

# Nature & Brain Development

## ➤ How does time spent in nature promote healthy brain development?

### I RICH SENSORY ENGAGEMENT – Why it matters, how nature helps

- Studies prove that children who are allowed to freely explore sensory rich environments tend to be more alert, curious, happy, enthusiastic, self-directed, and have more complexly structured brains than children who are not given these opportunities.
- Neuroscience has discovered that it is not the size of the brain that determines intelligence, but the complexity of its structures.
- Natural environments → Hands-on exploration of new sights, sounds, smells, textures, etc.

### II NEW INFORMATION & NEW CHALLENGES -- What kids are learning

- **Facts about natural surroundings** – what is a forest, names of animals and plants that live there, what they look like, sound like, etc.
- **First order information** (*example: holding various pine cones, seeing & touching their seeds and structures, will make lessons on conifers, later in life, more meaningful*)
- **Kinetic learning** (*example: climbing a variety of trees, versus a play structure with standardized dimensions*) In addition to our 5 senses, we learn from how our body moves. Jumping, stretching, climbing, dangling, dropping. Kids are gathering information about distance, strength, etc. Even about how the world is made up. And they are learning how to problem solve.

### III GETTING KIDS INTERESTED IN NATURE ALSO...

- **Nurtures a connection to the Earth** – more grounded in the real living world.
  - balances TV watching, time spent with video games, etc.
  - sense of being part of something larger (other creatures, chains of impact)
  - awareness of the physical world – the reality outside their thoughts and feelings (and distinct/separate from human ideas of the world)
- **Promotes compassionate response toward animals and other living things** – a child who experiences a sense of awe and wonder examining snails and flowers is typically less likely to behave destructively toward them.
- **Encourages getting outdoors and get involved in active pursuits** – hiking and etc.
- **Begins a basic scientific understanding of the world we live in** – food webs, life cycles, rocks and fossils, weather, etc.
- **Promotes environmental responsibility** – we won't take appropriate actions to steward the Earth when we don't know, don't care, don't value.

**Always remember** that educational software and nature shows are *not* the best way for kids to learn about nature. According to findings reported by the NAEYC (National Association for the Education of Young Children), **90% of what children experience should be through direct experience and play!**

## ➤ How can we help kids enjoy time spent in Nature?

- **Provide plentiful and relaxed opportunities** – learning about nature is something children do through their whole bodies when they have sufficient time to do so.
- **Let the child have opportunities to guide the learning**, to gravitate toward the things that interest them. Each child will be different.
- **Help them notice features or activities of animals and plants.** “Hey, look at those lady bugs...”
- **Ask leading questions** “What are they doing?” “I wonder why they’re all clustered together like that?”
- **Validate child’s responses:** “Hmm... interesting idea...” “Maybe they DO love each other and enjoy snuggling together.”
- **Disguise facts in the form of a question:** “Do you think they might keep each other warm that way?”
- **Supply interesting tidbits,** “I’ve heard that lady bugs sleep/hibernate through the winter.”
- **Stay relaxed and ready to move on** to the next thing -- like your child’s attention! Don’t turn your child off by lecturing or forcing attention.
- **Don’t worry if your child isn’t interested in something important.** Maybe they will be next time. Or next year.
- **Let your own enthusiasm shine.** Let your kids observe your own wonder, curiosity, respect, and interest. Kids learn from the values and behaviors we model.
- **Above all, learning needs to be personally relevant** for children to *want* to engage. So see if you can highlight those things your own child may connect with. For example, a child who is into sports and active play may be more interested in talking about the ways that animals move. The child interested in cuddling and dressing dolls may be more impressed with the ways that mother animals care for and love their babies.
- Finally, while we adults appreciate professionally guided fact-filled whirl-wind tours (that address our audio-visual processing centers – and our tendency to carve the world up into abstract concepts) this does not encourage **the self-directed exploration that kids crave.** Always balance adult directed learning with kid-directed, hands-on activities. And allow plenty of time for play.

**Don’t forget to record your adventures!** Take pictures. Collect samples where appropriate (i.e. not from nature preserves). Write brief journal entries together. Collect maps & brochures (“artifacts”). Use these to **talk together** about places you’ve been and things you’ve seen. Make plans together about future adventures. All of this furthers **brain development** in a variety of important ways.



# Ways to get out in nature!

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- ❖ Gardening -- planting, digging, raking, and pulling weeds.
- ❖ Plant a sensory garden, with things to feel and smell.
- ❖ Hikes and nature walks
- ❖ Camping trips
- ❖ Local parks
- ❖ Visits to state/national parks and nature preserves
- ❖ Trips to the beach.
- ❖ Explore garden stores. Look at and smell the different flowers.
- ❖ Visit zoos and petting zoos
- ❖ Feed the birds
- ❖ Lie on the grass and watch the leaves falling.
- ❖ Watch clouds.
- ❖ Stop to smell the flowers
- ❖ Go outside and look at the stars and moon
- ❖ Enjoy Spring sunshine and Summer breezes.
- ❖ Collect natural objects such as rocks, sticks, sand, leaves, flowers. Bring them home in a baggy or pail to look at, display, discuss.
- ❖ Try bird watching
- ❖ Observe lawn sprinklers, and get close enough to feel the drops.
- ❖ Visit a tide pool.
- ❖ Set up a small aquarium.
- ❖ Capture a insect, frog, or lizard from your backyard and set up a mini habitat in a container to observe for a few days.
- ❖ Fly a kite.
- ❖ Have a picnic
- ❖ Water the yard together.
- ❖ Have a winter snow expedition.
- ❖ Turn the little walks you take getting where you have to go into opportunities to notice and explore.
- ❖ Keep your eyes open! You never know what you might find in a patch of weeds, a tree in a parking lots, etc.