Starting Out Wild at the I-20 Wildlife Preserve

Thriving in Nature, a Pre-K Class

I-20 Wildlife Preserve and Jenna Welch Nature Study Center

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The I-20 Wildlife Preserve and Jenna Welch Nature Study Center, Inc.

- **Mission:**
  - Our mission is “to ensure conservation of and provide access to Midland’s wildlife preserve for the use and enjoyment of present and future generations.”

- **Purpose:**
  - Our purpose is to make accessible to the public 87 acres for conservation of the wetland, eco-tourism and recreation, and educational opportunities for the citizens and visitors of Midland.
  - The I-20 Wildlife Preserve handles the day-to-day operations of the preserve.

- **Myself:**
  - #i20wpsow @i.20wildlifepreserve
  - background and passion for outdoor education.
Playas quiz : True or False

- Playas are only found in Texas.  
  T or F

- Playas recharge the Ogallala Aquifer.  
  T or F

- Playas contain water all year.  
  T or F

- Playas contribute economically to the High Plains region.  
  T or F

- Playas are very low centers of biodiversity.  
  T or F

- Our playa is the 12th largest playa in Midland Co.  
  T or F
Our children hold the future in their hands and hearts. Let's teach them a Healthier, Happier, Smarter future.

Do you know what a playa lake is?

Do you think the next generation has the knowledge needed to save our fresh water?

“In the end, we will conserve only what we love, we will love only what we understand, we will understand only what we teach.” Baba Dioum
• Playas are only found in Texas. Playas are found over the Ogallala Aquifer in Texas, New Mexico, Colorado, Kansas, Nebraska and Oklahoma. We are at the southernmost point in Midland.

• Playas recharge the Ogallala Aquifer. Playas are a major source of recharge to aquifer. This recharge is enough to support grazing operations and municipalities but not irrigation.

• Rangeland playas are ephemeral. Urban playas because of their compromised functioning retain water for longer periods.

• Playas contribute economically to the High Plains region through supporting ranching, hunting, ecotourism, recreation and aquifer recharge.

• Playas are centers of high biodiversity by providing local resources and are critical to stopovers for migrating wildfowl.

• Our 86-acre urban playa is the 12th largest playa in Midland County. It has been cut off at the south and north ends by roads and greatly altered by human activities over time.
But our Playa is an urban playa!
Why play and learn outdoors?

When did America decide preschool should be in a classroom?

Foundational skills in the preschool years include developing large and fine motor skills, developing self-regulation, learning to follow directions, and learning how to think through problems. “Teaching a child to put on his own gear encompasses all of these.”

“Look deeper into Nature and you will understand everything better.”

-Dr. Albert Einstein

50% of adults think “kids not spending enough time outdoors in nature is an extremely or very serious problem” another 30% feel like it is a “somewhat serious problem”

published by NWF
Could outdoor early education be an answer to a gamut of child-rearing challenges?

In addition to academics, nature can help overall lifetime health choices. There are way too many life altering diseases affecting younger and younger children. - heart disease, -depression, -obesity, -vision- attention - diabetes, -among others still being researched. Let them connect while they are young and before school becomes pressure and challenging. Connect now. let’s do what is right. Let me know how I can help.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Today’s adults’ childhoods</th>
<th>Today’s children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close enough to walk or bike to school</td>
<td>75%</td>
<td>37%</td>
</tr>
<tr>
<td>Neighbor kids to play with</td>
<td>Average: 14</td>
<td>Avg: 6</td>
</tr>
<tr>
<td>Play outside every day</td>
<td>71%</td>
<td>21%</td>
</tr>
<tr>
<td>Play outdoors &gt; indoors</td>
<td>73%</td>
<td>13%</td>
</tr>
<tr>
<td>Climb trees</td>
<td>64%</td>
<td>20%</td>
</tr>
<tr>
<td>Had a patch of nature</td>
<td>75%</td>
<td>64%</td>
</tr>
<tr>
<td>Went to patch each week</td>
<td>50%</td>
<td>&lt;25%</td>
</tr>
<tr>
<td>Visit natural setting every day in summer</td>
<td>59% of grandparents, 42% of parents</td>
<td>26%</td>
</tr>
<tr>
<td>Fave place to play is indoors</td>
<td>16%</td>
<td>41%</td>
</tr>
</tbody>
</table>
Why Don’t We Spend Time Outside?

Common Barriers

- “No access to nature”
- Safety
- No free time
- Weather / discomfort
- Messy
- Kids not interested
- No one to play with

Definition

Outdoor Time = Time Spent Outdoors!

Greatest benefits come from extended free play time in natural setting

But… you get some of the benefits from any time spent outdoors

Studies show that kids who play and learn outside:

1. Are healthier physically and mentally.
2. Do better in school.
3. Have higher self-esteem.
5. Feel more capable and confident.
6. Are good problem-solvers.
7. Are more cooperative with others.
8. Are more creative.
9. Feel connected to nature.
10. Are tomorrow’s conservation leaders.

Find places to play, explore, and connect with nature near you.

Healthier, Happier, Smarter.

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www.texaschildreninnature.org
www.naturerockstexas.org
www.tpwd.texas.gov
Physical Benefits of Outdoor Time

- More ways of moving / using their body
- Can apply skills learned elsewhere
- More variability
- Can customize to ability, grows with child

Health Benefits of Outdoor Time

- More physically active / lower obesity
- Lower stress (less circulatory disease)
- Less asthma and allergies
- Essential Vitamin D: protects from bone problems and heart disease
- Better vision
Mood Benefits of Outdoor Time

- Release big, loud energy
- Soothing – parasympathetic NS
- Improved concentration

Social Benefits of Outdoor Time

- May be easier to make friends. Multi-age
- Child-led. Parents less likely to intervene
- Negotiation and Conflict resolution
Intellectual Benefits of Outdoor Time

- Exploring: Always new things to discover
- Imagination & symbolic play
- Building & destroying
- Self-direction, control, and mastery

Early Childhood Health Outdoors (ECHO)

ECHO is based on a decade of research on the Preventing Obesity by Design model. The results show that improving the design of outdoor spaces through affordable interventions and training early childhood educators, young children, and care providers produces substantial benefits including:

- Children are more physically active in the outdoors and engage in social interactions more often.
- Children and providers enjoy naturalized outdoor spaces and spend more time outside, supporting healthy behaviors.
- Hands-on gardening encourages the consumption of fresh fruit and vegetables.
- And parents are more likely to linger at care centers, improving community experience.

ECHO is a partnership with the National Wildlife Federation.

https://naturalearning.org/echo/
Ten Reasons Why Children and Adults Need Vitamin N

FROM RICHARD LOVLY ON JUNE 24, 2015 — 62 COMMENTS

I recall my father’s dark-tanned neck, creased with lines of dust, as he tilled our garden. I ran ahead of him, pulling weeds and home and toys from his path.” — The Nature Principle

In "Lost Child in the Woods," I focused on why children need nature. In my new book, "The Nature Principle," I tell how the whole family — and whole communities — can become healthier and smarter through more contact with the natural world. I do hope you’ll read the book to find out how; but for starters, here are 10 reasons children and adults need nature:

1. The more high-tech our lives become, the more nature we need. We have a human right to a meaningful connection to nature, and we have the responsibilities that come with that right. Few today would question the notion that every person, especially every young person, has a right to access the Internet. We should also have access to the natural world, because that connection is part of our humanity.

2. Humans are hard-wired to love and need exposure to the natural world. Researchers have found that regardless of culture people gravitate to images of nature, especially the savannah. Our inherent affiliation for nature may explain why we prefer to live in houses with particular views of the natural world.

3. We suffer when we withdraw from nature. Australian professor Glenn Albrecht, director of the Institute of Sustainability and Technology Policy at Murdoch University, has coined the term solastalgia. He combined the Latin word solacium (comfort — as in solace) and the Greek root — al- (pain) to form solastalgia, which he defines as "the pain experienced when there is recognition that the place where one resides and that one loves is under immediate assault.”

4. Nature brings our senses alive. Scientists recently found that humans have the ability to taste by scent alone. Some humans rival bats in echolocation or binaural abilities. Military studies show that some soldiers in war zones see mannequins others miss, and can spot hidden bombs; by and large these tend to be rural or inner city soldiers, who grow up more conscious of their surroundings.

5. Individuals and businesses can become nature smart. Spending more time outdoors nurtures our "nature neurons" and our natural creativity. For example, at the University of Michigan, researchers demonstrated that, after just an hour interacting with nature, memory performance and attention spans improved by 20 percent. In workspaces designed with nature in mind, employees are more productive and take less sick time.

6. Nature heals. Pennsylvania researchers found that patients in rooms with tree views had shorter hospitalizations, less need for pain medications, and fewer negative comments in the nurses’ notes, compared to patients with views of brick.

7. Nature can reduce depression and improve psychological well-being. Researchers in Sweden have found that joggers who exercise in a natural green setting feel more restored and less anxious, angry, or depressed than people who burn the same amount of calories jogging in a built urban setting.

8. Nature builds community bonds. Levels of neurochemicals and hormones associated with social bonding are elevated during animal-human interactions. Researchers at the University of Rochester report that exposure to the natural environment leads people to nurture close relationships with fellow human beings, value community, and to be more generous with money.

9. Nature bonds families and friends. New ways are emerging to make that bond, such as family nature clubs, through which multiple families go links, gardening or engage in other outdoor activities together. In the U.K., families are forming "green gyms," to bring people of all ages together to do green exercise.

10. The future is at stake. The natural world’s benefits to our cognition and health will be irrelevant if we continue to destroy the nature around us, but that destruction is assured without a human reconnection to nature.
Children’s transition to kindergarten and their skills at school entry forecast long-term school success.


Research suggests that children’s school outcomes, especially achievement, remain remarkably stable after the first years of school.

What skill have you noticed your students need the most improvement?

What is your determining factor for early school success?

Further, there is evidence that interventions are more likely to be successful in the early school years. As a result, researchers, policy-makers, educators and parents grapple with what it means for children to be “ready” for school. A national survey of kindergarten teachers showed that teachers identified “ready” children as those who are physically healthy, well-rested and well-fed; able to communicate needs, wants and thoughts verbally; and curious and enthusiastic in approaching new activities. Surprisingly, teachers did not attach particular importance to specific numeracy and literacy skills. Another study found that teachers place greater emphasis on self-regulatory and interpersonal skills rather than academic competence. Parents, in contrast, typically define readiness in terms of academic abilities, such as the ability to count, name objects, or identify letters.

Readiness as Defined by Cognition, Self-regulation, Social Competence, and Chronological Age
get into groups and discuss:

- name
- campus
- upcoming school year assignment
- hopes of takeaway of this session.
- Your experience with Nature
- An in nature experience you are glad you had.
- How can you incorporate more outdoor time into your class schedule.

**Outdoor games.**

Each One, Teach One
Nature Bracelet
A program that introduces toddlers to nature

An educational program where toddlers, ages 18mo - 3 yrs, may learn to love and experience nature in the first years of life. Parents (or caregivers) accompany their children during each class as the program explores and introduces the nature of West Texas here is Midland.

Classes are highlighted with music, movement, and stories to create a reassuring structure for children and parents. The classes are active with informative nature content reinforced throughout.

http://www.i20wp.org/sow

Healthier, Happier, Smarter

Spending time in nature has many positive benefits. Children who have opportunities to play and learn in nature are more likely to:

- Handle challenges and problems more capably.
- Act responsibly toward the earth and each other.
- Be more physically active and aware of nutrition, and less likely to be obese.
- Have a greater appreciation of the arts, music, history, and literature.
- Choose science or a related field for careers.
- Become better-informed and environmentally-aware adults.
Can learning outside of classroom academically prepare preschool children for Kindergarten?

YES!

Outdoor schools often perform better on standardized tests.

Where the wild things grow...

Nature is the teacher. We are mentors and facilitators, helping young children connect with their bodies, the elements of nature, and each other within a safe explorative space at the I-20 Wildlife Preserve or a park near your school. Children belong outside, and the tools of imagination are what build a happy childhood and a strong family bond.
Outcomes Living In a Tree

Targets
- Trees have roots, trunk, bark, leaves
- Many different animals love in trees

Extensions
- Roots slurp up water and food and anchor the tree to the ground
- Water and food go up the trunk
- Leaves make energy from sun and air
- Energy goes down the trunk
- The trunk supports the tree
- The bark protects the trunk

Thinking about outcomes: Living In a Tree

<table>
<thead>
<tr>
<th>Vocabulary</th>
<th>Concepts</th>
<th>Skills</th>
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</thead>
<tbody>
<tr>
<td>Trunk, roots, bark, leaves</td>
<td>Many animals live in trees&lt;br&gt;Trunk supports the tree&lt;br&gt;Roots slurp up water and food&lt;br&gt;Leaves make energy from sun and air&lt;br&gt;Bark protects the tree</td>
<td>Doing the sounds and actions of the tree parts&lt;br&gt;Using the senses to explore and observe bark, tree sections and leaves</td>
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</table>

Music and Story
Do the actions with *The Sun and the Rain* song<br>Imitate actions of the leaves fingerplay
Attend to the *Busy Tree* book

Art/Snack
Dip pine needles in paint and paint on paper.<br>Attach bark and leaves to tape.<br>Choose and sample nuts and fruit.

Walk/Explore
Observe trees and parts of trees.
link: El Paso, region 19, praises GOW

~The teachers have many positive views on Growing Up WILD: the curriculum is supportive of children’s learning, easy to follow, and enjoyable to teach.
Two years ago San Antonio Natural Area Education Coordinator Peggy Spring had a dream of starting an educational program where toddlers love and experience nature in the first years of life. From this grew the Starting Out Wild (SOW) concept.

The basic format has four segments, including: learning, hiking, craft project and snack. The lessons are highlighted with music and movement and a story on both ends to create a reassuring structure for children and parents. All components are active with substantial nature content reinforced throughout.

The SOW program is based on these principles:

- The love of nature needs to accompany growing up from the earliest age.
- Teaching must engage both children and parents.
- Learning will spiral, moving from tolerating and participating, to acquiring nature concepts and vocabulary over the three year span.
- Activities should facilitate children’s experiences through movement and using all their senses.
- Familiar analogs of unfamiliar concepts and vocabulary are provided.
- Providing an emotionally comfortable environment is the starting point.

Each session begins with a gathering of 15 toddlers and their parents sitting on a grass rug near the entrance of the I-20 Wildlife Preserve Pavilion. Finger-play activities, songs, learning through familiar analogs and a short story are included. A guided learning walk, craft and nutritional snack follows. Class ends with a reprise of earlier song and stories. Parents receive handouts reinforcing what has been taught with at home nature connection ideas for the whole family.
Questionsss?
“Playa forage is so much better than anything else on the landscape that migrating birds will feed out the playas before they will forage in the fields. And it’s not just ducks. We’re talking about shorebirds, upland species, wading birds—the gamut.”

-David Haukos, PhD, TTU
Kari Warden

email: kari@i20wp.org

I-20 Wildlife Preserve and Jenna Welch Nature Study Center.

www.i20wp.org
Vaya to the Playa
K-2

• Push in program
• Built around an integrating theme which develops science observational skills
• Student journal, Big Book and playa jar are left in class
• K: Patterns
• First: Cycles
• Second: Relationships
• Extension activities for all levels
An Opportunity to Educate

Undergraduate and Graduate Students
- The Jenna Welch Nature Study Center is developing partnerships with Midland College, Sul Ross University, UT Permian Basin, and Texas Tech University, and University of Texas
- Students are utilizing the playa as a “living laboratory”.

Participant Outcomes
- An appreciation for how science works
- A better understanding of the scientific method
- How to ask and answer a question
Sources

• Starting Out Wild at the I-20 Wildlife Preserve. http://www.i20wp.org/sow
• Starting Out Wild at the Phil Hardberger Center. https://www.philhardbergerpark.org/events/kid-friendly-events/starting-out-wild