

Naturalistic Intelligence



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We are all intelligent in different ways



It is surprising that the educational world has not responded to this undeniable truth. People possess a set of intelligences that make them unique. Allowing individuals to become who they are meant to be is the base of happiness and success. This is achieved by recognising a child's strengths and challenges and then providing an environment

where others respect this individuality while also setting appropriate limits and freedoms. All of this builds the child's personality. This process contributes to a person's inner happiness and also their social happiness; living harmoniously and respectfully among others.

A successful group of people (project team, association, think tank) consists of people with different sets of intelligences. This variety ensures a constructive process. A multitude of possible angles can be generated to produce creative answers.

One of the intelligences is not more important than another, however, some are given much more emphasis than others. This can lead to misinterpretations of a child's true self. Diagnoses of behavior disorders in children have been on the rise for several years now. The labels of ADD, ADHD, autism perspective and so on are now familiar terms to the public at large. However, is the behavior we see something that needs to be "fixed"? Could this ADHD child simply have a much stronger Bodily-kinesthetic Intelligence? A child with a strong Bodily-kinesthetic Intelligence needs an appropriate outlet for movement and an emphasis on the development of other skills to give them balance. Is Ritalin a "cure" for this child or a suppressant for the child's inner nature? Could the 'autism perspective' in fact be a strong Intrapersonal Intelligence where the child is shy, likes to be by himself, and is reflective? This child needs an environment that helps the development



of social awareness, social enjoyment and people skills. Could the ADD child have a strong Naturalistic Intelligence and feel cramped and cooped up inside? This child needs an environment that offers outdoor opportunities and balances this with cues and activities appropriate for indoors. Children whose inherent intelligences are catered for grow up with self-love and confidence.



Naturalistic Intelligence



These individuals also have a strong ability in sorting and organising. They see related patterns, and can use this to analyse structures within the animal or plant kingdom and understand subdivisions such as phylas, classes, subclasses and families. Interest expands to history in relation to extinction and evolution.



Naturalistic Intelligence is defined as having sensitivity to nature and all its details and intricacies. These people have an affinity for everything living and non-living. This includes animals, plants, butterflies, bugs, snails, rocks, water, sand, clouds, stars and much more.

Children with a heightened Naturalistic Intelligence love collecting flowers, seeding pots or branches and making use of these in crafts. They collect shells during the seashore holiday and read books to find names and origins. They also like to work in the natural environment with ponies, chickens, wildlife, flowerbeds and vegetable gardens. A holiday including biking, hiking, camping, fishing and visiting nature parks will always be enthusiastically welcomed.



Having a strong affinity for nature does not mean the child needs to be outside all the time. The interest can be applied to academic development since they love many topics related to the sciences. They show an interest in zoology, botany, astronomy, meteorology and ecology. Also geography is part of it by being interested in origins and biotopes of animals and conditions needed for specific plant life.

Strengths particular to this intelligence

A person's strength is simultaneously a learning channel.

When children develop through their strengths they enjoy the process of learning. We feel good about ourselves when we do something we are good at. So the learning of a topic is intrinsically linked to the growth of one's self-confidence. When children feel they are doing well, they stop telling themselves that they can't do it and their self-esteem rises. Hence using one of their dominant intelligences as an entry point to learning has a lot of positive consequences.

The characteristics related to Naturalistic Intelligence can be divided in left and right brain strengths. Left being the more analytic, abstract characteristics and right being the more holistic and social characteristics.

Characteristics related to the right side of the brain:

- Feels at their best in the outdoors
- Strives for balance with nature and mind and body
- Demonstrates an empathy with nature and it's creatures
- Has a strong sense of responsibility towards the environment
- Possesses a sensitivity to animal abuse and environmental destruction
- Enjoys exploration, adventure, open-ended experiences
- Feels an affinity toward animals in general, pets in particular

Characteristics related to the left side of the brain:

- Analyses of information
- Has an eye for detail
- Sees patterns
- Identifies categories



- Reasons in hierarchy (can rank items by significance and relationship)
- Memorises schematically
- Looks for structure
- Understands statistics
- Prefers charts, timelines
- Has a strong interest in ecology, biology, chemistry

Possible Career choices

- Farmer, gardener
- Wood worker
- Designer
- Zoologists, botanist
- Anthropologists, sociologist
- Veterinarian
- Teacher
- Green manager in forestry, animal shelters, animal husbandry and training
- Policy maker on environmental issues; DG environment, local politics.

Nature provides 'Peace of Mind'



Ritalin. This is one of the best-sold medications in the Western world. In Europe it is common to have classes of children with 25% using this drug. In the States this is approximately 40%. It is said that ADHD is a 'condition' of the individual, however it should instead be seen as a 'condition' of the educational system and should be challenged urgently. Surely, our species does not regress that fast?

We can all learn from individuals who have a strong Natural Intelligence. When they are given the space, with freedom and related limits, they can fulfill their own needs while serving as role models to others who are less inclined to explore outdoors. Nature can help one to become calm and to release stress in a natural way. Nature can be a

haven for all of us!

Nature provides peace and calmness. Going for a walk in the forest can help sort out issues that preoccupy our brain. It brings us peace through the deepness of breath, which allows silence to penetrate into our body. Being in nature integrates our thoughts and extends our mental growth. Every once in a while we should ask ourselves, "When did I last hug a tree?"

People with Natural Intelligence crave to go into nature. This brings them calm and balance. It provides mental relaxation and harmony. Children attending typical schools receive the message that this intelligence is not important in our culture since it is not given attention. They are asked to sit still in school for most of the day, and can consequently show symptoms that can be interpreted as ADD or worse ADHD. A large disservice is done to these children, and on top of that they are often given



Nature Deficit Syndrome



Our intelligence is not only seated in the brain. The brain provides the networking and connections, but the senses provide the information. When in nature, one uses all the senses. When on a nature walk, one slows down, observes movements, smells flowers or the salty air, touches stones and twigs, hears birds, sees sunsets. All these experiences provide information to the intellect.

Comparing those activities to being 'wired up' to television, computers, iPods, mobile phones or consoles one can see that an overdose of these 'games' have quite the opposite effect. When being involved with electronics, only sight and touch of keyboard or screen are activated. These are only two of the five senses. The others are muted. When senses are muted much of the time, the brain receives limited information. One of the consequences here is the 'know-it-all' attitude.

Playing outdoors, gardening, building huts, damming streams and more of these 'old fashioned' ways of playing remain very important for children. In nature they feel free, they build relationships, they come across small problems that need solutions, they learn to care for each other and become peaceful in their minds.

Richard Louv has introduced the phrase 'Nature Deficit Disorder' in his book, 'Last child in the Woods; saving our children from nature-deficit disorder'. This 'condition' is not meant as a medical term, but describes the growing gap between children and nature. He describes the importance of (re) connecting children to nature.





Children and adults learn about birds whilst watching a TV program or see the mountains from a bird's eye perspective on TV and they think they know it all, even though sense-wise it was a very limited experience, due to lack of real life interaction.

Children with this 'know-it-all' attitude are uninterested, apathetic, show signs of lethargy, have a low energy level and feel bored.

Reconnecting children with nature through informal nature play and unstructured outdoor activities can stimulate interest and 'awakening'. Children use their senses as soon as they are in the backyard, in the sand pit or take the dog for a walk (without the headphones). The know-it-all attitude can be cured quite easily. When electronics are turned off or at least used in a limited way, curiosity and interest return.

In the chapter 'Why the young and the rest of us need nature', Louv has an awakening story:

Perhaps we'll someday tell our grandchildren stories.... "You did what?" they'll ask. "Yes", we'll say, "it's true. We actually looked out of the car window. In our useful boredom, we used our fingers to draw pictures on fogged glass as we watched telephone poles tick by. We saw birds on the wires and combines in the fields. We were fascinated by road kill, and we counted cows and horses"

Of course we live in a technology-centric society and we want to enjoy new innovations. As adults, we are caught in the social pressures of fashionable technology, such as the GSM we carry. However, it is still important to protect childhood. There are already dependency clinics that cater for the treatment of I.A. (Internet Addiction). Research is done in the connection of depression and the amount of hours children spend isolated, behind a screen. People spending many hours 'wired-up' become socially deprived and also touch deprived. This in itself adds to depression and even violence.

Fortunately this can easily be rewound and put into balance by limiting the amount of time children (and adults) spend inside and outside.

Being outside stimulates all aspects of human development and functioning. The body is moving, one breaths deeper, digests better, feels lighter. The brain relaxes, absorbs, observes and consequently integrates and becomes more creative.

Richard Louv states in his second book named 'The nature principle' that in an age of rapid changes eventually the 'nature-smart' people will lead. These will be individuals, companies or associations who can combine and balance the real world with the virtual one. They are the ones with respect for themselves, others and the environment.



The green school environment



In order to help children to remain in tune with nature and to become 'nature-smart', a typical classroom with a few posters on the wall and a blackboard, teamed with a paved schoolyard will not do. A 'green' classroom with natural school grounds are necessary to engage those students with Naturalistic Intelligence as well as stimulating the others.

Green indoor and outdoor environments are important to all children as it:

- Offers information to all senses and thereby gives primary experiences
- Sharpens awareness, therefore prevents shrinking of sensory world
- Helps to integrate thinking
- Urges care and respect
- Stimulates concern for the environment
- Enthuses children to work together
- Offers tranquility, reflection and harmony

The Naturalistic Intelligence can be stimulated by organised and spontaneous activities. Depending on the age of the children, these activities involve concrete handling, manual experiences, language exposure, reading, writing and research. Let's have a look what the different age-ranges offer indoors:

Toddler Community and Children's Houses

Young children function at a very concrete level and get use to feeling good in nature and respecting it by handling sticks, plants, water, sand, objects and so on. Because manipulation gives unconscious and conscious messages children develop best when they can work with their hands. The classroom offers many different opportunities:

- Fish care
- Plant care - watering, dusting and cleaning leaves, cutting of dead leaves
- Ikebana – flower decoration
- Fruit and food preparation

- Leaf cabinet – learning about the shapes and names of leaves
- Botany classified nomenclature cards which provide vocabulary expansion, writing and reading activities:
 - Parts of the plants such as leaves, stems, roots
 - Seeds
 - Kinds of flowers and parts of the flower
- Zoology classified cards:
 - Parts of the five vertebrates
 - Names of animals
 - Animals in different continents
- Science: First experiments



Primary

Now we move on to a vast curriculum related to botany, zoology, geography, history and chemistry. At this age the curriculum is totally holistic, so can be studied from different angles. The starting point can be the needs of the plant and then the connection to geographical regions that offer specific conditions. It can also start with evolution—which era did pigtales first exist and how have they survived all these thousands of years. It can also start with the study of a specific insect and then, looking at Kingdom Animalia, classify it by phyla, class and family. The development of ecological awareness starts right here, at an unconscious level.

Apart from the study topics, art and craft are interrelated, songs and poems can be found and plays can be written. Thereby integrating knowledge and continuing to give opportunities of primary experiences.

Care of the indoor plants, experiments with plants related to light, minerals, absorption and so on provide hands on experiences.



Middle Years Programme

Developing a person's strengths will increase their response to the learning experience, which helps them to develop their weaknesses as well as their strengths. It sounds difficult, but is so simple. First hand experiences remain very important at the MYP level. This is because this is the age where students start becoming actively involved in computer communication such as Facebook, computer games, telephone traffic and so on. In order for their sensory world not to shrink, 'playful' and meaningful activities are important, hence the caring of plants and animals, the cooking and catering and 'playtime' in a natural environment.

Apart from these hands on experiences, Middle Year students move on far and wide in the different subjects and study all related subjects to the natural and human world such as biology, chemistry and humanities. Even philosophy and information technology studies relate to the natural world from a sociological point of view.

Middle Year students learn to take notes during presentations and whilst studying. There are studies that show that people with a strong naturalistic intelligence seem to prefer mind mapping to taking vertical lists with lots of bullet points. They think in patterns, subcategories and structures, but always related to the whole. In teaching them note taking, mind mapping can help a lot.

The naturalistic intelligence can be further supported in subjects by:

- Using graphics
- Providing sorting and attribute grouping tasks
- Charting hierarchies
- Utilising semantic mapping of ideas
- Brainstorming
- Modeling strategies for finding common

attributes, categories and hierarchies across the curriculum

- Providing an integrated, holistic view of the topic.

Therefore keeping the individual learning styles of the students in mind and giving a variety of learning opportunities remains important also at the older age. Students are at their best when the 'doorway' into their functioning is kept open.



The outdoor environment

The outdoors provides constant opportunities for organised activities, free play and spontaneous initiatives. At school, children spend time in the outdoors every day, weather permitting. They have free playtime, which often includes invitations to join organised activities. These vary at the different schools and include:

- Planting bulbs and flowering plants
- Weeding
- Watering plants
- Planting vegetables such as potatoes, Brussels sprouts, strawberries, leek, tomatoes, broccoli
- Planting herbs such as basilica, thyme, parsley
- Harvesting the vegetables, collecting herbs
- Picking apples
- Cooking, catering
- Setting tables in the garden
- Eating lunch together at the picnic tables

- Finding leaves, flowers for study purpose
- Studying the snail, butterfly
- Feeding the chickens
- Looking after the cats
- Climbing trees (MYP)
- Playing games, sports
- Singing songs with the group



Additionally children can do academic work outside. Sometimes math lessons are given in the garden or on the courtyard, volcanoes and rivers

are made in the sandpits and a study of the artist Folon is done by making photos whilst the sun is shining and beautiful shadows are formed.

Without an outdoor environment and a 'green' classroom it is difficult for a child to become ecologically aware and nature-smart. These are not abstract concepts that can be taught, but only develop when experienced and sincerely lived.

At home

Nature offers many marvels. As adults, we do not always look; our senses are already a little muted, since we have 'seen it all before'. But having children, gives us the opportunity to see it again through the eyes of our children. For them it is wonderful! Wow, look at that big bird, and look at the pheasant in the field with its three young ones who are being taught on how to find food! Look at the bright sky! These experiences reconnect us back to nature via the child.

As a parent, one can help children maintain and further develop their Naturalistic Intelligence by organising activities in nature or by simply letting the children play. These activities are not too difficult and should not be over-organised. What it does require is time. Time to spend together in nature, absorbing and enjoying the effect it has on one's personality.



Non-organised activities could be just spending time on the beach, in the woods, in the playground, near the farmer's field, near the horses, next to the bicycle path. When children are left to their own device they slow down, explore and find something to do. The only thing adults need to do is give them the time and relax (and not to grab the phone and call someone quickly!)

Play dates can be organised in the park followed by free play. Parameters can be set on which area can be used and consequently children can be left to their own exploration; they can drag branches, build huts, have a little conflict, find a solution, become exhausted and sleep well!

Some ideas on organised activities:

- Go on a neighbourhood walk and identify the types of flowers and trees



- Work in the vegetable or flower garden. Share names, needs and characteristics of plants.
- Visit plant nurseries and choose according to set criteria

- Visit the zoo and learn about the different types of animals
- Collect objects, pictures and books of animals, rocks, shells, leaves, seeds, nuts
- Go on a night walk to gaze at the stars
- Enjoy a winter walk to marvel the cold

For older children/teenagers:

- Camping and fishing trips
- Skating and rollerblading tours
- Barbeques and cooking
- Making a bon fire
- Survival camps
- Join walking clubs, environmental clubs, scouts
- Read National Geographic
- Read the 'Economist'; study the effects and interrelationships of the economy and the environment at large.

A curiosity:

The Naturalistic Intelligence in it's reverse; positive effect on nature



We are affected by nature; it has a calming and integrating effect on our mind and body. Dr. Masaru Emoto claims that it goes much further than that. We are an intricate part of nature and can effect on it as well!

Dr. Emoto has produced stunning water-crystal photos and published books for adults and children. He is encouraging people to value water as it is a very precious resource. The earth consists of 70% of water. Plants exist of approximately 70% of water and also we exist of approximately 70% of water. The water inside us and around us is connected.

According to Dr. Emoto, we can have a positive effect on this water. When positive thoughts and words are projected on water and the water is then frozen, it creates beautiful ice crystals, like the crystals that used to be on our bedroom windows at the time of single glass and less energy consumption. Thoughts are vibrations and vibrations apparently make these unique patterns.

In his books one can see beautiful photos of water that formed crystals when exposed to happy vibrations and misshaped crystals when

exposed to angry/hateful/disrespectful vibrations.

So if we can have effect on crystal formation in water outside of us, we maybe can also have effect on the water inside of us, and the water in other people? True or not, it makes one think. It makes one value positive thought and a positive attitude even more. Masaru Emoto's books are read worldwide. Maybe an interesting brainteaser.

That everything is interrelated is a fact. We see that in the children every day. Self-esteem, concentration, academic performance, strengths in intelligences, independence, responsibility, learning styles and so on relate and influence each other. Together it constitutes the base of the personality and the current functioning of the human being. This is nice to know, because helping a child concentrate by telling him to "concentrate now" does not work, in case of a nature smart child, it works much better to send him/her outside, with a designated task or with some 'free time' to reconnect. It does wonders!

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References and interesting reading list:

Internet: Good Googles:

<http://surfaquarium.com/MI/profiles/naturalist.htm>

<http://www.casacanada.com/natuintel.html>

<http://www.businessballs.com/howardgardnermultipleintelligences.htm>

Wonderful Books:

One can find a good collection of books on activities related to Naturalistic Intelligence. The ones mentioned below have recently been added to the Parent Library:

Richard Louv

- Last Child in the Woods: Saving Our Children From Nature-Deficit Disorder
- "The Nature Principle: Human Restoration and the End of Nature-Deficit Disorder"

Joseph Bharat Cornell

- Sharing Nature with Children 1
- Sharing Nature with Children II

Jenny Hendy: Gardening Projects for Kids: Fantastic ideas for making things, growing plants and flowers, and attracting wildlife to the garden

Jennifer Ward: I Love Dirt! 52 Activities to Help You and Your Kids Discover the Wonders of Nature"

Linda Garrett: Small Wonders: Nature Education for Young Children

Maja Pitamic: Child's Play; Montessori games and activities for your baby and toddler

Masaru Emoto

- The Hidden Messages in Water
- Water Crystal Healing: Music and Images to Restore Your Well-Being
- Messages from Water and the Universe
- The secret of Water – for the Children of the World

