Indigenous Permaculture

Dustin Bajer

Organization type:
nonprofit/ngo/citizen sector
Project Stage:
Scaling
Budget:
$1,000 - $10,000
Website:
http://permacultureschool.ca

- Biodiversity
- Cultural preservation
- Food security
- Indigenous cultures
- Education
- Sustainable agriculture
- Sustainability

Project Summary
Elevator Pitch

Concise Summary: Help us pitch this solution! Provide an explanation within 3-4 short sentences.

Those cultures among us who have learnt to live with and honor these ecological patterns and principals through their worldviews, traditions, customs, stories, and legends have been able to live harmoniously with ecology for thousands of years; participating in, working with, and adding to its rich complexity. With this in mind, I was asked to pair with Indigenous Elder Isabelle Kootenay from Alexis Nakota Sioux Nation to teach the Alberta Aboriginal Studies 30 curriculum through the study of permaculture design; a design science that seeks to apply ecological patterns and principals to human systems. We came to call this course, Indigenous Permaculture; an innovative approach to the first Aboriginal Studies class taught in the Edmonton Public School Board.

Who waters an ecosystem? Who fertilizes it? How is it that ecology doesn’t need tilling, weeding, or chemicals? Why it it that if you walk away from a forest and return a hundred or a thousand years later, it’s still thriving?

For billions of years, ecological systems have been refining the patterns and principals that give them their remarkable resiliency. With endless relationships, connections, and pathways, ecology has learnt to harvest, build, and reuse every available resource. With time, these ecological systems gather nutrients, build stability, and increase in complexity to the benefit of the Earth and to those who choose to embrace it.

Through the study of place and ecology, a small diverse group of students began studying curriculum through the researching, planting, growing, and caring of a large variety of plants that have a history of edible, medicinal, spiritual, and cultural use by indigenous people of the area, North America, and around the world. Through their interactions with these plants, students explored traditional uses, stories, and customs, passed down by indigenous cultures for thousands of years.

During a presentation by Chief Gordon Planes, of the T'Sou-ke Nation (home of the most solar intensive community in Canada), students were asked to consider how traditional indigenous customs and worldviews might be applied to contemporary society. As a result students of the Indigenous Permaculture course helped contribute to the creation of a food forest in the school's central courtyard. Containing more than seventy species of edible perennial plants, many with a history of use by indigenous cultures, the food forest is designed to work with ecology; build soil, sequester carbon, encouraging and embracing biodiversity while simultaneously producing food; providing an ecological and educational model in balance with nature.

With a student success rate of over 95%, the Indigenous Permaculture program gathered interest from CBC radio and television and the Edmonton Journal. Though, on perhaps a more profound level, students began to explore the parallels between the patterns that build stable and resilient ecological communities and those that build healthy human ones; the importance of diversity, resourcefulness, the forming and nurturing of relationships, and how the strengths of each and every individual can come together in such a way that their weaknesses don't matter.

About Project

Problem: What problem is this project trying to address?

We view the need for permaculture in schools as two-fold: Initially, the program was created to introduce students to the resilient patterns found in ecology and to incorporate these patterns into our own systems is to demonstrate to a generation of students at good design can go far beyond sustainable (net zero) and actually provide a net benefit to people and the environment. In addition, the very nature of our designs is providing students with cross-curricular hands-on learning opportunities. Since the program started, however, it has become apparent that permaculture design may have some interesting applications in the context of the education system itself; what if we could look at a school as an ecosystem?

Could the cycling of information draw parallels with the efficient cycling of nutrients in a forest? May the branching patterns found in rivers, and trees indicate more effective ways of moving through curriculum? Does the importance of biodiversity back the argument for diversifying instruction?

Solution: What is the proposed solution? Please be specific!

Since its creation, the program has create a food producing forest that contains more then 80 species of edible perennial plants, sequestrers carbon, captures and stores its own water, and increases biodiversity. In addition, however, the garden provides human and educational needs, as a source of food for the Culinary Arts program and as a teaching tool for biology and science classes. More recently, JP Permaculture has established an aquaponics system in the Culinary Arts classroom. The system uses waste vegetable scraps to feed tilapia (fish) which intern add nutrients (in the form of their waste) into the water which provide support for vegetables and herbs growing in the system. After the fish waste is removed from the water by the plants, it is returned to the fish. In the end, both fish and vegetables are returned to the Culinary Arts class to be served to the student population; where the cycle begins again. This system, inspired by the circular flow of nutrients within ecosystems, reduces waste, recycles water, produces food & cross-curricular opportunities, while at the same time bringing students closer to the natural processes that sustain them. Currently, we are investigating the ability to add generators to the +30 bicycles in the school's fitness centre; where students can ride bikes to recharge their electronic devices or batteries.

Impact: How does it Work

Example: Walk us through a specific example(s) of how this solution makes a difference; include its primary activities.

Permaculture is an ecologically inspired design science that seeks to create healthy systems that care for people and the environment. Largely based on systems thinking, permaculture teaches us that if the elements within a design are placed properly can create systems that are larger than the whole. In the context of a large urban school (serving 2400 students and 200 staff), JP Permaculture aims at creating ecologically beneficial systems that serve as educational tools and opportunities for cross-curricular collaboration.

Sustainability

Marketplace: Who else is addressing the problem outlined here? How does the proposed project differ from these approaches?

As part of an educational institution, we do not view JP Permaculture as having any competitors but many potential collaborators. It has always been our policy to reach out to as many students, teachers, departments, administrators, schools, policy makers and community members and
groups.

About You
- First Name
  Dustin
- Last Name
  Bajer
- Confirm a user name that will be displayed publicly to identify your entry
  Indigenous Permaculture

About You, Your Group, or Your Organization
- Name
  Jasper Place High School
- Country
  AB
- Please confirm that this project could benefit First Nations, Métis and Inuit Peoples
  Yes
- Twitter URL
  JP_Permaculture
- Facebook URL
  https://www.facebook.com/Permaculture.School
- Youtube URL
  http://www.youtube.com/user/dgbajer?feature=mhee#p/a/u/1/hf8DA4pixRM
- What categories best describe who your group or organization serves (check all that apply)
  First Nations people, Métis people, Inuit people, First Nations, Métis and Inuit people, Other.
- What best describes your group or organization
  Elementary or Secondary school.
- How long have you, your group, or your organization been operating?
  15 years

Innovation
- Define your idea / project in 1-2 short sentences
  Building a self-sustaining food forest to reconnect students to the patterns and principals of ecology that have sustained indigenous people for millennia.
- Select the stage that best applies to your solution
  Growth (the project is up and running and is starting to move forward)

Social Impact
- Please tell us about the social impact of your idea or project
  Resiliency is a measure of how well connected something is; the web of life that connects all things in a forest creates a system that is independent of external watering, fertilizing, or chemicals and is able to increase in complexity and biodiversity over time.

  What then is a resilient person or community? How can we foster, build, and increase the complexity of the social web of life that builds stability and resiliency in our own lives? Through permaculture, students study the analogies of ecology and the relevance they play to our everyday lives; they learn why diversity should be embraced, why forming and maintaining connections is increasingly important, and how the traditional worldviews, customs, and stories of indigenous cultures have honoured these ecological truths.

  Your Future Goal(s): Tell us what you hope to achieve with your idea or project in the next year
  The creation of a medicine-wheel garden; featuring plants with a history of use by indigenous cultures of North America.

  In 5 years, what will be different as a result of your idea/project?
  The school and community will have a greater appreciation and understanding of the ecological processes that have sustained human existence for hundreds of thousands of years, and an increased appreciation of how many indigenous cultures around the world have embraced these principals (though worldviews, stories, legends, rituals, and traditions) in ways that support ecological and human health.
In practical terms, this means:

- The return of 'waste' back into the energy flows of the school. i.e. Reducing waste by turning it into a resource; creating compost and healthy soil with culinary scraps.
- An increased focus on producing food at the school; vegetables, fish, poultry.
- An increase in the biodiversity of the green areas around the school.

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**Sustainability**

**Tell us about the people/partnerships that are already involved and why they are important to your idea or project.**

On a financial level, Jasper Place Permaculture has received $5000 from Alberta Ecotrust's Young Environmental Stewards (Y.E.S) grant, $2000 from the Epicure Foundation, $300 from the Emerald Foundation, and a donation of $2500 worth of equipment from Alberta Rural Development. As one can imagine, these partnerships have been important for the creation of the projects initial infrastructure and have greatly contributed to the success of the program.

On a partnership level, however, the program has made many connections within the First Nations (Alexis/T'Sou-ke Nations) and Educational communities. News of the program has been spreading to numerous other school (ex. Amiskwaciy Academy) and post-secondary institutions (University of Alberta) who are looking to take on similar initiatives.

**If there are other people/partners that you will reach out to tell us who they are and why they will be important to your idea or project.**

One theory of permaculture is that ecological communities derive their resiliency from the intricate web of connections found in ecosystems. On a social/community level, we firmly believe the program needs to continue to branch out and partner with the as many individuals, groups, organizations, and communities as possible; so that we may come together in such a way that our strengths align so that our weaknesses don't matter.

The importance and wealth of traditional knowledge held by our indigenous elders can not be underestimated; the skills, traditions, stories, and experience take a life to gather. As the program continues to grow, it will be imperative to create and build connects with our indigenous communities and elders.

The local and provincial permaculture communities have been very supportive of the permaculture initiatives at Jasper Place; as a community, there are many professionals with a variety of experience to draw from.

**Describe the kinds of support you receive (other than money) or will need to support your idea or project (e.g.: donated, space, equipment and volunteers)**

The largest supporter of the program has been Jasper Place High School itself; as an unusual initiative from the beginning the school and principal Jean Stiles has been extremely supportive with the project. Through the use of space, time, willingness to experiment, and the full-time employment of myself, Jasper Place High School has put a lot behind the program.

**Do you currently have funding for your idea or project?**

No (skip next two questions)

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