Growing a Nature Preschool

Rebecca Wolf
Director of Education & Garden Operations
Queens Botanical Garden

Eileen Prendergast
Director, Education
Chicago Botanical Garden

Cara Sciarce
Manager of Studio Programs
Newfields
Newfields
Newfields by the Numbers

152 Acres of Land

300 Full Time Staff

50,000 Artworks

10,000+ Plant Species

250,000 Spring Bulbs

135 Years Old
Finding your way at Newfields
St. Mary’s Child Center at Newfields Preschool

Enrollment: 12 students
Student to Teacher ratio: 6:1
Student ages: 3, 4, & 5
School Day: 9-11:30am
School Year: August-June
Annual Tuition: $5,170
Full time/Part Time options
Tuition/Scholarship
The (Indoor) Classroom
Growing a Nature Preschool at Newfields
Early Childhood Programs at Newfields

Toddler Art Group

wee Wonders

Preschool Summer Camp
“Children need the freedom to appreciate the infinite resources of their hands, their eyes and their ears, the resources of forms, materials, sounds and colours.”

Loris Malaguzzi
The Business Plan
An Average Day at Newfields Preschool

9:00 – 9:15  Drop Off
9:15 – 9:45  Exploration and Play in Classroom
9:45 – 10:15 Gallery Visits and Special Guests
10:15 – 10:30 Morning Meeting
10:30 – 11:00 Outdoor Activities and Project Work
11:00 – 11:30 Clean Up and Snack
11:30 – 11:45 Pick Up
Challenges

- Storing Muddy Boots
- Occupying a Museum Space
- Refining Processes
- Recognizing Limitations
Successes

- Teaching Team
- Integrating Art + Nature
- Learning Laboratory
- Returning students
Potato Harvest Project
Potato Harvest Recipes

FAMILY POTATO “PROJECT”

In honor of our splendid potato harvest this week, we decided to send home a fun project for the children to do with their families. Today, each child will be coming home with a potato to cook in some way and taste at home. We ask that each family write down a recipe or describe in some way how they cooked the potato, and then each child can draw a picture of the finished potato dish and write (with family help) down how the potato tasted, smelled, etc. after tasting.

Enjoy!
Mary & Elizabeth

RECIPE: POTATO MUFFINS

We washed and peeled, then cut them up and put something in the stove and poured them into the pan. Then put lots more ingredients in them: butter, yucky milk, cream, shredded cheese. And put them in the muffin pan. And put them in the oven.

POTATO DISH DRAWING:

DESCRIPTION OF HOW POTATO TASTED/SMELLED:

“They smelled good. Like chocolate.”

“They tasted yummy. Like potatoes, and I liked the kind I made better than the other kind.”
Label Writing Project
Preschool Stories

Meerkats
2018

Cracking Art
Italian, founded 1993

recyclable plastic

Collaborative by nature, meerkats travel in groups known as “mobs” or “gangs.” This is essential to their survival. Each member of a mob acts as a lookout, warning others of predators. They are also able to adapt to their environment, even in the most hostile conditions.

Preschool Stories

Addie: Mine is dancing.

Ollie: Mine is spitting.

Aerith: Mine is drumming.

Addie: There at a birthday party for the meerkat. Time to blow out the candles. Here’s your cake, here’s my cake.

Ollie & Aerith: Num, num, num.

Wild animals. Please do not ride.
Growing a Nature PreSchool

By Rebecca Wolf
Assistant Director/Director of Education and Garden Operations
Queens Botanical Garden, Flushing, Queens, New York City
Mission: Queens Botanical Garden (QBG) is an urban oasis where people, plants, and cultures are celebrated through inspiring gardens, innovative educational programs, and real-world applications of environmental stewardship.
Our Programs:
School Programs

- Botanical/Science Content
- Year-round but matching school calendar
- 17 different workshops
- Mostly Mornings, matching school bus schedule
- Mostly one-time visits
Our Programs:
Children’s Garden

- Gardening and other nature based programming
- Spring, Summer and Fall sessions
- Ages 4-10
- Split into groups by age
- 8-10 kids per group with 2 counselors
- Spring: 8-week series, weekends
- Summer: Two week sessions, weekdays
- Fall: 5 classes, can do drop-in or whole series, weekend
Our Programs:

Garden Buds (newer)

- 2+3 year olds w/caregiver
- 1 hour program
- Offer both weekend and weekday
- 4 week series (tried 6-week but too long)
- Sessions sell out very quickly
- Spring, Fall and just added Summer 2018
- 5 options: 1 weekday, 2 Saturday, 2 Sunday
Our Programs:
Nature Discovery Area

• Installed to ‘test out’ a freeplay area
• All natural materials found on site
• Pilot started at large event
• Incredibly successful
• Has mostly biodegraded (installed 2015)
Rebecca’s inspiration: seeing is believing

- Nature Explorium: Middle County Public Library (Long Island, NY)
- Brooklyn Nature Days: Prospect Park, (Brooklyn, NY)

**Nature Based PreSchool Conference through Natural Start Alliance (under NAAEE)**

- Nature Preschool at Dodge Nature Center: (St Paul, MN)
- Green Play Yard, Minnesota Landscape Arboretum (Chaska, MN)

AND SO MANY MORE!!!!
Nature Play Programming- how do we do it!?
Forest Explorers Season 1: Autumn 2016

- 6 children, 2 teachers
- 2 days per week; same children both days
- 3-6 years old, must be potty trained
- 3 hours per day

Revenue: $4720
Expenses: $4865 (84% Staff time, 16% OTPS)
Net: -$145
Forest Explorers
Seasons 2 and 3: Spring and Summer 2017

• 12 children, 3 teachers + one intern
• 4 days per week; children chose 1, 2, 3 or 4 days/wk
• 2-6 years old, if not potty trained parent must stay
• 3 hour sessions
• Updated curriculum
• Sessions: March/April, May/June, July/August

Revenue: $32,225
Expenses: $29,286
Net: +$2939 ✔
Forest Explorers Seasons 4 and 5: Autumn and Winter 2017/8

- Only change in structure is 2 days/week minimum sign-up
- Expand number of weeks per session
- Sessions: September to November; January to March
- Solidify cold weather curricula and space
- Less full winter registration

Revenue: $36,103
Expenses: $31,158
Net: $4945✔
Forest Explorers: Season 6 and beyond

- Increase number of children
- Meet children first
- Structured internship program
- Pilot afternoon program:
  - Older children only (non-nappers)
  - Limited to 8 children
- Budget in office hours
- Minimize set-up/breakdown
- Continue breaking even
Issues and Concerns:

1) Initial lack of clarity about the program in communication with families

Resolved by:

- Require a ‘new family questionnaire’ (added spring 2018) completed
- Elicit and discuss previous experiences in similar settings
- Require that all new families observe a 45 minute segment of the program (added spring 2018)-- used a doodle poll for scheduling!
- Increase and expand staff training so everyone could speak confidently and clearly
- Registration link is not public; we invite people to sign up (Downside: a lot more work on our end, but worth it!)
Issues and Concerns:

2) With expanded program, need experienced staff

- Be VERY specific on job descriptions and during interview (outdoors, with kids, heavy lifting, all weather….)
- Review motivation/protocols/techniques of program throughout the season
- Pay a reasonable rate
- Offer PD and train them well! Do readings but also observations of our program and other similar programs, watch videos
- Weekly meetings and check-ins throughout
- Talk through challenging children/families. Come up with joint solutions
- Have backup so everyone can get a break
Looking to future programming

- More family engagement
- More collaboration with Horticulture, Farm and Education teams
- Scholarships
- Adding office hours
- Making the area shade/rain tolerant
- Creating an preschool/UPK program
- More PD for staff
- Looking for older (homeschool) children to join
- Adding social justice and other relevant issues to training and curricula
- Need for separate area that is not open to the public
### One day in the life of an Expanded Forest Explorers Program running 41 weeks of the year

<table>
<thead>
<tr>
<th>Time</th>
<th>Group</th>
<th># Children</th>
<th>Activity</th>
<th>Head</th>
<th>Co-Teacher</th>
<th>Assistant 1*</th>
<th>Assistant 2*</th>
<th>Total Staff</th>
<th>Support</th>
</tr>
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<tbody>
<tr>
<td>8:30-9:30</td>
<td>Set up</td>
<td>0</td>
<td>Set up</td>
<td>Teacher</td>
<td>$15</td>
<td>$18</td>
<td>$15</td>
<td>$8</td>
<td>$41</td>
</tr>
<tr>
<td>9:30-10:30</td>
<td>Group 1</td>
<td>12</td>
<td>Open Play</td>
<td>$30</td>
<td>$18</td>
<td>$15</td>
<td>$15</td>
<td>$48</td>
<td></td>
</tr>
<tr>
<td>10:30-11:30</td>
<td>Group 1</td>
<td>12</td>
<td>Meal Story Art</td>
<td>$30</td>
<td>$18</td>
<td>$15</td>
<td>$15</td>
<td>$48</td>
<td></td>
</tr>
<tr>
<td>11:30-12:30</td>
<td>Group 1</td>
<td>12</td>
<td>Open Play</td>
<td>$30</td>
<td>$18</td>
<td>$15</td>
<td>$15</td>
<td>$48</td>
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</tr>
<tr>
<td>12:30-1:30</td>
<td>Group 2</td>
<td>4</td>
<td>Lunch</td>
<td>$30</td>
<td>$18</td>
<td>$15</td>
<td>$8</td>
<td>$41</td>
<td></td>
</tr>
<tr>
<td>1:30-2:30</td>
<td>Group 2</td>
<td>4</td>
<td>Open Play</td>
<td>$30</td>
<td>$18</td>
<td>$15</td>
<td>$15</td>
<td>$33</td>
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</tr>
<tr>
<td>2:30-3:00</td>
<td>Lunch break</td>
<td>0</td>
<td>Lunch break</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>3:00-4:00</td>
<td>PLAN (EOD)</td>
<td>0</td>
<td>Planning EOD</td>
<td>$15</td>
<td>$9</td>
<td>$0</td>
<td>$0</td>
<td>$9</td>
<td></td>
</tr>
<tr>
<td>Mondays</td>
<td>OFFICE</td>
<td>0</td>
<td>Work/Teaching</td>
<td>$30</td>
<td>$0</td>
<td></td>
<td></td>
<td>$0</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>$210</th>
<th>$117</th>
<th>$90</th>
<th>$60</th>
<th>$477</th>
<th>$258</th>
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</table>

**Mondays**

<table>
<thead>
<tr>
<th>Children</th>
<th>Revenue</th>
<th>Staffing</th>
<th>Supplies</th>
<th>Overhead</th>
<th>Staffing + Supplies</th>
<th>Contingency</th>
<th>Annual Cost of Program</th>
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<tbody>
<tr>
<td>8 X 20</td>
<td>$160</td>
<td>$20 per day</td>
<td>$87,644</td>
<td>43 weeks per year</td>
<td>$84,204</td>
<td>$102,048</td>
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<tr>
<td>12 X 42</td>
<td>$504</td>
<td>43 weeks per year</td>
<td>$3,440</td>
<td>43 weeks per year</td>
<td>$8,764.00</td>
<td>$4,382</td>
<td></td>
</tr>
<tr>
<td>4 X 322</td>
<td>$88</td>
<td>43 weeks per year</td>
<td>10%</td>
<td>5%</td>
<td>$100,790</td>
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*2 fewer children are paying due to scholarships and under enrollment

<table>
<thead>
<tr>
<th>SEASON</th>
<th>WEEKS</th>
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<tbody>
<tr>
<td>WINTER</td>
<td>10</td>
</tr>
<tr>
<td>SPRING</td>
<td>12</td>
</tr>
<tr>
<td>SUMMER</td>
<td>7</td>
</tr>
<tr>
<td>AUTUMN</td>
<td>12</td>
</tr>
<tr>
<td>41 ON</td>
<td></td>
</tr>
<tr>
<td>11 OFF</td>
<td></td>
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</table>

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<thead>
<tr>
<th></th>
<th>$4,900</th>
<th>$62,656</th>
<th>$14,143</th>
<th>$102,048</th>
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</table>
THANKFUL!

- **Horticulture** (mowing the lawns, letting us pick flora for projects, pruning the trees over our heads!)
- **Education** (sharing staff, jumping in if needed, sharing bathroom and other spaces, collaboration on curricula, giving us gardening spaces)
- **Security** (making sure the kids are safe!)
- **Maintenance** (fix broken objects, let us use their tools as well as laundry machine)
- **Visitor Services** (helping out parents and other visitors, parking, etc)
- **Development** (looking for various grants and opportunities-- we did receive one during our first season!)
- **Marketing** (created our flyer!, helped us GREATLY with registration forms and online documents, edited our listing many times on the website and social media)
- **Finance and HR** (helped make sure we were meeting our goals, paid our staff, helped hire and make decisions on staffing)
- **Executive Director** (pushed for and encouraged us!, allowed us to run our experiment, helped raise money, network with other leaders about our great program)
Growing a Nature Preschool

Eileen Prendergast
Director, Education
American Public Garden Association
Conference 2018
Chicago Botanic Garden

- North of Chicago in Glencoe
- Opened in 1972
- 385 acres: 27 display gardens & 3 native habitats
- 240 full time staff
- 1 million + visitors; 51,000 member households
- 150,000 people in 1,700 education programs

Mission: We cultivate the power of plants to enrich and sustain life
## Preschool Overview

<table>
<thead>
<tr>
<th>Year One</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mornings: Classroom A</td>
<td>4 year olds</td>
<td>3 year olds</td>
<td>4 year olds</td>
<td>3 year olds</td>
<td>4 year olds</td>
</tr>
<tr>
<td>Afternoons: Classroom A</td>
<td>4 year olds</td>
<td>3 year olds</td>
<td>4 year olds</td>
<td>3 year olds</td>
<td>4 year olds</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year Two</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
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<td>4 year olds</td>
</tr>
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<td>4 year olds</td>
<td>3 year olds</td>
<td>4 year olds</td>
<td>3 year olds</td>
<td>4 year olds</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year Three</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
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<td>4 year olds</td>
<td>3 year olds</td>
<td>4 year olds</td>
<td>3 year olds</td>
<td>4 year olds</td>
</tr>
<tr>
<td>Mornings: Classroom B</td>
<td>3 year olds</td>
<td>4 year olds</td>
<td>3 year olds</td>
<td>4 year olds</td>
<td></td>
</tr>
<tr>
<td>Afternoons: Classroom A</td>
<td>3 - 5 year olds</td>
<td>3 - 5 year olds</td>
<td>3 - 5 year olds</td>
<td>4 year olds</td>
<td></td>
</tr>
<tr>
<td>Afternoons: Classroom B</td>
<td>3 - 5 year olds</td>
<td>3 - 5 year olds</td>
<td>3 - 5 year olds</td>
<td>3 - 5 year olds</td>
<td></td>
</tr>
</tbody>
</table>

### Additional Information

- **3 year olds** meet 2 days a week for 2.5 hours ($2,520)
- **4 year olds** meet 3 days a week for 3 hours ($3,940)
- **3 – 5 year olds** meet 4 days a week for 3 hours ($5,200)

15 – 16 students per class
1:8 ratio plus volunteer
Early Childhood: The Early Years

Hands-on, inquiry-based science activities that did not meet audience needs
Inspiration

Emphasis on developmentally appropriate methods, processes, and experiences, not facts and content.

https://www.seek.mn.us/sites/default/files/naturalwonders.pdf
Youth & Family

• Open ended play
• Sensory “sandboxes”
• Toddler/baby adaptations
• Loose parts
Youth & Family
Teachers

- Early Intervention
- Gateways authorization
- Custom programs
- Conferences
Spaces: Growing Garden & Cove

Self-guided and free play opportunities
Nature Preschool

Can we really do this?

- Conference
- Site visits & research
- Five year business plan financials & programs

natural start alliance

Learning with Nature
Embedding Outdoor Practice
Claire Warden
First Steps

• Hire staff - make the investment
• More site visits & research
Professional Development

• National & international organizations
• Local organizations: Northern Illinois Nature Preschool Association & the Alliance for Early Childhood, Eastern Region Association of Forest & Nature Schools
• Conferences
• Continuing education
Advertising & Recruiting

- Open houses
- Libraries
- Bucksips
- Member magazine & catalog
- Presence at family programs
- Word of mouth
Licensure & Accreditation

• DCFS-Yes!
• NAEYC-Maybe!
Spaces: Nature Play Garden

Gross Motor
Appropriate Risk
Loose Parts
Indoor Classroom
Indoor Classroom
Outdoor Classroom
Outdoor Classroom
Year One

- Enrollment began 9 months in advance
- Two Three classes!

**Daily Schedule**
- 30 – 45 minutes: Outdoor Classroom Play
- 1 hour: Garden Exploration/Hike
- 15 minutes: Snack
- 30 – 45 minutes: Continued Hike/Free Choice
- 15 minutes: Circle & Story

At least 50% outdoors
Year One

• Staffing & volunteers
• Horticulture collaboration
Year One

• Parent & Family Support
• Gear
• Snacks
Year Two

- Assessments
- Conferences
- Substitutes
- Nature Buddies

Dr. Patti Bailie’s “Nature-ness” Scale

<table>
<thead>
<tr>
<th>ENVIRONMENTAL AWARENESS</th>
<th>PRE-LITERACY SKILLS</th>
<th>LARGE MOTOR SKILLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does not show interest in the natural world and the living</td>
<td>Takes an interest in the natural world and the living</td>
<td>Can maintain short hike on flat terrain without</td>
</tr>
<tr>
<td>things in it</td>
<td>things in it</td>
<td>failing</td>
</tr>
<tr>
<td>Takes an interest in the natural world and the living things</td>
<td>Shows respect and empathy for the natural world</td>
<td>Sustains balance during movement experiences such as</td>
</tr>
<tr>
<td>in it</td>
<td></td>
<td>jumping</td>
</tr>
<tr>
<td>Shows respect and empathy for the natural world</td>
<td></td>
<td>Can hike in a controlled way in a variety of terrains</td>
</tr>
<tr>
<td>Cares deeply about the natural world and is motivated to</td>
<td></td>
<td>including hills and rocks</td>
</tr>
<tr>
<td>take action to protect it</td>
<td></td>
<td>Can balance while walking along a log</td>
</tr>
</tbody>
</table>

Program Goals, Curriculum Practices

Environment

Staffing

Nature Center Resources

Parents and Community
“We began our hike looking for the letters in the tree branches. We searched...for...the letter ‘L’ for love! The children were so proud of themselves when they found the letters...I posed the question, ‘What do we love about the outdoors?’ The children and their ideas inspired our hike! ‘We love the snow,’ the children exclaimed, so we stopped to show some love to the snow...[We rolled] down the hill. This is something that the children love and it strengthens their vestibular system which is part of the larger sensory motor system. The vestibular system has to do with balance, movement, and is centered in the inner ear.”
Year Two: Emergent Curriculum

RAMPS!

“A way of planning curriculum that is based on children’s interest and passion at a certain point in time.”

Forts

Waterfalls

Balls

Cookie Factory
Year Two: Emergent Curriculum

FIRE!
Year Two

• More Horticulture Collaboration
• New Outdoor Spaces
Year Two: Natural Materials
Year Three & Beyond

- Financial aid
- Marketing plan
- Continued professional development
- More gardening
- Changing role of director
- Partnerships
Please continue the conversation

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317-923-1331 x490