

CHAPTER
6

The Benefits of
Connecting with Nature

Steve Peterson



Photo courtesy of Maria Napoli

Nature.....
Alive
Simple
Exotic
Majestic
Nurturing
Always delivers

Maria Napoli

"I felt my lungs inflate with the onrush of scenery—air, mountains, trees, people. I thought, 'This is what it is to be happy.'"

—Sylvia Plath, *The Bell Jar*¹

Photo courtesy of Maria Napoli



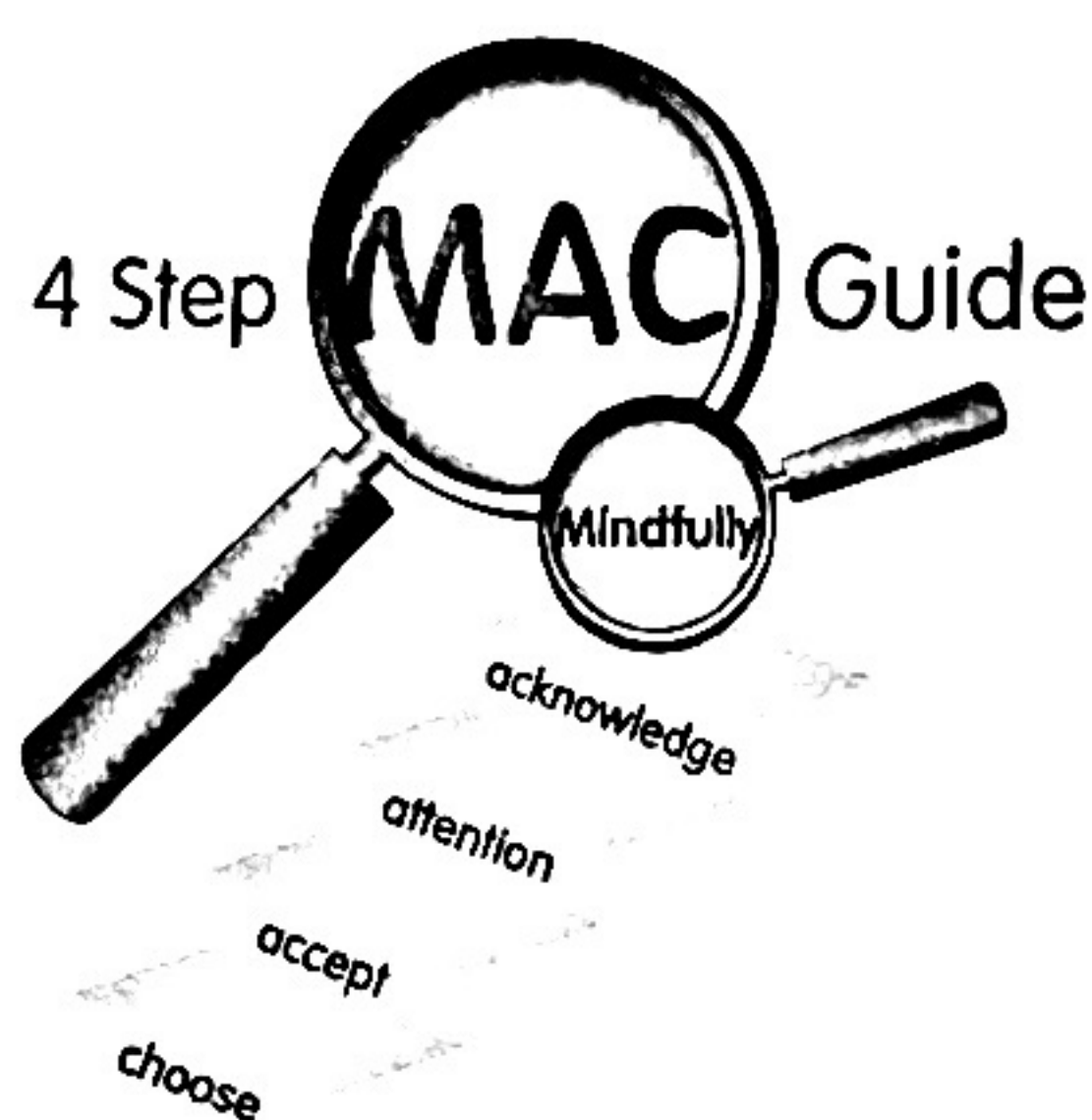
Nature can be defined as a collective of the physical world, inclusive of the landscape, plants, animals, air, and those things not of human creation. Nature is the experience of one's senses while engaged in this collective through activities as wide-ranging as walking a dog, smelling the trees in a forest, feeling the rain upon one's skin, sitting on a beach, gardening, riding a skateboard or bicycling in a park, and photographing nature. The possibilities are endless but the underlying theme remains consistent: Take time to mindfully experience nature, and pay attention to the moment as it occurs.

Following are but a few examples of overt benefits of a healthy balance of human-nature interaction and connectivity:

Studies show the cognitive benefits such as skill development are enhanced in children with regular exposure to nature and the outdoors. Skills range from increased abilities in observation and creativity² to fostering language and collaboration skills when playground time is actually spent outdoors.³

Adult and adolescent intake of vitamin D, arguably challenging to get strictly from food as so few carry the vitamin naturally, is historically low and the prevalence of its deficiency is well-documented. The primary and ideal source is received from sensible sun exposure.⁴

Even for those limited in their ability to go outdoors (such as the elderly or home-bound), pictures of nature or other visual/sensory representations can help restore directed-attention and provide a level of mental comfort through a sort of "escapism" from the indoor environment.⁵



Colleges and universities have long integrated nature-awareness as a complementary component on campuses. Initiatives range from eco-friendly sustainability to open-air meeting areas, outdoor classroom environments, utilization of natural light and ventilation.

Employment of the four-step guide to mindfulness can open and enrich the experience of nature: 1) Acknowledging the moment in nature fully, 2) intentionally paying attention to that moment and opening the senses, 3) accepting all that nature offers to the senses without judgment, and 4) making a cognitive choice to allow nature to have a positive impact.

Keep the Experience Simple and Manageable

Often when people think about connecting with nature, the assumption is that it must be a formal, structured activity. It is beneficial to attempt to redefine the concept of connecting with nature, for it does not have to be a holistic retreat on a mountainside or a Tai chi class in a grassy field. Although such activities are a marvelous way to discover nature's wonders and explore the unknown, sometimes too MUCH structure can take away from the magic of the mindful transformation, the personal connectivity, and inner exploration that nature has to offer in its simplest form!



Photo courtesy of Maria Napoli

If a generalized categorical statement about outdoor activity involvement across different periods of the lifespan were to be made, it would probably look something like this:

- Children require little structure; they are happy to be just playing outdoors.
- Adolescents form structure in their outdoor activities as it is a social/bonding event for them.
- Adults may require more structured events as they may have to be fit into their schedule. Such events may also act as a motivator to get them outdoors in the first place.
- Older adults may have more time to spend in nature, yet often are restricted due to increased medical issues and may experience the least amount of outdoor activity.

Removing the structure of an outdoor excursion allows for the experience to happen on its own terms and eliminates predisposed expectations. This also can reduce unnecessary complications and impediments to the outdoor experience, as well as increase participation from those who otherwise would not be able to be involved.

This can be likened to the family vacation that has an itinerary or sets times and points of interest. All energy is concerted on meeting preset deadlines and the focus is on the destination, not the trip itself and experiences in between.

It is important to be aware of the benefits of the more rudimentary and common outdoor activities such as taking a hike, doing outside chores, or even transplanting young basil from an indoor herb box to the moist soil outside your patio. At the time of planting the leaves of the basil are too small and immature to use. But you know that at the onset and still transplant it in anticipation of growth and future harvesting of the leaves. You have the patience. You watch your basil, nurture it, and appreciate its maturation process. You pay attention to the lighting, soil, and watering conditions as they will have an impact on the flavor of the basil. The journey of the growth of the plant makes the final outcome even more special. One can tailor the final outcome by paying attention to the little details along the way.)

Mindfully engaging in basic outdoor activities can be more relaxing and less structured. Less structure leads to more mindfulness and more mindfulness leads to less stress.

ACTIVITY: A PLANT IN YOUR LIVING SPACE

"Bamboo is flexible, bending with the wind but never breaking, capable of adapting to any circumstance. It suggests resilience, meaning that we have the ability to bounce back even from the most difficult times."

—Ping Fu⁶

Purchase a small indoor bamboo plant and a shallow container you can fill with water. This is a small investment with great longevity. Bamboo is suggested because it doesn't need soil and is easy to grow. All that is needed to maintain this plant is some sunlight and enough water to keep the roots/base covered.

Place it in an area of your living space that you will observe often. Observe it. Be mindful of your experience with this plant and absorb every detail and facet about its ability to thrive in nothing but water and some stones to keep it upright.

Write down five details about this plant as this is your first truly mindful encounter with it. Focus on specifics as if you are explaining this to someone who has never seen nor heard of a bamboo plant:

1. _____

 2. _____

 3. _____

 4. _____

 5. _____

-

Mental Roadblocks, Inattentiveness, and Mindfulness

I spent an afternoon with my parents recently and had an opportunity to make an observation about their three little dogs. Specifically, the difference between how the dogs acted while inside the house and their behavior once the door was opened and they discovered the back yard. Yes, I said *discovered* the back yard.

At the time my parents had been living in this same house for nearly 20 years and the dogs were present for nearly eight of those years. These dogs have been familiar with this yard for a long time. Yet every time they went outside, they acted as if the entire landscape had changed from two hours prior and every blade of grass, every stick, every rock, every leaf, and every flower was brand new to them. Their noses were stuck in the air taking in every scent and aroma on the breeze, and then their heads would survey the ground with the greatest of attention and wonderment. Every little detail was exciting to them and caught their undivided attention. These dogs were re-discovering the back yard each and every time they went outside! Each time I watched this event unfold my immediate thought was “this has been the same back yard for nearly 20 years.”

But it wasn't the same back yard for three little dogs who were excited to be outside and whose immediate response was to go into “discovery” mode. This “discovery” mode was not exhibited when they were in the house. They slept, casually played with the occasional toy, nibbled on food, and slept. But when that door opened a switch was flipped and they came alive!

My first thought was that these dogs live in a box ... a house. They feel a level of comfort and security in that house, with its proverbial four walls and a roof. Their house-bound environment is structured and consistent and very safe for them. Yet when they run out the door into nature's wilderness they do not demonstrate any fear. For these dogs nature is not a box! It lacks structure and consistency and is ever-changing. Their exposure to nature lacks the moment-to-moment consistency that the safety and security of the house provides them. When they go outside they do not feel a lack of security; instead they are discovering the new and ever-changing environment. If anything, they appear to be more invigorated.

My second thought was, “Why don't people act as enamored with nature every time the door opens for them?”

In 2007 Gidlöf-Gunnarsson and Öhrström wrote that contact with nature impacted a person's psychological well-being by moderating daily “non-nature” processes such as daily structure, routine distractions, and disturbances. Specifically studied was that of community noise levels. It was suggested that the perceived availability of natural resources as a psychosocial outlet was negatively impacted by the level of noise and audible distractions⁷. This appears to be mostly an “adult” phenomenon, as children appear widely unaffected by urban noises when it comes time for them to play outdoors. However, studies suggest that children demonstrate improved levels of cognitive function when they are relocated from a concrete neighborhood landscape to one that contains more natural outdoor features (parks, greenery, etc.).⁸

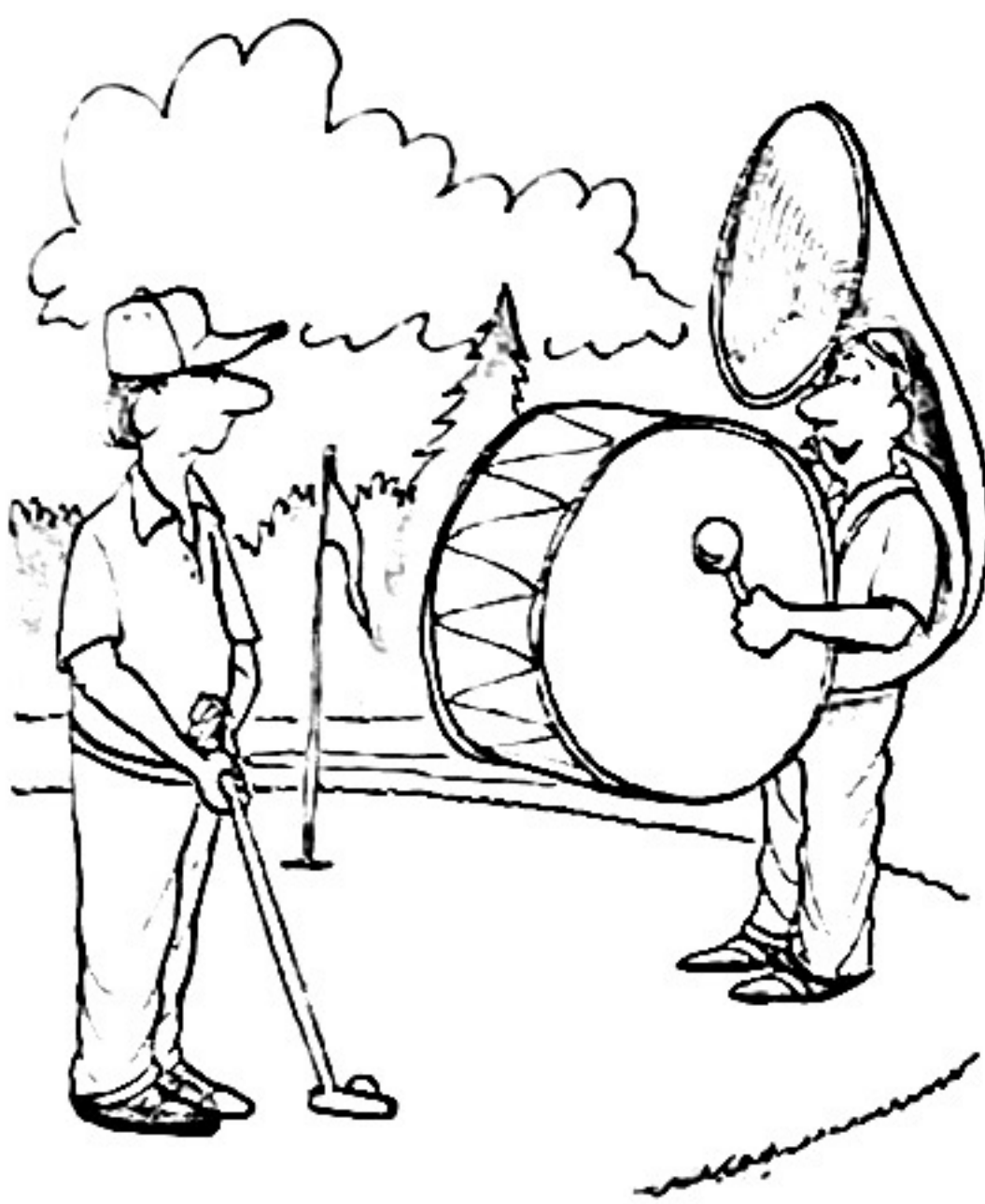
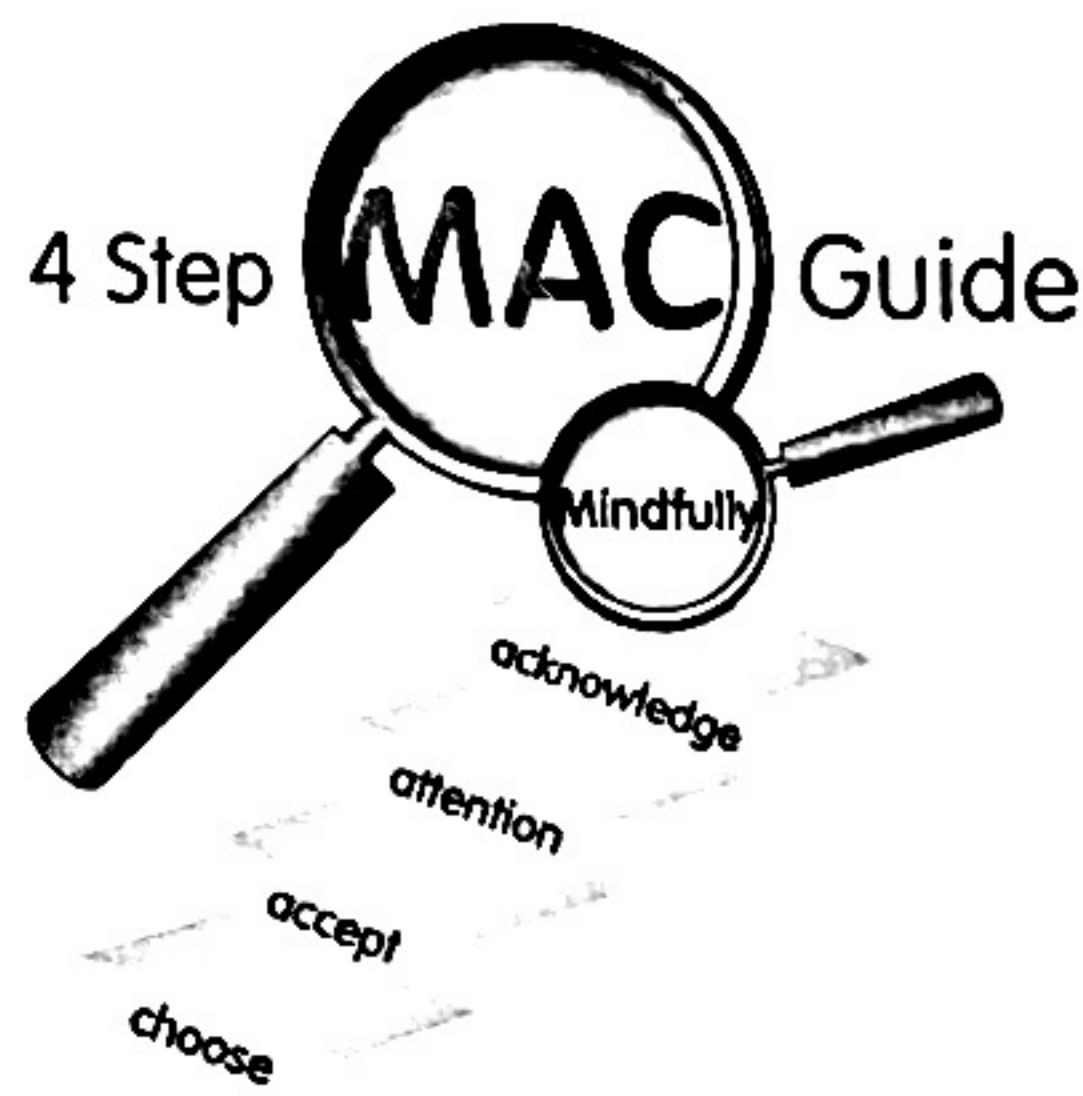


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This may be an underlying reason why many people do not embrace nature *by default*. If the moment one steps outside of their house and they feel overwhelmed by noise, activity, and other sensory overload, it is easy to understand why that would not elicit a cognitive and holistic sense of emotional “discovery”—a sense of calm.



“Let me know if I am distracting you.”

Cartoonresource/Shutterstock.com

A solution to this particular distraction may be as simple as redirecting the focus of attention. I like to refer to it as depth perception for the ears. Here is a very straight-forward exercise:

1. Go somewhere outside that has trees or water. A public or community park/recreation area is a good venue for this activity.
2. If there are some man-made noises present (people talking, music in the background, children playing, etc.) identify those noises.
3. Now concentrate on hearing nature’s noises instead of the man-made distractive noises. Do you hear the birds? Do you hear the leaves rustling in the breeze? Do you hear the water from the water feature in the middle of the pond? Do you hear the ducks “honking” as they paddle around the water?
4. If there is no immediately available natural park feature, then simply walk somewhere outdoors and focus on *something* from nature. Smell a flower in a bush along the sidewalk, listen to the sprinklers watering a patch of grass, or even search for an aroma in the air.

This simple activity allows one to become mindfully aware of nature’s surroundings instead of the distractions. It requires listening beyond the front noise and *discovering* the sounds in the background, an intentional attention to the background sounds.

I found myself doing this very thing one afternoon sitting on the patio of a restaurant waiting for a table to become available. The weather was warm with a slight breeze and there were dozens of birds in the trees in the immediate area. I became startled as the person whom I was with tapped me on the shoulder and said, “Didn’t you hear them call your name? I went to the restroom and I heard them call you when I first walked in.” I didn’t even notice that she had walked away, let alone did I hear my name being called. I was too involved in the birds.

This is the same behavior my parents’ three little dogs demonstrate when they are outside. When they are in discovery mode their names can be called two or three times and they fail to respond. It is not because they are ignoring the call as much as they are being distracted by being outdoors. Conversely, how often do people find themselves so distracted that they are *unable* to enjoy being outdoors?

To appreciate one’s subconscious connection with nature it is first necessary to remove conscious distractions. Being mindfully attuned to the details of nature will help allow those distractions to fade into the background.

ACTIVITY: OVERCOMING MENTAL ROADBLOCKS

*"I don't have a short attention span I just ...
Oh, look, a squirrel!"*

—ironydesigns.com

Name three features of nature that exist just outside your literal or proverbial front door:

1. _____
2. _____
3. _____

Describe a natural scent/aroma that is in the air the moment you step out of your front door:

List three reasons you do not have time to connect with nature:

1. _____
2. _____
3. _____

List three reasons how making time to connect with nature can benefit you:

1. _____
 2. _____
 3. _____
-

Nature and Children: Time to Play

When thinking of a child, the first thought that pops into mind is that of play: running around, spontaneity, imagination, loud voices, and just having fun, acting upon whatever thought enters



into their heads and then two minutes later moving on to another activity. A child's early education occurs best through self-discovery, free-play, and limited-constraint investigation, as this is whole-body involvement and facilitates development of emotion, motor skills, intellect, social interaction, and growth of the individual.⁹ Typically a child's play is non-goal directed, free of adult-imposed rules and constraints, imaginative, pleasurable, and self-motivated.¹⁰

The concept of "wonder" has widely been accepted as a motivator for life-long learning.¹¹ Experiences children have when exposed to nature and outdoor environments have positive correlational links to the development of imagination and the sense of wonder.¹²

Unlike adults, who have grown accustomed to indoor environments (industrial, un-natural), children tend to respond more positively to outdoor experiences as they do not have this basis of comparison. As such children require a chance for solitude, contact with nature, and the "sense of wonder that nature offers."¹²

When comparing different environments for a child to play in, the sensory experiences are vastly different between indoor and outdoor, in addition to the obvious sets of rules and constraints that guide indoor activity. A child can be more free-spirited and has greater manipulation upon their outdoor environment versus an indoor area. In 1987, Elizabeth Prescott identified three traits that natural outdoor environments¹³ offer for a child's arena of play:

- Unending diversity.
- Not created by adults (lacking adult rules and constraints).
- The feeling of timelessness (plants, trees, landscape, etc.).

The value that can be given to a child's outdoor play experience is similar to the values that adults hold about a natural outdoor environment: a place of exploration, rest and relaxation, rejuvenation, endless possibilities, and freedom from constraints and stress. Yet unlike an adult, children are free of that *value analysis*. They simply want to play and experience and discover without any underlying intent or goal.

To understand why children seem to demonstrate such a pronounced wanderlust for the outdoor world, one theory suggests that we were born with it. If this is the case, then this may help explain why natural environments play such a strong role in the child's learning process.

Biophilia is a theory that is gaining strong traction not only in the field of environmental psychology, but also in that of child psychology. The theory suggests that humans have a subconscious connectivity with nature and activities/objects in a natural surrounding.¹⁴ Edward Wilson introduced the theory in 1984 and suggested that the bond with nature is instinctual with humans.¹⁵ While this bond may be instinctual, it is refined and redefined over time through experience and is based on different cultures. This, too, may also explain why adults demonstrate infrequent and different levels of connectivity, whereas children participate in a universal mode of playfulness and engagement.

Nature's Impact on Adolescent Development

The adolescent years are an incredible experiential and learning period. This is the point in our lives where we have flashes of intellectual brilliance and yet at the same time unregulated emotion. An adolescent is defining the world through intellectual and social discoveries. To fully appreciate the cognitive and social-developmental brain of an adolescent, it is important to understand the two opposing forces within the brain and how they develop as they do so at different stages and define the specific behaviors of the adolescent mind.

The Limbic System is the first to develop and is the center for instinctual and emotional reaction. Commonly referred to as "the social brain," this area is responsible for emotional impulses, selfishness, risk-taking behavior, and primitive motivation. This area of the brain does not change with time and is formative.

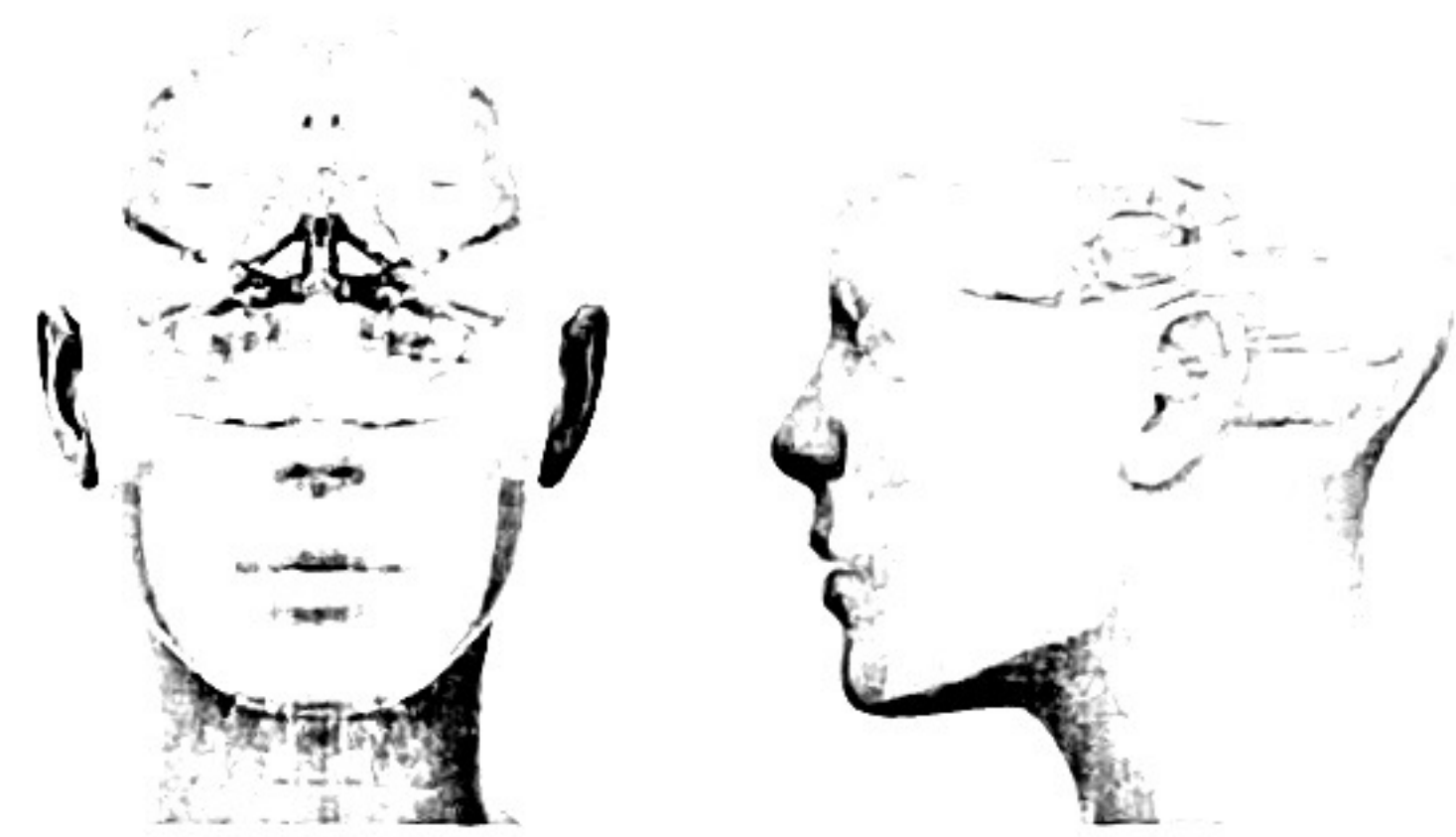
The Prefrontal Cortex is not fully matured until the early twenties and is the "reflective brain," where we find the hard-wired skills of thought differentiation, response inhibition, emotional regulation, prediction of outcomes, social control, and organization. This part of the brain is the "grey matter" that actually develops over time and is able to be formed by learning and experience¹⁶

Adolescents are very malleable and adaptive, yet they often have poor impulse control. They sometimes tend to be unaware of the implications their actions have on others and are constantly conflicted between their perception and the perception of others.¹⁷ In short, the adolescent years (as we all remember) are a mentally and physiologically stressful period of development. Often an adolescent lacks the experience and coping mechanisms to make mindful, healthy decisions.

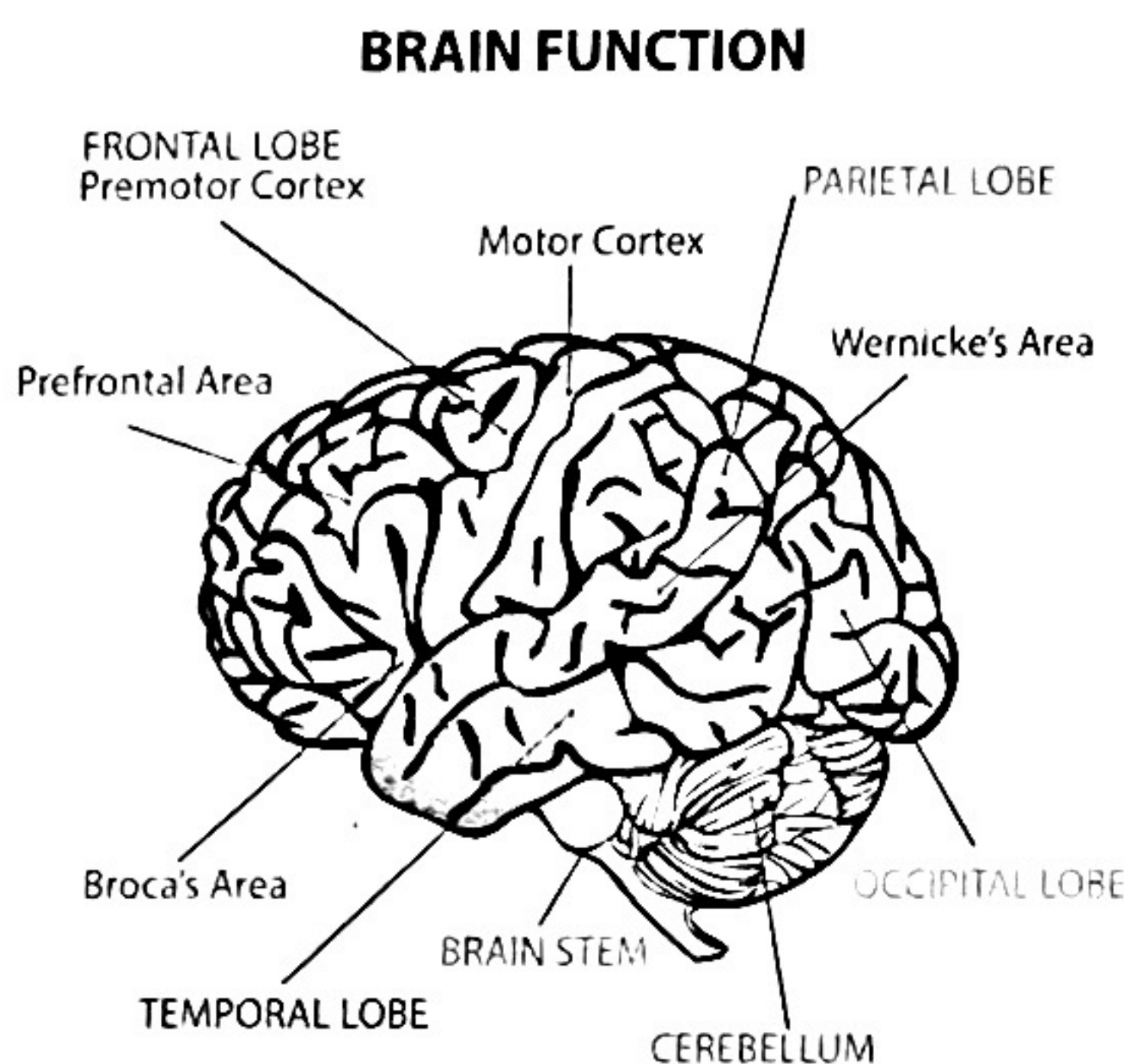
Research in environmental psychology has suggested that nature can provide a very adaptive function in the way of psychological restoration.¹⁸ This restoration promotes not only a healthy outlook on situations and events, but also acts as a stress-relieving component. Interacting with nature can be a powerful tool to assist the adolescent through these tumultuous developmental years by allowing a "reset switch" to be thrown during periods of highly emotional activity and serve as a coping mechanism.



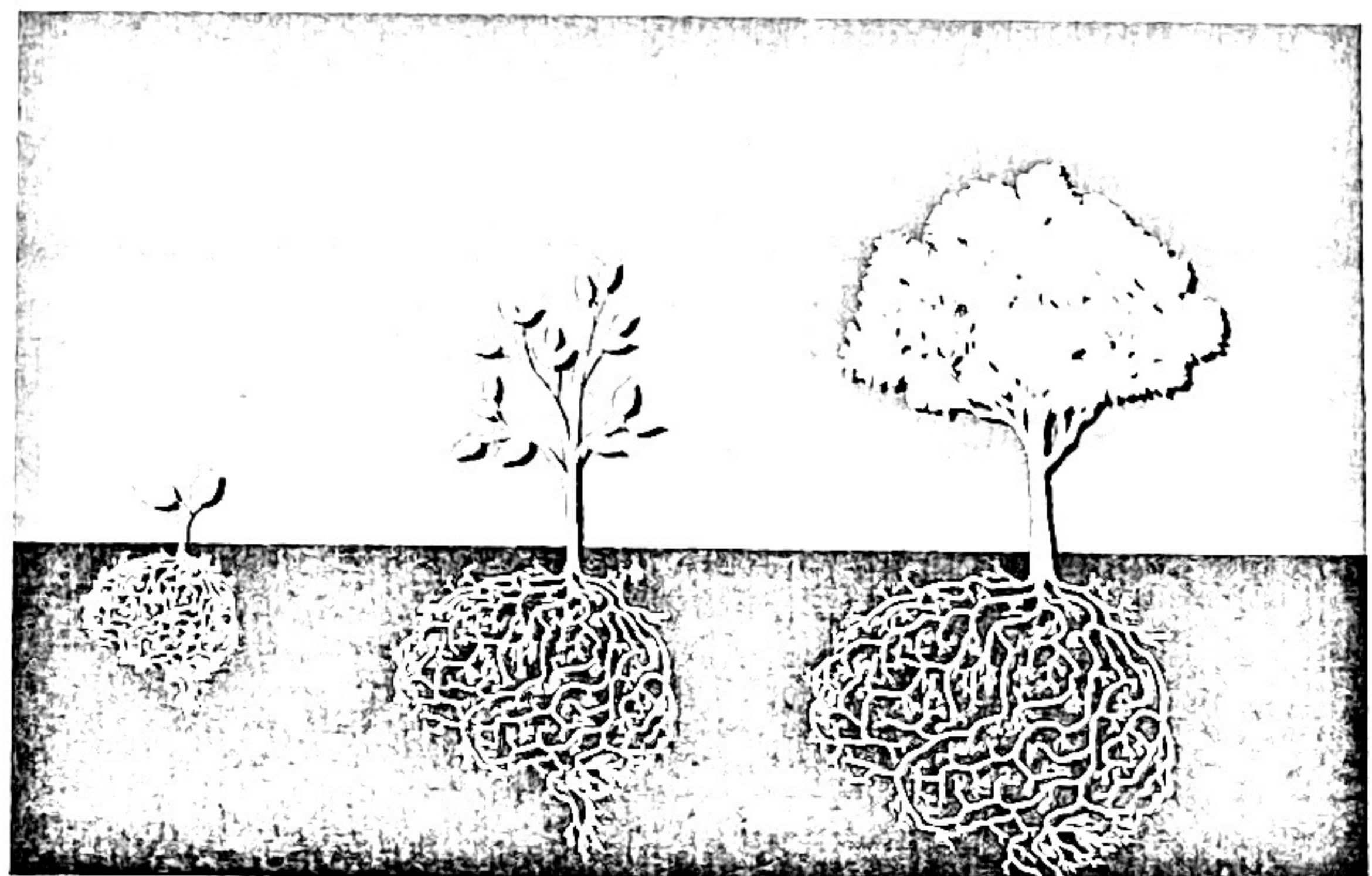
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During this time period, there is also a tremendous explosion of synaptic growth that is unparalleled throughout the rest of our lives. Herein lies a window of learning opportunity that starts to close as we progress into adulthood. If lifelong environmental awareness and proactive behaviors toward ecological sustainability are to be developed, this would occur during the adolescent years where learning opportunity is at its greatest. Structured and residential learning activities held in outdoor settings have demonstrated a higher level of cognitive environmental awareness.¹⁹ Such awareness will carry into and be evidenced/practiced in adulthood and ultimately passed onto the next generation.

The adolescent is also going through a period of defining self-identity. For many, their social world is cosmetically-driven through magazines, social media, movies, music, and peer-pressure. For others it is the influence of technology, video games, and urban industrialization. Nature can provide a radically different model of living that can help define an identity and sense of self in a more mindful and relaxed way that is free of structures, pressures, and expectations adolescents would normally be exposed to.



Research has found that adolescents tend to reflect metaphorically about natural features, animals, and landscapes to describe their moods, struggles, or need to establish a sense of identity.²⁰ Connectivity with nature can provide its own sense of stability and structure outside of the expectations and pressures associated with this challenging developmental period. A healthy influence of outdoor and nature exposure can provide a compensating balance for the adolescent.

ACTIVITY: GROWING UP WITH NATURE

"For human beings, habitat and environment are the literal space of the ground of thought ... The child is a 'traveler' mapping out the first spatially ordered reality of his life. The end of childhood is the end of that simple identity."

—Paul Shepard²¹

List your favorite indoor activities growing up	List your favorite outdoor activities growing up

Now list favorite indoor activities in your life right now	Now list favorite outdoor activities in your life right now

Have your outdoor activities outnumbered your indoor activities?

Has there been a noticeable change from the number of outdoor activities as a child versus now?

Adults Connecting with Nature: Time Constraints

Quite possibly one of the greatest impediments to adult interaction with nature or outdoor activities is the lack of available time. Or, more accurately, the perception of lack of available time or determination that connecting with nature should be a scripted, organized event.

The statistics of the American lifestyle support the notion that we are very busy and finding time to engage in outdoor activities is at a premium. Eighty-six percent (86%) of American males and 67% of American females work greater than a 40-hour work week.²² Nearly one-third of those worked on weekends.²³ Forty percent of Americans report getting less than the recommended amount of sleep every day, averaging 6.8 hours when experts recommend seven to nine hours of sleep.²⁴ The U.S. Census Bureau reported that in 2010 of 45 selected leisure activities that adults participate in two or more times a week, only 13% of those activities were actually outdoor activities. The primary leisure activities were indoor activities that include socializing, watching television, and engaging in computer-assisted activities. This same report disclosed that from 2005 to 2010 there was a 15% reduction in the number of household lawn and garden activities engaged in by the American household.²⁵ To understand the comparison of activity level of adults to children and adolescents, The Outdoor Foundation reported in 2012 that nearly 50% of all American (age 6 and older) participated in outdoor recreational activities.²⁶ Drawing a loose correlation, this implies that there is a hypothetical 37% reduction in outdoor activity as we enter adulthood.



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Because adults have the busiest of schedules and the greatest level of personal, professional, and family responsibilities, it would stand to reason that the integration of an outdoor or natural experience would be one that takes this particular lifestyle into consideration. As mentioned previously in this chapter, keeping the experience with nature simple and manageable is an easy tool to integrate into a busy lifestyle.



To begin with, one of the basic reactions most people have when they engage with nature is to smell the environment and take it all in. This often results in a nice, full, deep belly breath. These big, refreshing, and rejuvenating full breaths pull air deep into the lungs and invoke the parasympathetic nervous system response. Blood is being fully oxygenated, the mind is clearing itself, the digestive system is mediating itself, and the body is working toward bringing itself into a homeostatic state. Homeostasis is the internal chemical stability, temperature regulation and pH balance as it responds to external stimuli.²⁷

Simple outdoor chores, be it cleaning up an outdoor living space, mowing the lawn, landscape beautification, or watering flowers, require focus and full attention. This is mindful engagement. The mind is drawn away from any other task or thought and is focused on the present moment. Simple outdoor chores are, in effect, ongoing repetitive maintenance activities that the body finds relaxing and that relieve muscle tension (presumably due to muscle memory on otherwise consistent daily actions).²⁸

Participating in a home-based horticultural activity is neither time-consuming nor expensive. Introducing a plant or seedling into a new environment is a truly mindful activity requiring great attention to detail and connection with the natural environment.

Gardening and grooming is nurturing new growth that could metaphorically serve as personal new growth. Activities such as these introduce us to brand-new scents, non-man-made textures, and the integration of the earth. We escape indoor contaminants and the familiarity of our everyday indoor environment. We escape the “autopilot” that we function within on a daily basis. When integrating ourselves with the earth, we have to be aware of brand-new details and sometimes brand-new environments. Not unlike going on a hike, every foothold is a new experience, requiring us to pay attention to small details and intricacies of a new environment. This redirected focus manages stress and anxiety by taking our minds away from other stressors.

As many adults lack sufficient sleep, bringing a natural environment into the sleep pattern may help produce a more restful night’s sleep. Headaches, low oxygen saturation of the blood and mucous membrane, nasal and eye dryness and irritation are associated with poor room air ventilation, specifically, contaminated indoor air space.²⁹

Whenever possible, opening a window where one sleeps can improve the air quality and be conducive to a more restful and productive night’s sleep, as labored breathing is a major contributor to sleep apnea and other sleep disorders.³⁰ Approximately 18 million adults suffer from airway-related sleep apnea/sleep disorders according to the American Sleep Apnea Association. It makes sense to give our bodies fresh air as we sleep.

How much time, per week, would this activity involve?

Older Adults and the Nature Connection

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Older adults can face unique challenges, specifically mobility and accessibility, when it comes to engaging with nature. For those in long-term care facilities research has confirmed that time spent outdoors can improve their sleep patterns and ability to cope with pain as well as assist in recovery.^{32,33} Outdoor areas of many facilities have been underutilized by the residents, and one of the primary reasons has been the landscape features, specifically, lack of seated areas comingled with trees and paved walkways to navigate through green areas. Residents reported an overwhelming desire to be outdoors versus indoors and cited the benefit as their “personal health.”³⁴

For those with limited mobility, one option to going outside to experience nature would be to bring nature *inside*. Bringing nature into a living space can provide the home-bound adult similar emotional and cognitive benefits as being outside. One easy transition would be the introduction of natural light and fresh air. Sunlight through a pane of glass and fresh air through an open window can elicit not only obvious health benefits but also help recall and recognition memories.³⁵ Such memories are comforting to elderly adults and may enhance transient cognitive function.

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The introduction of house plants and providing care and nurturing of these plants has been shown to provide therapeutic and proactive care for patients with dementia. Contributing not only to maintenance therapy, but also improving quality of life.³⁶

An artist’s rendering of nature, be it a photograph, painting or picture, can stimulate cognitive processing. Placement of depictions of nature throughout one’s living space can have soothing effects. Adults are enamored with the beauty and detail replicated through media, and although a media rendering cannot capture the smell of a tree or the way the leaves move in the wind, our own imagination can mindfully fill in those details.

In closing, here are some fast facts about how simple engagement with nature can have health benefits:

- Spending just 20 minutes a in a vegetation-rich environment improves vitality.³⁷
- Living within one-half of a mile of a rich green space or wooded area decreases depression.³⁸
- Exposure to plants and parks boosts immunity.³⁹
- Spending 30 minutes a day in nature for 30 days can increase happiness, energy levels and improve sleep patterns.⁴⁰
- Communing with nature inspires creativity.⁴¹
- Mindful engagement with nature's sights and sounds can improve memory and cognitive function.⁴²

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