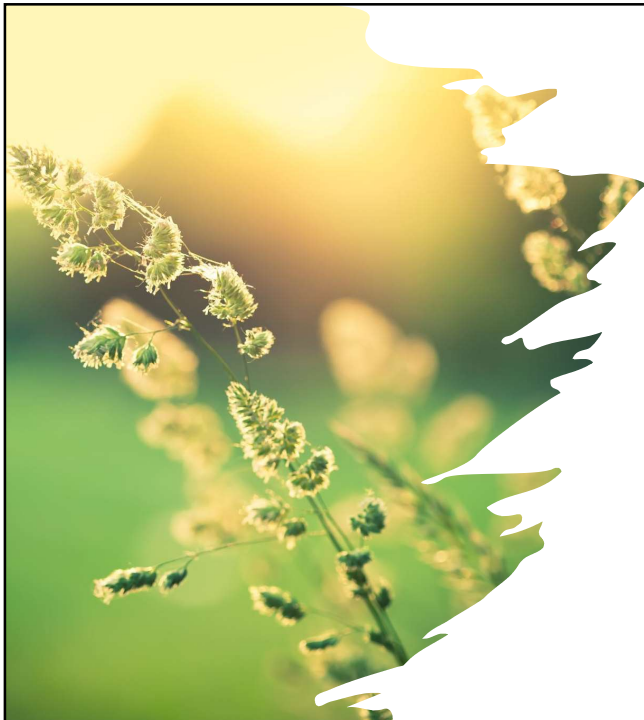


28

Stress reduction theory (Ulrich, 1981)

- Responses to nature are a result of 'immediate, unconsciously triggered emotional responses' (Ulrich et al, 1991, p207)
- Human's have evolved to have a 'biologically prepared readiness' to respond to natural stimuli in a way that is appropriate to the situation.
- Some aspects of nature (e.g. snakes, heights) invoke attention/fascination, along with emotions of fear and dislike, resulting in avoidance behaviour.
- Aspects of nature favourable for well-being/survival elicit attention/fascination, but with positively-toned emotions.

29



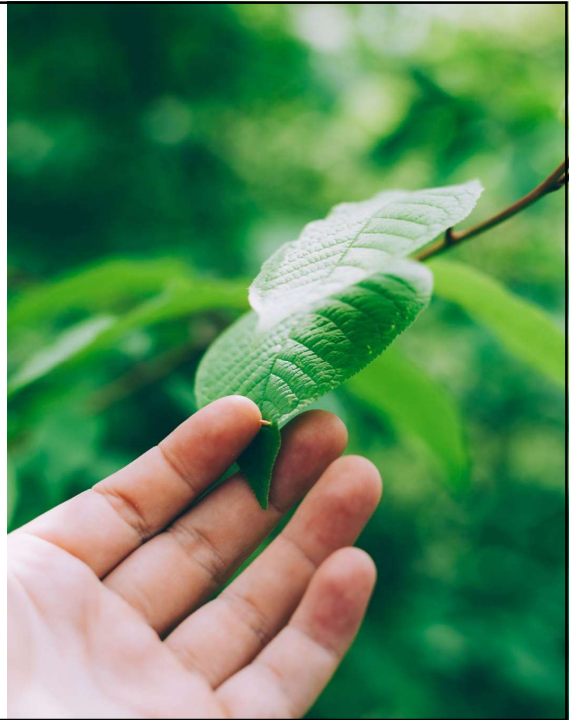
Summary of theoretical explanations

- Natural environments provide positive distractions from daily stresses and invoke feelings of interest, pleasantness and calm
- Natural environments help reduce stress symptoms and promote positive affect.
- Natural environments restore attention and concentration.
- Natural environments act as a coping measure
- Natural environments positively affect mood state
- Natural environments allow us to better connect with ourselves (nature?)

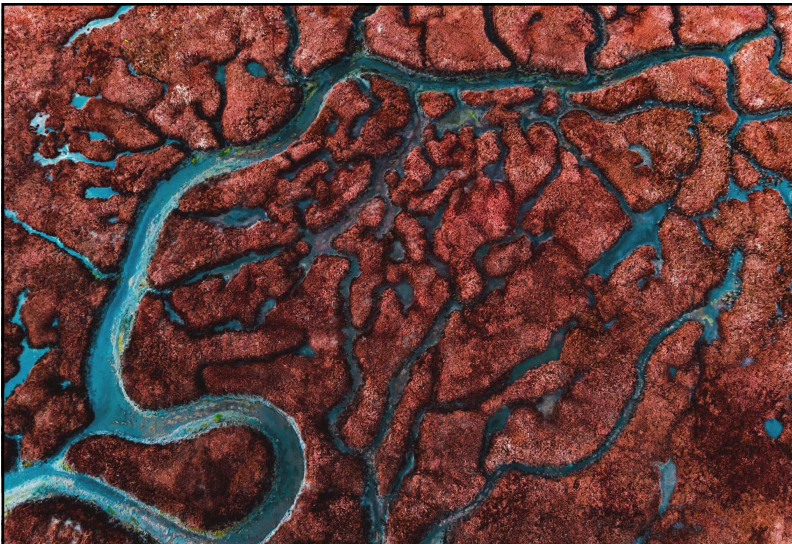
30

Summary (continued)

- Natural environments positively affect mood state
- Natural environments allow us to better connect with ourselves (nature?)
- Regular exposure to natural environments reduces the number of days absent from work
- Natural environments improve recovery after surgery



31



Fractal/Nature Geometry – Benoit Mandelbrot

- Nature has very few straight lines, circles or triangles
- Nature does have endless random, chaotic-like shapes
- These shapes appear in repeat patterns in nature at different scales
- Stars/waves/coastlines/clouds/plants and leaves/branches & trees
- These shapes attract humans via genetic association with savannah environments and evolutionary development of brain and eye structure
- Alpha brainwave response stimulate feelings relaxed

32

Reflective prompts...

- Exploring our connection to nature – biophilic elements; environmental features; emotional connection; sense of place & culture; childhood memories.
- What are your memories of outdoor play? What did you enjoy the most? What type of play?