Engaging Young Children with Developmental Disabilities Through Nature-Based Teaching

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Objectives

By the end of this presentation, you will be able to

– Describe nature-based teaching and its developmental benefits
– Discuss potential challenges and barriers when incorporating nature-based experiences and outdoor learning
– Identify research-based strategies for overcoming challenges guided by the DEC Recommended Practices
A little about me...

Doctoral Candidate - Devoted Wife, Mother, Daughter, Sister - Dancing Queen
Story Time!

- Name of a child
- Age (early childhood)
- Gender Pronoun
- Developmental Disability
- Challenge (due to disability)
- Challenging behavior (may or may not be due to disability)
Once upon a time, there was an early childhood teacher named Ms. Liz. She had 10 students in her inclusive early childhood classroom, including (age) (name of child) who was diagnosed with (developmental disability). (Child) loved chasing his/her/their friends and playing outside. (Child’s) mom said he/she/they liked to watch insects and knew the names of his/her/their favorite bugs.

After attending a workshop on nature-based teaching strategies, Ms. Liz wanted to take her children outside more each week, but she was worried. (Child) struggled with (challenge). He/she/they also (challenging behaviors). How can Ms. Liz incorporate more nature experiences for her students while supporting (child)?
What are some specific concerns Ms. Liz may have about introducing nature-based learning into her daily routine?

Write them down in your notes. (We will revisit these later.)
Understanding Nature-based Teaching and Its Developmental Benefits
Benefits of Nature-Based Early Childhood Education

https://www.youtube.com/watch?v=Egr5O_BvG-Y
- Increased creativity in play
  (Cloward Drown & Christensen, 2014)
- Increased problem-solving skills
  (Natural Learning Initiative, 2012)
- Increased academic knowledge (e.g., identifying weekdays in connection to days going outside)
  (O’Brien & Murray, 2007)
- Improved academic performance*
  (Fabor Taylor & Kuo, 2009; Natural Learning Initiative, 2012)
- Increased attention*
  (Fabor Taylor & Kuo, 2011; Martessen, et al., 2009)
- Improved visible affect and energy*  
  (Li, et al., 2019)

- Improved emotional regulation  
  (Chawla, 2015; Gill, 2014)

- Increased opportunities to express emotions through movement (e.g., stomping)  
  (O’Brien & Murray, 2007)

- Reduced stress and improved mental health  
  (Chawla, 2015; Gill, 2014; Natural Learning Initiative, 2012)

- Reduced display of ADHD symptoms*  
  (Fabor Taylor & Kuo, 2011)
– Improved social relationships with others  
  (Natural Learning Initiative, 2012)

– Improved vocabulary with peers  
  (O’Brien & Murray, 2007)

– Increased interactions, conversations, and discussions with peers  
  (O’Brien & Murray, 2007)

– Increased instances of offering help  
  (O’Brien & Murray, 2007)

– Increased quality of speech and language*  
  (Richardson & Murray, 2017)
- Increased outdoor play and activity*  
  (Christiansen, et al., 2015; Li, et al., 2019)

- Improved nutrition  
  (Natural Learning Initiative, 2012)

- Improved balance and gained confidence in managing different terrains and climbing trees  
  (O’Brien & Murray, 2007)

- Increased use of authentic materials (e.g., using tools and tying knots)  
  (O’Brien & Murray, 2007)

- Increased engagement with natural materials*  
  (Li, et al., 2019)
Instruction

–INS5. Practitioners embed instruction within and across routines, activities, and environments to provide contextually relevant learning opportunities.

Environment

–E1: Practitioners provide services and supports in natural and inclusive environments during daily routines and activities to promote the child’s access to and participation in learning experiences.
Do you or have you taken your children outside? Engaged them with natural materials? How did they respond?

Share aloud in group.
Challenges and Barriers with Nature-Based Teaching
Fears and Concerns
Traditional Program Early Childhood Teachers

- Loss of control
- Loss of expert status
- Anxiety
- Shift in teacher/student relationship
- Safety

- School regulations
- Access to natural outdoor settings
- Lack of time
- Weather (winter)

(Ernst, 2013; Legget & Newman, 2017)
Fears and Concerns
Early Childhood Special Education Teachers

- Challenging behaviors
- Sensory issues
- Unclear barriers
- Safety
- Fear of unknown
- Dealing with changes in environment

(DEC Conference, 2018)
What other fears might an early childhood special education teacher have? What challenges might the children they serve encounter?

*Share in group.*
Strategies for Overcoming Challenges Based on the DEC Recommended Practices
Loss of Control/Expert Status
Anxiety/Fear of Unknown

“access professional development and technical assistance systems to build knowledge and skills” (p. 4)
INS5.
Practitioners embed instruction within and across routines, activities, and environments to provide contextually relevant learning opportunities.

INS8.
Practitioners use peer-mediated intervention to teach skills and to promote child engagement and learning.
Safety and School Regulations

E2. Practitioners consider Universal Design for Learning principles to create accessible environments.

E3. Practitioners work with the family and other adults to modify and adapt the physical, social, and temporal environments to promote each child’s access to and participation in learning experiences.
Access to Natural Outdoor Settings

E6.
Practitioners create environments that provide opportunities for movement and regular physical activity to maintain or improve fitness, wellness, and development across domains.
Time and Weather

A9.
Practitioners implement systematic ongoing assessment to identify learning targets, plan activities, and monitor the child’s progress to revise instruction as needed.
Changes in the Environment

TR2.

Practitioners use a variety of planned and timely strategies with the child and family before, during, and after the transition to support successful adjustment and positive outcomes for both the child and family.
Challenging Behaviors, Sensory Issues, Unclear Barriers

A3. Practitioners use assessment materials and strategies that are appropriate for the child’s age and level of development and accommodate the child’s sensory, physical, communication, cultural, linguistic, social, and emotional characteristics.
A8. Practitioners use clinical reasoning in addition to assessment results to identify the child’s current levels of functioning and to determine the child’s eligibility and plan for instruction.
What strategies can I use to support young children with developmental disabilities during nature-based activities?

*Share in group.*
Resources and Tools for Self-Assessment and Intervention Implementation
**Informational**

*Learning is in Bloom: Cultivating Outdoor Explorations* by Ruth Wilson

*Learning with Nature* by Claire Warden

*Nature and Young Children* by Ruth Wilson

**Activities**

*Early Childhood Activities for a Greener Earth* by Patty Born Selly

*Nature-Based Learning for Young Children: Anytime, Anywhere, on Any Budget* by Julie Powers and Sheila Williams Ridge

*Preschool Beyond Walls: Blending Early Childhood Education and Nature-Based Learning* by Rachel A. Larimore
Journals

International Journal of Early Childhood Environmental Education (IJCEEE)

Journal of Environmental Education (JEE)

Journal of Outdoor and Environmental Education (JOEE)

Publications

Early Childhood Environmental Education Programs: Guidelines for Excellence by NAAEE

The Great Outdoors: Advocating for Natural Spaces for Young Children, Revised Edition by Deborah Schein, Mary Rivkin**

Experiencing Nature with Young Children: Awakening Delight, Curiosity, and a Sense of Stewardship by Alice Sterling Honig**

**Published by NAEYC
Curricula

Growing Up WILD

Project Learning Tree

Getting Little Feet Wet (from Project Wet)

Websites

www.naturalstart.org

www.childrenandnature.org/

www.kindernature.org
Early Childhood Environmental Education Rating Scale

A formative evaluation tool to help programs improve nature education for young children

Yash Bhagwanji, Ph.D.

https://naaee.org/eepro/resources/early-childhood-environmental-education-rating-scale-eceers
### Strategies for Embedding Nature-Based Experiences to Support Developmental Gains in Young Children with Disabilities

- Take a 20-minute walk in a green area
- Use natural loose parts in academic tasks
- Use natural loose parts in play
- Play outdoors for a minimum of 30 minutes a day for every three hours in program
- Designate outdoor space as a play and learning environment
- Provide access to natural features in the outdoor environment (e.g., trees, mounds, variable terrain)

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**Early Childhood Environmental Education Rating Scale (ECEERS) Self-Assessment**
Contact Information

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“When children come into contact with nature, they reveal their strength.”

Maria Montessori
Thank you!