

- A ENTRY**
- ARBOR WITH VINE(S)
 - LOW BRIDGE AT NATURAL SWALE
- B WATER**
- RECIRCULATING
 - ALONG NATURAL SWALE
 - HAND/FOOT OPERATED PUMP
- C GATHERING**
- USE EXISTING AMPITHEATER
- D NATURE ART**
- NATURE ART TABLE
 - SEATING - AT EASE BENCHES
 - LOCAL / REGIONAL STONE FLOOR
- E MESSY MATERIALS**
- 12"-18" DEEP MULCH
 - 4'-6" LONG X 10'-20" DIAMETER LOGS
 - AT PERIMETER
 - CENTRAL LOG OF INTEREST
 - GIANT TREE COOKIES
 - SHARED STORAGE
- F SAND**
- L-SHAPED GROUND LEVEL BED
 - ROUNDED ROCKS FOR BORDER AND SEATING
 - SHARED STORAGE
- G BUILDING**
- DISCOVERY TABLE
 - SEATING - AT EASE BENCHES
 - STORAGE
 - LOCAL / REGIONAL STONE FLOOR
- H MUSIC / MOVEMENT**
- METALLOPHONE / AKAMBIRA
 - STORAGE
- I CLIMBING & CRAWLING**
- RED CEDAR LOG STEPS
 - REMAINDER OF AREA DEVELOPED ON SLOPES BY OWNER

- J OPEN**
- CLEAR LOW BRUSH
 - ESTABLISH NATIVE/ADAPTED GRASS OR RETAIN NATURAL FLOOR
- K GARDEN / DIRT DIGGING**
- RAISED AND GROUND LEVEL BEDS
 - WATER SOURCE
- L SMALL GATHERING**
- MULTIPLE LOCATIONS AS DESIRED
 - TABLE(S), BENCHES, HAMMOCK(S)
- M PATHS THROUGH PLANTINGS**
- DIVERSE NATIVES AND ADAPTED PLANTINGS AS SEEN / TRANSPLANTED FROM REMAINDER OF PROPERTY



LEGEND

- S : STORAGE
B : BENCH
PT : PICNIC TABLE
SS : STEP STUMPS



Concept Plan | 2.21.13

Duluth, MN

Hartley Nature Center w/ UMD Environmental ED.



Nature Explore is a collaborative project of Arbor Day Foundation and Dimensions Educational Research Foundation ©2013 Dimensions Foundation

NOT INTENDED FOR CONSTRUCTION

Entry (A)

1

Description:

The entry serves as the transition zone along path between the rest of Hartley and the natural playscape.

Recommendations

- Large living willow “arch” entryway.
- Large log tunnel along willow entryway- “secret” crawling entry.
- Carved wood Welcome sign.
- Creative signpost just inside entryway and further along on paths directing children to different areas.
- Soft mulch flooring.

Other Possibilities

- MN bird wingspan comparison activity along entryway.
- Option for kids to climb on entryway if sturdy.
- Unique flooring option to “set off” entryway- stone tiles, wood cookies, etc.

Rationale:

The entry serves to help children understand they are entering a special place. It also serves to cue visitors into the surrounding natural area and sets the mood. The entry invites children to explore further, and serves to encourage a slower, more thoughtful entry into the play area.

Materials Needed:

Willow archway, trellis, large hollow log welcome sign, mulch, signpost(s), wingspan carvings.

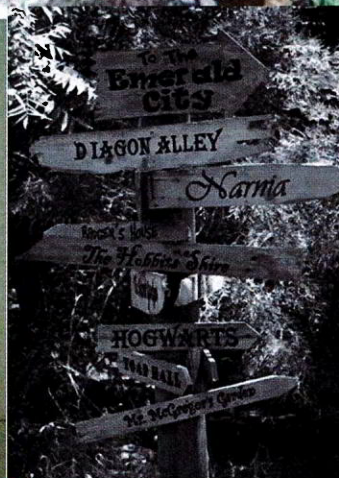
Resources to Consider:

- Betsy Bowen of Grand Marais is a block printer who may be a resource for crafting a welcome sign.
- For landscaping the entrance arch and log, landscaping companies to consider include A+ Landscaping and Garden Center, Northern Lights Landscaping, Carlson Lawn and Landscaping, Northern Pines Landscaping, Amity Creek Landscaping, Bella Terra Landscaping, and Boreal Natives.

Expertise Needed:

- Landscapers for creating and placing willow arch entry and log tunnel.
- Craftspeople for creating signs and signposts.

Photo Examples:



Water (B)

Description:

Visitors from all over the world come to Duluth and the North Shore to view its lakes, rivers, and waterfalls. To represent this popular natural feature, it seems necessary to include a water area in the natural play area. Luckily, Hartley Nature Center has a small intermittent creek that flows along the edge of its proposed natural play area. This area will be an area where children can safely experiment with water and its properties. Within this area, children will be presented with materials that best represent the local water areas and culture that has grown around the water systems on the North Shore.

Recommendations:

- As the creek is intermittent and does not flow consistently, a hand pump can be installed near the head of the water area to provide access to water when the creek is otherwise dry.
- Construct a mini version of the Duluth Aerial Lift Bridge that crosses the creek (bridge does not need to lower and rise, but will have the feeling of the one down in the harbor).
- Place an old canoe and/or fishing boat along the edge of the creek for children to use as a dramatic play area.
- Bird feeders and bird baths can be placed in a quieter location along the creek that attracts birds to the area. Water from the creek can be used to keep the bird baths full.
- Buckets can be used to transport water from the creek up the banks or to other areas along the creek, and even to the sand area or the garden/dirt digging area.
- Materials should be provided that allow children the opportunity to interact with water and its surrounding area: materials that float and materials that sink (sticks, pinecones, rocks, leaves, feathers, ...); shovels for moving soil to make dams; paint brushes that can be used to paint with water and soil on nearby rocks and wood along the creek; rocks that can be used to construct cairns that are often found on the shores of Lake Superior; etc.
- Large boulders can be placed along the creek bank for climbing and manipulating that mimic parts of Lake Superior's shoreline and the banks of some creeks along the North Shore.
- Flooring: The floor of the creek will be what naturally exists. However, permanent stone stepping stones will serve as a path through the creek and wooden stumps will serve as moveable paths through and across the creek. Artistic liberty can be taken with the top of the stepping stones; ex. A local artist can be called upon to help create tile mosaics of water, fish, dragonfly nymphs, frogs, etc. on the top of the stepping stones. Long boards can also be used to create small bridges and paths across the creek.
- Sign: Hartley Nature Area can work with a local artist to develop a sign near the creek that identifies the area as a Water Area. It can simply say Water Area and have a picture/painting/mosaic of children playing near/in a creek.
- Benches can be positioned along the creek bank to allow for quiet reflection or for a place for parents to keep a watchful eye on their children as they play in this area.

Other Potential Ideas:

- If a hand pump is not available, a large water tub with water collected at the nature center (perhaps from rain barrels) can be carried to the water area containing a mounted hand pump for children to use.
- If the area allows, sphagnum moss can be planted that creates a wetland feel. After time this area will mature enough for children to play in/on to experience the soft feel of sphagnum on their skin and the unique bouncy feel of sphagnum as they walk and jump.

- A reservoir can be constructed (perhaps in the shape of Lake Superior) that holds some of the water in an area for children to further explore nonmoving water (more like that found in a pond or a lake).
- Large sculptures of fish, frogs, and other creek critters can be scattered along the bank for children to climb on or use as benches.

Rationale:

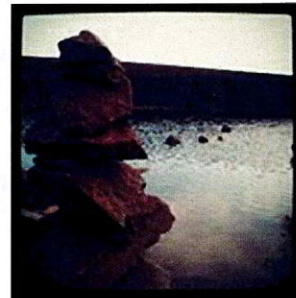
A water area provides a space where children can have hands-on experiences to explore water physics, mechanics, and processes. They can learn about the transformation of objects, the difference between solids and liquids, the buoyancy of objects, the flow of water, water currents, and other physical laws of nature as they mix water and dirt, predict whether a leaf will sink or float or will be propelled down a waterway faster than a feather, add rocks and sticks to a moving stream of water, and more. The addition of a bridge, boats, and sculptures allow children the freedom of imaginative play. The bridge, stepping stones, moveable stumps and boards create opportunities for physical exercise, balance and coordination, and risk taking assessment.

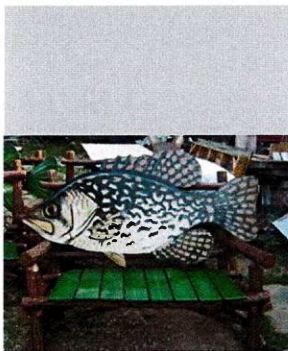
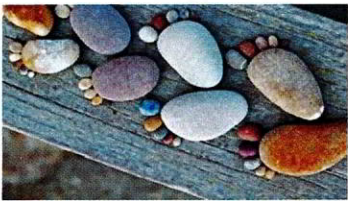
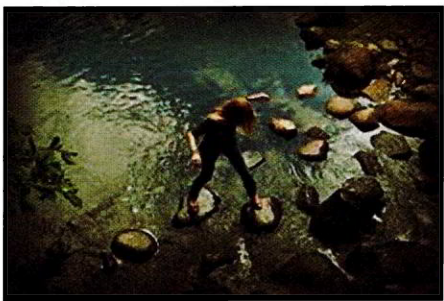
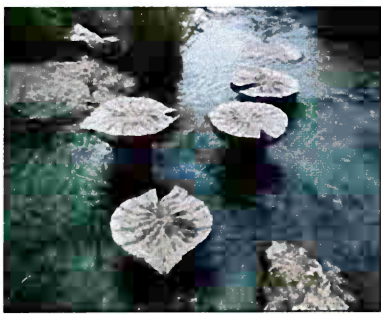
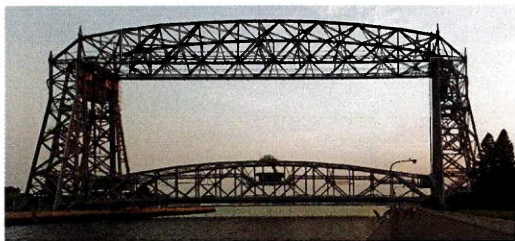
Materials Needed: Hand pump, wood/concrete/metal and other materials for a bridge and benches, old canoe, old fishing boat, bird feeders, bird baths, buckets, shovels, sticks, pinecones, rocks of various sizes and shapes, leaves, feathers, large boulders, stepping stones, tile for mosaics, wooden stumps, long boards.

Resources to Consider:

- Kelly Dupre is an artist from Grand Marais, MN with considerable experience with mosaics. She may be interested in helping to create signs or unique stepping stones in the creek.
- Construction and Excavating Resources: Arrowhead Concrete Works, Inc; Northland Constructors, JR Excavating and Landscaping, LLC; Kunst Greg and Sons Truck.
- Sculptors: Kirk Maur, Douglas Freeman, Stanton G. Sears, Carla Stetson.

Expertise Needed: Crafts people familiar with carpentry, metal work, and/or cement work may be needed to help with the installation of a bridge, stepping stones, stumps, and benches. An architect may also be called upon to assist in the design of a mini lift bridge. Artists and fabricators may be needed to help design and create the mosaic tiles, sculptures, and sign. Landscape designers or construction workers familiar with choosing rocks, safely moving, and securely placing large rocks can be asked to help appropriately install climbing boulders. Minimal grading may need to be performed to allow rocks to be placed properly and the use of a backhoe or bobcat may be needed. Someone familiar with water pump installation may be asked to help with the installation of the hand pump.

Photo Examples:



www.shutterstock.com · 94748359



Gathering (C)

Description:

This is a large gathering space to be used for large groups and classes to meet before and after using the playscape and for adults to sit at while their children are using the playscape.

Specific Ideas:

Recommendations

- Use existing amphitheater
- Border this with native trees/shrubs that offer seasonal variety. Can consider: tamarack (A), maple (B), viburnum, mountain ash, ferns (D), red osier dogwood (C), wild rose (E), thimbleberries (F)
- Flooring: current dirt floor
- Sign: picture of people sitting in circle

Rationale:

This area provides teachers with the opportunity of using a gathering space to meet with their group. It will allow the students time for thought before and after their experience in the playscape and the opportunity for the teachers to set up what activity will happen next. Special large-group events can also occur here.

Materials Needed: chosen native trees/shrubs for bordering amphitheater and appropriate planting tools, sign materials

Resources to Consider:

Nurseries

Grussendorf Nursery and Landscaping, Inc.
Edelweiss
Lake Superior Garden Center
Miller Creek Garden Center
Itasca Greenhouse, Inc.

Landscaping

A+ Landscaping and Garden Center
Northern Lights Landscaping
Carlson Lawn and Landscaping
Northern Pines Landscaping
Amity Creek Landscaping
Bella Terra Landscaping
Boreal Natives

Expertise Needed: An experience local landscape designer/forester could be helpful for picking out proper bordering plants.

Photo Examples:
Plantings



A



B



C



D



E



F

Nature Art (D)

Description:

This area is where children can use natural materials to create works of art. Children can experiment with different materials, and learn to value the artwork of others while developing their own creativity.

Recommendations:

- Area should have a view
- Sit down area (photos A, B)
 - Table with sectioned top (for sorting), but be flat also so children can draw
 - Stumps for seats
- Storage shed (small cabinet with two doors)
 - Mural/painting on outside of doors by local artist, of local scene, plants or animals (photo C)
- Collected materials (in baskets in storage cabinet) (photos D-E)
 - Pine cones, colored rocks, mushroom, birch bark, galls, tree cookies, large/small smooth rocks, feathers (chicken, grouse), sticks, bones
- Flat sides of large stones (basalt, white stone) to paint on with mud/water (photo F)
- Easel/panel to draw on – hang up paper upon/use clipboard (photo G)
- Paper, pencils, crayons, paintbrushes
 - Children can draw maps of their adventures in the playspace, use paper on easel to draw view, etc.
- White canvas (i.e. from Duluth Pack) as tarp over art area (photo H)
 - Large trees available to tie canvas on to
 - Watch shadows on “roof”, give quieter feel
 - Sloped towards amphitheater, (offer “barrier” from amphitheater gathering area barrier), slope also allows debris/snow to slide off
 - Good view (long open view) remains open
- Sign: Similar to other areas. Personalize with mosaics or embedded agates (photos K, L)
- Flooring: Incorporate mosaics or stepping stones (photo J)
 - Stone could be place in circular fashion, similar to look/composition of agates

Other potential ideas:

- Mural elsewhere in area by local artist
 - Mural or mosaics on a flat stone face, stone could be part of the area’s perimeter/boundary
- Use an easel made of Plexiglas so children can see through it when drawing (photo I)

Rationale:

The nature area supports the development of observation skills, classification skills, and a sense of appreciation for the beauty of the natural world. This area also helps children gain an understanding of weight, texture, shape of natural objects.

Materials Needed: Table, stumps or else for seating, storage shed or storage baskets, collected materials as listed above, flat rocks or upright stone tablet, wood easel, paintbrushes, paper, pencils, crayons, small buckets for children’s gatherings

Resources to consider:

1. Betsy Bowen, block printer, painter
2. Kelly Dupre, mosaics
3. Artist at North House Folk School,
4. Ojibwe artists
5. UMD art students

Expertise Needed: Crafts people familiar with stone laying for potential flooring or rocks to paint upon, carpentry skills needed for easels, tables and stools, local artist for painting of cabinet/mural.



G)



H)



I)



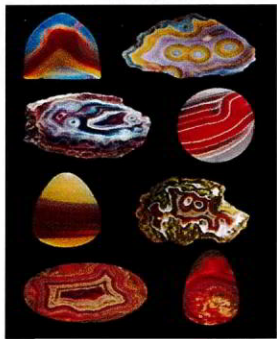
J)



K)



L)



Messy Materials Area (E)

Description:

This area is designed for creative and imaginative play with a variety of natural materials. Activities in this area may include building small forts or nests along the central log or against existing trees or other imaginative building with the larger natural materials located at this site.

Recommendations:

- Open area
- Central log of interest that can be used as the basis for building a variety of structures
- Enough space for children to work in groups and to maneuver larger materials
- Create boundary for the area with logs, stumps, or rocks
- Flooring: mulch or wood chips
- Sign: Messy Materials Area or a picture of forts, nests, and other creations made from the materials to inspire imaginations

Other Potential Ideas:

- Tunnel to the near-by sand area
- Storage area for materials

Rationale:

The messy materials area encourages experimentation with a variety of natural materials as well as the use of imagination and cooperation as children work together to develop ideas and create physical structures. This area also encourages children to use large muscles as they move objects of various sizes around the space and maneuver the objects to develop their creations. Children can also develop a sense of accomplishment from creating their structures.

Materials Needed:

Small and large sticks and driftwood, longer pieces of logs/thin trees, tree cookies, logs, stumps, pieces of lumber, bark of all sorts (e.g. birch, pine), pine cones, rocks or pebbles of various smaller sizes; central large log of interest; sporadic introduction of seasonal materials such as straw bales, pumpkins, ice chunks, fall leaves, etc.

Resources to Consider: harvest materials from trail clean-up events at Hartley; request sticks and natural materials to use in this area from HNC's volunteers and the community; gather rocks and driftwood from local beaches

Expertise Needed: No specific expertise needed.

Photo Examples:

Additional photos on next page.





Sand Area (F)

Description:

This area is designed for children to have an opportunity to experiment in a way that they cannot with other earthen materials. Sand along with water can be formed into different shapes or structures that other materials cannot.

Recommendations:

- Provide a nearby source of running water(water cascade over rocks)
- Area for wheelchairs and a raised sand bed
- Stump border/log border
- Tools for: creating mounds, digging, sandcastles, sand funnel, etc
- Pails to haul water from “water area” and move sand around
- Natural materials to use in sand area: drift wood, pine cones, rocks, sticks, etc
- Tunnels to messy materials and building areas
- A way to cover the sand area when it is not in use

Other Potential ideas:

- Stumps to jump from sand area to messy materials
- Incorporate an adjacent digging area with other local dirt types, for texture and experimentation
- Recreate a beach scene with North Shore beach materials and natural elements

Rationale:

Experimenting with sand provides a different tactile experience than working with other types of soil or natural materials. Sand areas can also provide opportunities for positive social interactions that another area may not, especially for certain children who are already comfortable playing with and in the sand. Sand is generally a safe surface for young children to play on and in.

Materials Needed: Sand, rocks, large boulder, water, large stumps, logs, tunnels, drift wood, pine cones, shovels, spoons, forks, pails, funnels, barrels, tarp

Resources to Consider: Neighbors that are taking down large trees on their property that could provide large stumps or logs; JR Excavating and Landscaping, LLC for sand and the possible excavation of the pit, Dirt Factory again for sand; Menards or community members to donate pails, shovels, forks, etc

Expertise Needed: Possibly an excavator, but most likely no specific expertise a necessity

Photo Examples:



Building (G)

Description: Area designated for building with natural materials on a variety of surfaces.

Recommendations:

- Sign: symbol possibility – rocks stacked on top of each other (kind of like a cairn), or simply “Building Area”
- Divide building area into three building sections
 - Rock Area
 - Block Area
 - Tree cookies/natural objects Area
- Rock Area
 - Surface: Flagstone laid flush into ground or small boulders of various sizes
 - Building material: rocks from the shores of Lake Superior of all colors, shapes, and sizes, driftwood found from shores of Lake Superior
- Block Area
 - Surface: pyramid of stumps
 - Building material: building blocks made from tree branches
- Tree cookies/natural objects Area
 - Surface: Natural ground
 - Building materials: Larger tree cookies and natural objects of all sorts (bark, twigs, leaves, pine cones, small stones, etc)
- Storage: wooden storage cabinet with shelves and baskets to organize materials at the end of the day (can be shared with “pretend area” by Paths through Plantings Area)

Other potential ideas:

- Half log table to allow ADA access to building with stumps for chairs
- Plant native low bushes to separate from other areas
- Hollow log tunnels to connect to Sand Area, Music and Movement, and/or Messy Materials

Rationale:

Building strengthens visual-spatial, mathematical, and abstract thinking. Providing blocks outdoors that are not typical of the types of used indoors provides children to experiment in new ways. An outdoor building area can provide elementary children to continue this important activity even after their indoor classroom experiences no longer allow for this. Children who are reluctant to build indoors are often more likely to build outdoors because of the space allowed for construction and noise absorption.

Materials Needed: flagstone pieces, Lake Superior stones, small pieces of driftwood, many building blocks (see below for building blocks tutorial), medium-sized tree cookies (10” – 12” diameter), stumps of varying heights, variety of natural objects (sticks, bark, leaves, etc.), wood for building wood storage cabinet (hinges, door knobs, wood sealant), baskets for inside storage unit, half logs and large branches (for table), stumps for benches

Resources to Consider:

- Building blocks tutorial: <http://lifeonwillowdale.blogspot.com/2010/12/henrys-natural-wood-blocks-tutorial.html>
- Flagstone resource: <http://www.greatlakesstone.com/>

- Shrubbery: Boreal Natives - 3943 Munger Shaw Road, Cloquet, MN 55720 (218-729-7001)
- Buy wood pieces: <http://www.rusticwoodworking.com/>

Expertise Needed: Wood working skills to build storage unit and building blocks and build possible half-log table, possible need for landscaper with expertise to move and lay flagstone

Photo Examples:



Building blocks



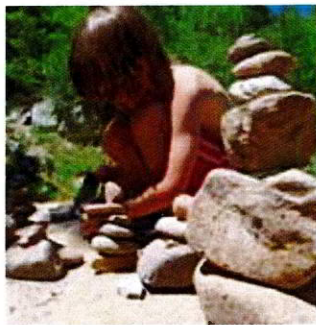
Stump Pyramid



Natural objects building area



Outdoor storage area



Building with stones



Flagstone surface



Half log table

Music / Movement (H)

16

Description:

Marimbas, xylophones, chimes, and other musical instruments are gathered in one area for exploratory musical play.

Recommendations:

- Permanent fixtures - Examples in photos A-F.
 - 1-3 large percussion or wind instruments such as xylophones or walk-through wind chimes. Use a variety of wood and metal tubes and surfaces (lumber, pipes, driftwood) for different tones and sounds. Instruments can be tuned or untuned. Large xylophones can be purchased through catalog or made locally.
- Fixed or moveable drums - Examples in photos F-I
 - Hand drums, drums with soft mallets, or both. Can be permanent fixtures as in photo F, where they can also serve as platforms for jumping and climbing, or portable drums to be stored away.
- Hand instruments - Any or all, but not limited to the following in photos J-O:
 - warbler water whistles
 - rain sticks
 - wooden egg shakers
 - gourd drums
 - hand-made bell & acorn shakers
 - wooden percussion frogs
- Some quieter types of instruments are recommended so children can still hear birds and wind through the trees, and also so others out exploring Hartley are not disturbed by loud sounds.
- Storage - Examples in photos B and P.
 - A safe, secure, and probably waterproof cupboard or shelf system should be located in this area to store moveable drums, hand instruments, and accessories during the day.
 - Portable items should be locked or stored inside overnight.
- Flooring - Example in photo B
 - A hard, stable flooring should be in place. Use local materials to develop a mosaic-like floor of either flat stone or large tree cookies. You can determine which material type to use by either contrasting or matching flooring types in the other play areas.
 - Provide an open area for movement and dancing.
- Sign - Provide signage for the area that flows with the signage for other play areas. This could be a catchy name, a music note symbol, or a simple "Music & Movement" label.

Other Potential Ideas:

- Permanent fixtures
 - A low table with textures and sticks to run across or between the trestles.
 - A fixed post or arch type structure with ship parts or "sunken treasures" from Lake Superior shipwrecks to explore sounds. Sunken treasures could be old pots/pans (the fish jello mold is great!), wheels, cogs, cranks, or anything sitting around people's garages. Examples in photos Q-R.
- Fixed or moveable drums
 - Have a local artist paint murals of Duluth scenes on some of the large drums. Photo G.

- Woodburn northwoods elements (animals, trees, leaves) onto mallets and accessories. Photo H.
- Consider a powwow-type drum to exemplify the vibrant Ojibwe culture of the region.
- All-wood drums will be cheaper than drums with leather or synthetics, but explore the woodworkers and artists of the region to see what variety you can get.
- Hollow stumps turned on their side, with maple mallets.
- Hand instruments
 - Shakers that can be filled by kids with found materials
 - Dancing scarves to explore movement – produce locally. Photo S.
- Storage - Like photo P, storage can be designed to look like an animal common to the Duluth area. Rather than a basic trunk or box, opening a turtle's shell or maybe a bear's belly to find hand instruments inside would be a fun experience.
- Flooring
 - A portion of the floor can be created to look like a stage where children can dance.
- Install all weather audio-posts that have recordings of different sounds around the city of Duluth. Each unit has a set of headphones- sounds include waves, sea gulls, wind blowing through the leaves and trees, ice dripping, streams flowing, birds flapping their wings...or consider collaborating with designers/artists at UMD to construct solar powered audio-posts. Photo T.

Rationale:

The music and movement area allows for sensory stimulation, exposure to creative expression, and opportunities for unique storytelling and dialogue.

Materials Needed: Depends on musical instruments desired, but will likely include: lumber, various wood scraps, metal scraps and “sunken treasures”, branches/sticks, driftwood, gourds and other natural materials for small instruments and wind chimes. Many materials can be acquired through donations, nature walks, or thrifting. Instruments are also available in the Nature Explore catalog.

Expertise Needed: None necessary. However, consider consulting with Michael “Waabi” Furo of Rosewood Music in Canal Park for his input or assistance with developing/constructing instruments, particularly those with a local or nature “flavor.” He is an expert craftsman of all types of musical instruments, including American Indian instruments, and his is very familiar with natural elements of the rural Duluth and North Shore community.

Photo Examples:



A



B



C

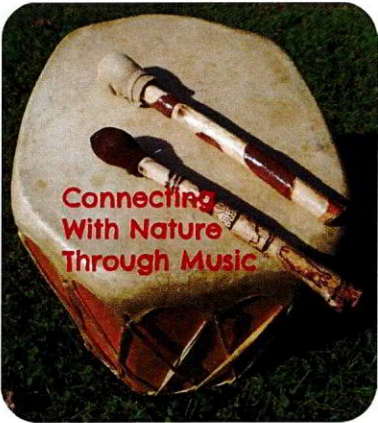


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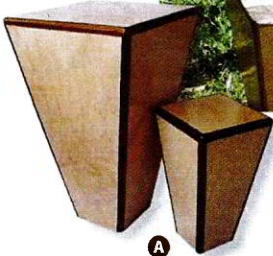
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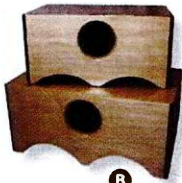
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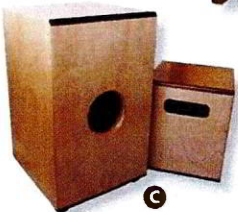
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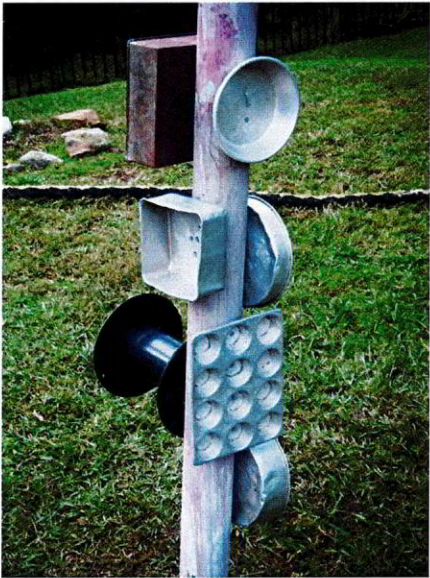
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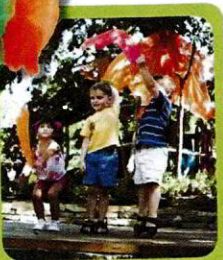
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D

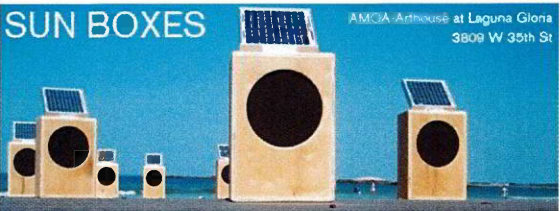
FUN WITH DANCING SCARVES

Imagine inspired, active, thoughtfully engaged children who are dancing like the wind fluttering through the colorful scarves they are holding high in the air. These students have a place to learn and grow where their senses are enveloped with the rich beauty, sounds and motion of the world around them. An outdoor Music and Movement Area uniquely supports real, meaningful experiences where a personal sense of wonder is nurtured and creativity has a place to flourish.

Idea: Encourage children to listen to the sounds they hear in nature, then create their own "nature sound dances," using their scarves to enhance their movement.



S



T

Climbing and Crawling Area (I)

Description:

This area provides children with the opportunity to climb, crawl, and move. This area should have an impressive feature made from local materials that can serve as a major draw for people to the Natural playscape and a gateway to explore other area in the playscape. This area can provide the “Wow!” factor!

Recommendations:

- Large tree structure with intertwining branches to climb
- High platform, “eagle nest” at the top of structure
- Multi-level platform network with swinging tree bridge
- Hollow low to crawl through
- Slide built into hillside using natural slope (sliding or sledding area in winter)
- Pile of smooth Lake Superior boulders or logs and stumps for climbing, jumping, balancing
- Flooring: safety surface of engineered wood fibers (EWF) mulch
- Sign designating “Climbing and Crawling Area”

Other Potential Ideas:

- Climbing structure that looks like Aerial Lift Bridge
- Animal statues to climb on (bear, wolf, etc.)
- Adventure area for older kids (more risk)
- Climbing rocks in shape of Apostle Islands

Rationale:

Climbing and crawling activities provide physical exercise that provoke children’s imagination while playing and alleviate stress—which leads to better concentration in class. Children develop balance, coordination and appreciation for physical movement; they assess risk, make decisions, experience the joy and exhilaration of sliding, and feel accomplishment of reaching a goal.

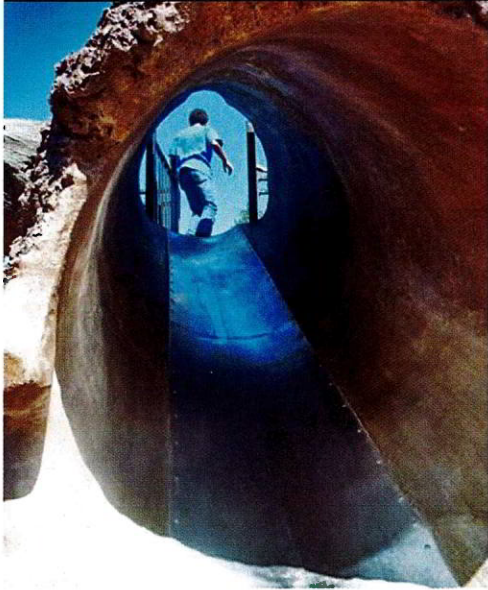
Materials Needed: Large, sturdy tree trunks and logs that are in free from rot or decay. Lumber for platforms and steel cables for support. Additional lumber and hardware to secure logs as needed. Other materials depended on what elements are chosen.

Resources to Consider: Harvesting the wood for the climbing structure locally or regionally (Hedstrom Lumber Company, Grand Marais, MN). Fibar Playground Surfaces or Nature Explore for flooring.

Expertise Needed: Woodworker or Arborist familiar with wood types and choosing high quality wood pieces. A Woodworker or Construction Worker may be needed for assembling climbing logs in a secure manner.

Photo Examples:





Open (J)

24

Description:

This area provides plenty of room for large movement. This area is often called the “action area.” It is ideal if this area can be covered with grass that can withstand much traffic. As part of regular maintenance, this grass will be reseeded or sodded periodically. The idea is not to have “perfect” grass but to provide enough coverage so that the ground is not overly muddy.

Recommendations:

- Wooden Benches
- Slide in hill (clean plastic, see through)
- Sled run in winter
- Climbing logs
- Plenty of space to run
- Tree for shade on hot days over a portion of area
- Mini hill or slope for little ones to get a sense of height, roll down, climb up
- Storage
- Flooring: grass
- Opens to climbing area
- Sign: Painting of different Minnesota birds wing span on a large wall close to the fence (Sign of freedom to play)

Other Potential Ideas:

- Water splash for use in the summer (sunny days)
- Outhouse

Rationale:

Children need enough space to run, jump, dance, or play active games. Designing one space just for active play is important for children’s health and well-being, especially in light of dramatically increased rates of childhood obesity and diabetes.

Materials Needed: Wood, tree stumps with flat tops and bottoms of various sizes, sod, sled, bucket, tap, large clean plastic to slide down hill,

Resources to Consider: Local artist to paint a picture of children playing in an open area, UMD grounds crew (Facilities & Management) to plant and maintain sod,

Expertise Needed: Use of a chain saw is likely. Tree and sod planting/maintenance needed.

Photo Examples:



A) Open Area (Plenty of space to run)



B) Splash



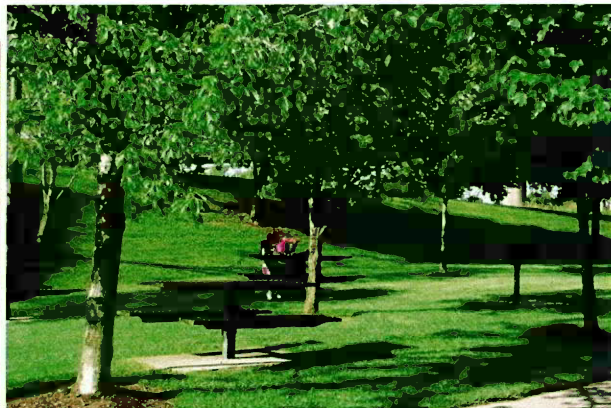
C) Slide in hill



D) Sled run in winter



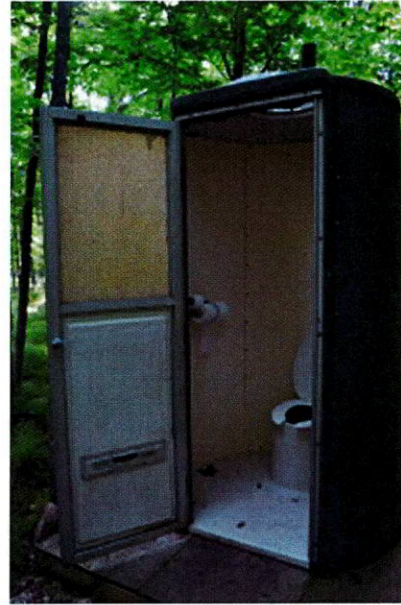
E) Climbing logs



G) Small Tree shade area



H) Storage



I) Outhouse



J) Painting of MN birds wings span, sign for open area and freedom to "fly" around

Garden and Dirt Digging (K)

Description:

This area provides a place where children can experience planting and harvesting flowers or vegetables, and/or a pathway for children to walk that takes them through a variety of low grasses, flowers or bushes.

Recommendations:

- Raised and ground level planting beds-ADA accessible
- Use non-toxic plants
- Choose local/edible plants-vegetables, raspberries, blueberries
- Provide herbs, wild onions, and berries-consider wild edibles that grow throughout the season that are native
- Butterfly attracting flowers/butterfly garden
- Plants that attract or feed native animals and birds (Mountain ash, viburnum, berries, etc.)
- Plants that change with seasons to offer color, texture, seeds, etc.
- Prairie/meadow plants vs. riparian plants
- Plants that make the space beautiful
- Benches
- A separate 'play' garden nearby where kids can practice planting, watering, etc.
- Zones to differentiate gardening area (not to be disturbed) and free digging in dirt
- Tool storage area
- Should have a water source nearby preferably
- Fence the area so that children do not run through it
- Surface surrounding the garden should be comfortable to kneel on for planting, weeding, harvesting, and also allow for drainage, perhaps thick mulch
- Sign might have a symbol of a plant (flower or vegetable) or a person in a garden; a short title might be 'Garden of Eatin' or 'Good Things Grow Here'

Other Potential Ideas:

- Place pots and containers around the entire play scape, not just the garden area, filled with beautiful plants and edibles
- Fence with vines
- Create a tipi that children can climb, and use it to grow peas and other edible vine plants
- Greenhouse
- Rain gauge
- Rain barrels
- Bird house/feeder
- Make small planting plots that youth can reach across to weed, pick veggies

Rationale:

Interacting with natural vegetation helps children connect with the wonders of nature, learn about natural systems and seasons, and develop keen observation skills. When children are able to help plant, care for and harvest a garden, they learn a sense of responsibility and often develop increased

appreciation for eating fresh produce if vegetables or fruits are grown.

Materials Needed:

Kid-sized shovels, rakes, hoes
Heirloom seeds, starter plants
Kid-sized watering cans, hoses, buckets
Wood, screws, non-toxic, weather proofing sealer, to make raised beds, benches

Expertise Needed:

Use Master Gardener volunteers
Work with 4-H gardening project volunteers
People with woodworking skills

Resources to Consider:Plant Nurseries

Grussendorf Nursery and Landscaping, Inc.
Edelweiss
Lake Superior Garden Center
Miller Creek Garden Center
Itasca Greenhouse, Inc.

Landscaping

A+ Landscaping and Garden Center
Northern Lights Landscaping
Carlson Lawn and Landscaping
Northern Pines Landscaping
Amity Creek Landscaping
Bella Terra Landscaping
Boreal Natives

Help with implementation and maintenance of the garden

UMD students (graduate and undergraduate)
UMD faculty
Hartley Nature Center Staff
Friends of Hartley Nature Center Staff
Service groups in local high schools/churches/colleges
Parents and families that use the nature playscape
United Way of Duluth
City of Duluth volunteer program (duluthmn.gov)
Rotary Club
Americorps Volunteers
Master Naturalists
Boy and Girl Scouts
Homeschool groups
Woodland Hills
Children who are in the garden can be working alongside any of the above people

Photo Examples





Small Gathering (L)

Description:

This is a small area that will invite quieter play activities. There may be room for more than one small gathering area within the playscape. The entire group of children may not fit in this area at the same time. This area can be thought of as a “fort” or an “escape”.

Specific Ideas:

Recommendations

- Borders
 - Utilize the existing large red pines and other trees to create natural “rooms” for the small gathering areas
 - Further delineate the space by planting native shrubs, plants or grasses to deaden sound and create “hiding places”. (photos A & B)
- Seating
 - Could be boulders, large logs, or all three. (photo C)
 - Materials can be found nearby – basalt boulders, cedar logs, etc.
- Hiding/Getting cozy
 - Build a willow hut or “nest” (photo D)
 - Hang hammocks for gazing up into the treetops or reading a book. (photo E)
- Flooring
 - Use existing pine needle mulch. Augment with more pine needles if needed.
- Sign
 - Picture of a nest or fort

Other Potential Ideas:

- Build a platform or two up in the trees for a different perspective, to hang hammocks from, to observe wildlife from and to play. (photo F)
- The seating objects (especially the rocks) could double as “islands” or stepping stones.
- Picnic tables
- Wildlife Viewing Area
- Bird feeders
- When creating borders, leave sightline to wetland
- Place stones on ground to attract insects that can then be turned over and observed.
- Small storage area for magnifying glasses or binoculars.

Rationale: Some children may need a chance to “escape” for quiet time and solitude. This area provides a place for children to create a space all their own that helps them interact with nature in an intimate setting. This area will provide an array of sensory stimulation.

Materials Needed: Native shade-tolerant shrubs and plants for border. Willow switches for the willow hut. Hammocks, birdfeeders, blankets or sleeping bags for winter, benches, rocks or logs for sitting. If a Wildlife Viewing Area is created, magnifying glasses and binoculars and a storage container or locker will be needed. Some native, shade-tolerant plants to consider: Hazelnut (*Corylus americana*), Bush honeysuckle (*Diervilla lonicera*), Virginia creeper (*Parthenocissus inserta*)

Resources to Consider:

Nurseries

Grussendorf Nursery and Landscaping, Inc.
Edelweiss
Lake Superior Garden Center
Miller Creek Garden Center
Itasca Greenhouse, Inc.

Landscaping

A+ Landscaping and Garden Center
Northern Lights Landscaping
Carlson Lawn and Landscaping
Northern Pines Landscaping
Amity Creek Landscaping
Bella Terra Landscaping
Boreal Natives

Animal Habitat

Wild Birds Unlimited

Experts

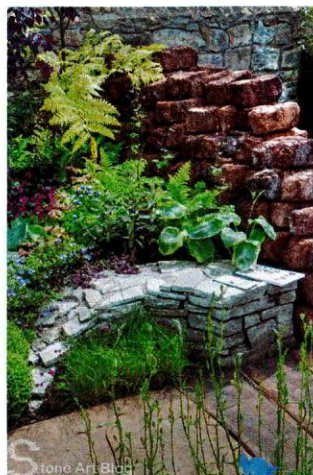
Duluth Audubon Society
North House Folk School
Duluth Art Institute
Great Lakes Aquarium
Duluth Superior Community Foundation
Duluth Public Arts Commission
UMD Early childhood education faculty and students

Gear

Duluth Pack
Gander Mountain

Expertise Needed: An experienced local landscape designer/naturalist could be helpful for picking out border and “hiding” plants that will thrive in shade. In addition, artists or designers could help with creating the willow hut. Also, to get the scale, dimensions and placement of objects just right, an experienced early childhood educator would be helpful.

Photo Examples:



A



B

C



D



E



F



Paths through Plantings (M)

Description:

Paths through plantings provide a way to connect spaces as well as opportunities for exploration of miniature areas and small groups of plants. The paths will take children through diverse native and adapted plantings. There will be a small dramatic play area including household-like elements underneath a small living willow structure.

Recommendations

- Native small plantings that offer seasonal variety including shrubs and grasses
- Crawl through areas that serve as “secret paths” in/out of plantings
- Birdfeeders hanging from plantings – hummingbird (A), oriole (B), and traditional
- Willow hut (E) with dramatic play materials. Can consider kitchen items (F-H), plastic cup phones
- Flooring: ADA accessible wood chips
- Sign: picture of a few plants at various parts of the trail

Other Potential Ideas

- Planters at intersections – butterfly garden plants (D)
- Small child-sized benches

Rationale:

This area provides children with the chance to learn about natural systems and the seasons by watching as the plants change form and color. They will be able to closely interact with native plants (grasses, flower, shrubs). The meandering nature of the paths, as well as their slope, provide a manageable physical challenge to small children. The dramatic play area connected to the pathways offers a chance for children to act out real-life scenarios. This will allow them to use imagination skills, social skills, and develop language skills.

Materials Needed:

Pathway through Plantings

Chosen native shrubs/grasses for plantings and appropriate planting tools, hummingbird, oriole, and traditional birdfeeders, ADA approved wood chips for trails, sign materials, planters for miniature butterfly gardens, benches

Dramatic Play Area

Willow hut, plastic cup “phones”, kitchen items including large spoons, pots and pans, mixing bowl, small bowls for mixing, ice cube trays for gathering materials, play table, play stove, stump chairs

Resources to Consider:

Nurseries

Grussendorf Nursery and Landscaping, Inc.

Edelweiss

Lake Superior Garden Center

Miller Creek Garden Center

Itasca Greenhouse, Inc.

Landscaping

A+ Landscaping and Garden Center
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Amity Creek Landscaping
Bella Terra Landscaping
Boreal Natives

Animal Habitat

Wild Birds Unlimited

General Supplies

Target
Walmart

Expertise Needed: An experience local landscape designer could be helpful for picking out proper plants, planting tools

- Maze (C)

Photo Examples:

Plantings



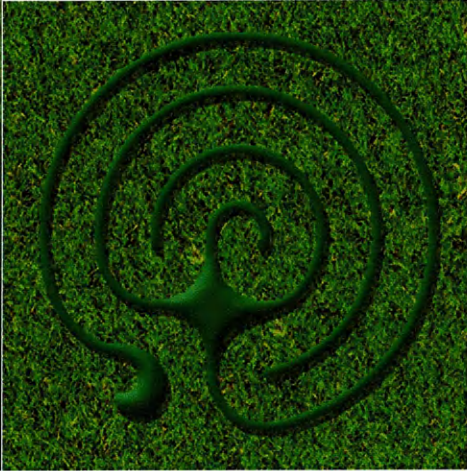
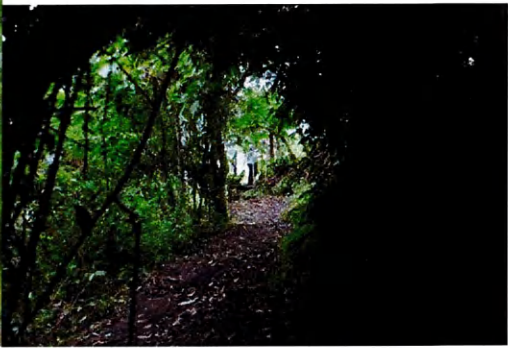
For Paths



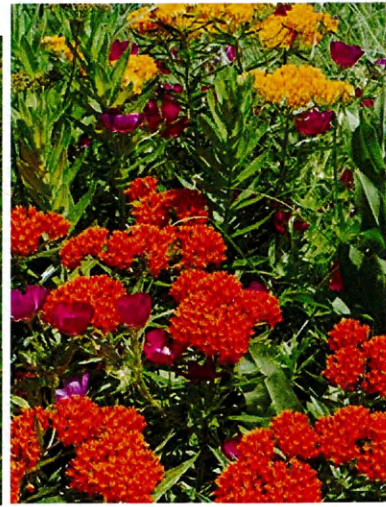
A



B



C



D

Dramatic Play Area



E



F



G



H