Nature Based Play Evaluation

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EXECUTIVE SUMMARY

Objective

To evaluate the Nature-Based play ideals implemented by the City of Rosemount in Minnesota. This project provides a sustainable social impact by improving children's social skills, problem solving abilities, interpersonal relationships, and helping decrease childhood obesity. It provides a knowledge of environmental impacts by engaging children in nature, which will increase their appreciation and understanding of the natural environment. This evaluation is relevant to the City of Rosemount, because it fulfills the 2013-2014 City Council’s goals to encourage community, cultural, and leisure events to add vibrancy to our quality of life. It would also implement the ‘Comprehensive Plan’ and it’s goal to collaborate and provide services to all groups of residents. “The purpose of the Rosemount Park System is to provide in as cost effective a manner as possible, a comprehensive, balanced, well-maintained system of parks, natural, open spaces, trails and leisure-oriented activities, programs for the City residents to use and enjoy.” (City of Rosemount1).

Goals

The City of Rosemount is providing these parks and nature based play ideal implementations in order to fulfill the city wide goals of encouraging community, culture, and leisure events to add vibrancy to the quality of life in Rosemount. The goal is to provide the best services and programs possible to the surrounding neighborhoods and communities in the area. While implementing these programs and services the City of Rosemount strives to involve the entire community together. This would begin with the involvement of a few people enjoying the services offered, and then the attendance and usage of the services will increase until it becomes a well-known initiative and the evidence of development begins to appear.

Project Outline

The structure for this report is a simple, three phase design evaluation. Beginning with the first phase, we start initial research on the ‘Nature-Based Play Ideals’ being implemented in other areas and communities. The next step is to decide what specifically we are evaluation for the City of Rosemount’s Park and Recreation Department. There are a number of different aspects in which Nature-Based Play Ideals can be incorporated into recreation; because of this, it is crucial to be specific on what exactly needs to be evaluated and what is not in the scope of the bigger picture. The second part of the evaluation design phase is the design of the evaluation itself. This is the collection of data and the selection of sources to provide data support. The evaluation is designed as a checklist in order to visit the City of Rosemount’s local parks to observe how their parks compare to other parks in respect to the Nature-Based Play Ideals. The third part of the evaluation is the ‘doing’ of the evaluation. Attending park visits and data collection and organization in order to create a evaluation report.

1 City of Rosemount, 2008 Parks, Trails and Open Space Systems Plan
Work Breakdown

<table>
<thead>
<tr>
<th>Date</th>
<th>Task Assignment</th>
<th>Delegated to:</th>
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</thead>
<tbody>
<tr>
<td>Sunday 10/19/14</td>
<td>Initial Research on Nature Based Play Ideals</td>
<td>Casey Bries, Jack Hickey, Kate Hughes, Anna Lane and Kendra Rysan</td>
</tr>
<tr>
<td>Friday 10/24/14</td>
<td>Complete Assessment Checklist</td>
<td>Kate Hughes &amp; Anna Lane</td>
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<tr>
<td>Friday 10/24/14</td>
<td>Assign Parks</td>
<td>Kendra Rysan</td>
</tr>
<tr>
<td>Monday 11/10/14</td>
<td>Complete Park Observations &amp; Assessments</td>
<td>Kendra Rysan, Jack Hickey and Casey Bries</td>
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<tr>
<td>Friday 11/14/14</td>
<td>Complete Assesment of Park Plans</td>
<td>Casey Bries</td>
</tr>
<tr>
<td>Monday 11/17/14</td>
<td>Complete Data Analysis</td>
<td>Casey Bries, Jack Hickey, Kate Hughes, Anna Lane and Kendra Rysan</td>
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<tr>
<td>Monday 11/24/14</td>
<td>Complete Renderings Potential Park Plans</td>
<td>Casey Bries</td>
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<tr>
<td>Friday 11/28/14</td>
<td>Information Organization for Evaluation Report</td>
<td>Kate Hughes &amp; Anna Lane</td>
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<tr>
<td>Monday 12/1/14</td>
<td>Complete Written Assessment &amp; Evaluation Report</td>
<td>Kate Hughes &amp; Anna Lane</td>
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<tr>
<td>Monday 12/3/14</td>
<td>Presentation on Complete Project</td>
<td>Casey Bries, Jack Hickey, Kate Hughes, Anna Lane and Kendra Rysan</td>
</tr>
<tr>
<td>*TBD</td>
<td>Present Evaluation Report to Rosemount Parks Department</td>
<td>Casey Bries, Jack Hickey, Kate Hughes, Anna Lane and Kendra Rysan</td>
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Presentation

The evaluation findings are to be presented to The City of Rosemount Parks and Recreation Department. The students who co-wrote the evaluation and evaluation report will present the findings to the Park and Recreation Board displaying the information gathered, findings and recommendations.
Inputs

The City of Rosemount currently has twenty-seven parks, totaling in five hundred and fifteen acres of land. One of their main sources of revenue is property taxes from Dakota County, including The City of Rosemount, that fund “79% of the General Fund Budget” (City of Rosemount²). Aside from Licenses and Permit revenue, other revenue producing facilities are the sports dome and recreation programs. The City of Rosemount also receives monetary input from partnerships, grants, and general funding.

Outputs

The demographics of the City of Rosemount is a median resident age of 34.7 years of age. In the 2014 Proposed Budget the Park & Recreation category and sub category of Park & Recreation- Revenue Producing Programs, was allocated $111,500 in expenditures for the upcoming year. Examples of the services, activities and programs provided are as listed:

- Youth Activities (i.e.. Science Explorers, Open Gym, Art Classes)
- Special Events (i.e.. “Who Done It?”, Hike, LEGO Party, Movies in the Park)
- Adult Sports: Fall Softball Leagues, Mens Football, Mens four on four basketball
- Adult Trips (i.e.. History on the Go!, Stillwater Trolly Tour)
- Senior Activities (i.e.. Card Games, Bingo, Mexican Train Dominos, Coffee at Cub Foods)
- Farmers Market
- Learn to Skate Programs

Learning Outcomes

The learning outcomes of the Nature-Based Play Initiative, is to show the communities the beauty of the natural world and how it can be used to better ones well-being. This is a step towards inducing a change in peoples opinions on fitness and well-being, while shifting their perspective on how humans treat the earth and the natural environment. The goal to be achieved is to help give people the skills and the tools they need to aspire to improve their overall well-being past the personal realm.

Behavioral Outcomes

The intended behavioral outcomes are to improve the health and well-being of today’s youth by introducing them to the natural world and how that can be used to create healthy fitness-based habits. The Nature-Based Play Initiative is not limited to only youth, the goal is to included the entire community; young and old, in teaching healthy habits to improve not only physical well-being through using the natural world as a playground, but to help improve the environment and give it the care it deserves. By showing communities how they can use the tools nature provides them, it will change how people treat the environment and themselves.

² City of Rosemount 2014 Executive Budget Summary
Impacts

The impacts that the Nature-Based Play Initiative encourage community, cultural, and leisure events to add vibrancy to quality of life. It will engage children in the natural world, which will increase their appreciation and understanding of the natural environment and its needs. Lastly, it will help improve children's social skills, problem solving abilities, and interpersonal relationships, which will help with them grow developmentally and socially.

Who Will Use these Results and How?

The City of Rosemount Parks and Recreation Department will use these results to help better their communities. The Park and Recreation Boards who will receive the results of this evaluation report, will begin implementing their own community specific Nature-Based Play initiatives. The survey report created will be used to help improve the City’s facilities and services that they are providing to their respective surrounding neighborhoods and communities.
NATURE BASED PLAY IDEALS

What is Play?

Play does not have one definition, it is defined by many actions and situations, it is a, “recreational activity, especially the spontaneous activity of children,” (Merriam-Webster). It is the unstructured, imaginative interactions between people during which, “it is usually voluntary,” (Rieber) when it is not voluntary it is typically for a practical purpose and would not longer be considered play. It would begin to be defined as sport or serious, structured forms of games. Play includes a range of self-chosen activities for one’s own interests and satisfaction. The patterns of play, “reflects the society in which they live in,” (GreenHearts). This is essential when planning park spaces and facilities to help promote the best developmental opportunities possible.

The Developmental Aspects of Play

The design structure of parks and playgrounds can vastly effect the development of children in today’s society. The developmental aspects of play are more widespread and impacting than it is recognized for. Play can consist of heavy physical activity such as running around playing tag with peers during recess or it can be light physical activity such as building houses for bugs with sticks. All aspects of play promote physical development and psychological development or a combination of both. The different play settings can induce certain forms of play depending on the materials provided it can, “enable children to construct and build,” or “practice and extend their physical skills through the use of space, active imaginary games and use of climbing, riding or games equipment,” (GreenHearts). Each of these settings is inducing a form of development whether it is improving their critical thinking skills or their motor functions.

Children reach an age where they become adventurous and they seek challenges and puzzles to solve. Condensing a park into one playground, and a few paved trails leaves no room for the imagination. The trails have a set path, and the playground is just a playground in the long run. Having a natural park can induce the creative challenges that developing children seek, “outdoor roaming: following streams, rails and roads,” (GreenHearts) allow children the choice to challenge themselves in a way that is not provided by paved trails and playgrounds. It develops their decision making skills and their problem solving skills as well as their facilitation skills. These are social cues and understandings that can only be learned through experience, “little attention has been given to the psychological and sociological value of play,” (Rieber). The unstructured play between people and children allows them to design and implement their own ideas and understandings with their peers. This allows them to learn to make connections with others and develop crucial social cues and skills that they cannot learn through technological games. The developmental aspects of play are all-encompassing in the fact that they not only support physical developmental but also intellectual, mental and emotional development. During park and facilities planning these ideals should be considered in process of creating the spaces for future development.
Modern Playgrounds

The checklist for a modern day park consists of a playground structure typically made out of some form of metal. The wood structures degraded too easily and do not last as long, forcing park planners to switch over to the safer and more durable materials. Along with the playground structures it is typical for the park to have asphalt trails or courts. These are all great for certain activities such as sports and accessibility to those who need even surfaces, but in terms of Nature-Based Play, these aspects are inducing set outcomes of play and are leaving children to play in nature and not with it. The Nature-Based Play Ideals suggest using tools already in the natural given environment and using them as playground structures. For example, assembling a line of old fallen logs creates a great balancing game and bridge for kids to walk across.

Nature Based Play

There is no specific definition that gives meaning to Nature Based Play. There is only a set of ideals that create the all encompassing framework of what the Nature Based Play Initiative strives to achieve. “Natural Play Areas are outdoor spaces designated for play that are made of natural components such as plants, logs, water, sand, mud, boulders, hills and trees. These components represent the larger wild environment in a way that feels safe and manageable to young visitors and their parents while inviting imaginative and explorative play,” (Oregon). Nature-Based Play is showing kids the natural environment and the different ways that they can learn from it. One of the Core Principles defined by Green Hearts INC. is the to trust in the inherent play value of nature, one of "the best places for nature play have already been designed by nature," (GreenHearts).

The need for fancy multimillion dollar playgrounds are fun and engaging in their own way but in the terms of Nature-Based Play, they are unnecessary. The metal components and manmade materials used to created these playgrounds are far from natural. The spaces that already exist in parks can be great playgrounds, with their, “rich, healthy, [and] diverse, natural habitats that are accessible to children. If [the] site has such areas, first consider their potential for supporting children’s play without major physical changes or enhancements,” (GreenHearts). By using the materials that nature has already provided, parks can save hundreds of millions of dollars on un-organic, man-made materials used to build the typical playground. Another ideal that many programs and facilities struggle with is to allow children to play with nature and not just in it. Playing soccer in a field is considered playing in nature. Playing with the dirt and sticks to build structures or art is considered playing with nature. Though not all outdoor play is the same, being that there are different bio-diversities in the world, the forms of nature and materials played with will be region specific. “Don’t fear the reaper,” is an excellent example of playing with nature versus playing in nature. Playing with nature can result in uprooting plants, crushing leaves, injuring bugs and breaking sticks. These are not actions that will effect the environment long term. Building facilities, tearing down trees, paving roads and paths are destructive to the environment. Therefore, children squishing bugs and sword fighting with twigs is the better Nature-Based Play Ideal because it not only encourages playing with natural materials but also it encourages the preservation of the earth.
PARK EVALUATION

Nature Based Play Ideals within Existing Rosemount Parks

The City of Rosemount has twenty-five parks in their surrounding community. At each park, there are different features offered based on the size and location of each park. For the Nature-Based Play Evaluation we began our checklist with a breakdown of features.

Evaluation Check List

Natural Features:
- Natural Spaces
- Trees & foliage
- Open un-landscaped fields in the area
- Minimal design structures but still functional
- Natural structures
- Rocks to climb and play on
- Shaded spaces
- Natural Habitats
- Multipurpose Lawn spaces
- Water feature (Pond, lake, swamp, etc)
- Gardens
- Sand, mulch, recycled rubber, playground, pebble gravel, etc.
- Path’s through plantings
- Animal attracting features
- Places for climbing and crawling
- Gathering spaces

- Messy materials (mud, sand, twigs, etc)
- Levels (stone walls, stairs, etc)

Physical Features:
- Hard-surface play area
- Hard-surface paths
- Dramatic play structures
- Trees and natural areas
- Active-play equipment
- Large soft areas (grass, etc)
- Fences, gates, walls
- Semi-private spaces
- Pet/animal-friendly areas
- Flower gardens
- Green houses
- Butterfly gardens
- Transitional spaces
- Access to amenities
- Accessibility

- Secured equipment
- No water hazards
- No entanglement hazards
- No traffic hazards

Safety:
- Fences around hazards
- Appropriate Equipment
- Litter-free area
- Fully-functioning equipment

Does the area:
- Encourage play?
- Stimulate senses?
- Stimulate curiosity?
- Support physical needs?
- Support social needs?
- Allow adult-child interaction
- Allow child-child interaction?
- Support active play?
- Support creative play?
- Support imaginative play?
- Support group play?
- Support games?
- Involve art or music?
- Involve science?
- Support child-nature interaction?

3 Nature-Based Play Ideals Evaluation Checklist 2014
After the Evaluation

The questions asked after the observation are as follows; Does the space mimic nature closely? (i.e. Plants and features native to the area), are the children playing (or able to play) with nature and not just in it?, are they allowed to pick plants, climb trees, throw rocks in a pond, etc?, are there materials around to build things? (i.e. branches/twigs/rocks, etc.). These are all important questions to ask when evaluating Nature-Based Play Ideals in already existing parks. By asking these questions the step forward to improve the natural learning environment in the area can begin.

Park Breakdown

Biscayne Park
Located in the midst of a dense housing area they have a great deal of open, unused space. There is already a small community garden which if expanded could create a wonderful space. The play ground is a fun feature for every one and with a few simple changes such as having mulch as ground covering and removing the curb from around the area, it can extend the playground into the area and create a much more open space.

Carroll’s Woods and Scwarz Pond Park
Has paved and unpaved trails traveling through wooded areas and around Scwarz Pond. There are a few natural trails running from near Rosemount High School towards the edge of the Scwarz Pond. Located on the other side of the pond is the Rosemount Community Center and The Irish Sports Dome, along with baseball diamonds. These are great facilities for structured games and activities but they do not enforce the Nature-Based Play Ideals. A suggestion for this area would include a natural play space located along the natural unpaved trail alongside the pond. This would give Rosemount High School and the local Community Center a place to go to teach about environmental topics and local ecology. The area could be set to include natural team building activities for the older students in the area. The tearing down of a few trees in the area to create the open space needed can be used further as wood chips to cover the ground in the area. This gives the area the ‘messy materials’ that kids can play with and build structures, among other things with. There is great potential in many of The City of Rosemount Parks, the natural structures already in existence should be observed to see the infinite possibilities.
Twin Puddles Park
A small park with two small ponds located within the park boundaries. These two ‘puddles’ can be used for a number of Nature-Based Play Activities including a ‘pond study’ which is simply observing the little creatures that live in the pond. By adding a small dock as a observing deck it allows a person to reach the pond easily. By adding a small feature to an existing one we can easily create a whole new learning environment. Children and families from the area can use the observation deck for pond study or even bird watching.

Recommendations
District wide recommendation for all of The City of Rosemount Parks is to simply include more natural features and facilities. The desire for parks to be clean-cut, mowed and paved in order to fit into the surrounding neighborhood developments is thought to be an important, though it lacks the natural beauty that can be created without using man-made materials. At parks, make use of the features that are already there. For example, leave rocks and logs for play. Arrange them into an area for use and it has created a simple natural play space. Include animal attracting features such as gardens and plants. Certain plants attract birds and butterflies that can be great learning experiences for children observing the ecology of their local parks. To observe the Nature-Based Play Ideals after implemented into the local parks, The City of Rosemount could run specific programs to test focus groups to view the success of the changes. There is a diverse population within The City of Rosemount and the surrounding cities of Dakota County. It is important to include the cultural differences when planning parks and facilities. While one culture may treasure the need for a playground, others might desire simple open spaces. By combing both these desires and the natural materials a natural play space and be created and enjoyed by the entire community as a whole.

Thank You City of Rosemount
The University of Minnesota Twin Cities Recreation, Park and Leisure Studies Students would like to thank The City of Rosemount for the opportunity to evaluate and learn from the already existing park structure. Field-experience is very important in the Park and Recreation field and the opportunity to participate with a local community in order to improve the community based parks is an amazing experience. Thank you, City of Rosemount Park and Recreation Department for the opportunity.
The first picture is of Biscayne Park in The City of Rosemount. It is located in a neighborhood setting and has a playground and an open field. There is an infinite number of possibilities with open fields such as this one. A landscape rendering by artist Nikki Norman shows the possibilities of the area. By adding a hill with a cascading rock side it gives children the area to climb, jump, roll and play on a natural structure. The log stumps are another natural material that are easily made and very fun for kids to jump between them. The long logs can be used for balancing and other games. The stream, though not easily created in a spaced without an original stream, shows an example of hows spaces with streams can be used. It allows children to see what is living in the stream as well as an unmarked path to follow. This is a great example of all of the different things that could be down with simple open park space.

Credit to: NBP Rendering By Nikki Norman
CITATIONS


