Lesson Plan Abstract

LESSON TITLE: The Human Loom Project

LESSON TOPIC: Woven willow landscapes

PURPOSE OF LESSON: Weaving together natural and unnatural systems is the challenge that landscape architects are faced with. Like a loom, a landscape architect’s work creates a beautiful fabric from the many fibers that make up our cities and towns. Providing opportunities for youth to explore landscape scale arts and craft projects outside of the classroom will foster generations of creative place makers. More than ever, designers must be mindful of our precarious human condition and our need to adapt to the living systems around us. When so much of our education is moving toward digital information, a landscape architect’s education must be grounded in the physical. A simple way to do this is to get students outside, provide them with a toolkit, and allow them to create. A student who has participated in The Human Loom Project will be able to work together with their peers to create living sculptures from sustainable materials that will continue to grow and provide places for them to play in, move through and contemplate for life. To echo the opening lines of John Stilgoe’s Outside Lies Magic, “Go outside, move deliberately, then relax, slow down, look around.”

KEYWORDS: Outdoor Education, Place Based Education, Plants, Land Art

TARGET GRADES: All Grades and Ages

DURATION: 3 Hours in the Spring and Three hours in the Fall

STUDENT RATIO: 1 teacher for one class of students

MATERIALS & EQUIPMENT: The Human Loom Project lesson plan includes all written and visual information needed to conduct the workshop. Many species of willow shrubbery are suitable for the project. Generally, larger, well established willow masses in the 8’ -16’ height range will work best. If living willow shrubs are not easily available, cuttings from live willows will work. In this case, these cuttings will need to be firmly driven into the area where the project will take place. Additional tools to consider having available for the project are pruning shears and hemp twine. Notebooks and pencils for students to draw and journal should be considered.
The teacher and a landscape professional will determine a viable location for the Human Loom Project site. An ideal site will be within a riparian area or drainage way near to or on school property. The site should contain medium to large willow shrubs (8’-16” tall).

After a suitable site has been selected and before the project start date the teacher and landscape professional should walk the site and flag desirable willow shrubs to be woven together. Clusters of shrubs approximately 8’-12’ apart will work best.
Lesson Plan Outline

Introduction
2-3 Project Purpose
4 Project Exchange
4-6 Project Logistics

The Human Loom Project
7 Practical Planting
8 Masterplan
9 Go Outside
10-12 Move Deliberately
12 Relax, Breath, Look Around

Conclusion
14 Project Take Away
14 Seasonal Repetition
Introduction
Introduction

Project Purpose
Why are you here and why am I here?

Does your class study science, art or language arts? Are your students bursting with energy and need a break from the classroom? Just go outside! I have talked with educators at all grade levels looking for ways to help their students break through educational barriers. Traditional recess and gym classes may not provide students with a chance to draw connections between what they learn in the classroom and the world outside its walls. If you are serious about educating the next generation of naturalists, artists and scientists then The Human Loom Project is just what you and your school need.

I grew up in Chicago-land going to school in overfilled, underfunded and understaffed classes. My last outdoor recess was in 5th grade. I felt locked behind closed doors, and when I graduated from High School I didn’t apply to college. Instead, I made some money and went as far from the Midwest as I could. During my travels I realized that I actually loved to learn, but I did so by getting away, moving around and thinking about the connections I drew from experiences. I spent time outside riding a bicycle, hiking on paths, sleeping in parks and watching performances in amazing places around the world.
Eventually, I decided to go to college and study landscape architecture because I had fallen in love with outdoor places and I wanted to design ones of my own. In college I was asked to read the first chapter of John Stilgoe's *Outside Lies Magic*. In simple terms he implores everyone to go outside while they still can. Everything finally clicked. I needed to engage my mind and body together.

I enrolled in an experimental course called “Artistry in Wood” where we covered land artists including Patrick Daugherty. These artists took typical landscape materials and transformed them into art. Around the same time I started working at a Native Tree Nursery, planting baby trees from seeds we collected. My boss's property ran along a massive riparian corridor. After work I would go down to the river and experiment with plants, weaving together 20-25 foot tall willow wisps into shapes. Over the next three years I continued to build upon what I had started while developing a technique of creating spaces out of living willows.

After college I moved to Bozeman, Montana to work for a landscape architecture firm. DHM design has supported my interest in plants, people and places. This past spring a co-worker and I volunteered with second grade classes at Irving Elementary School in Bozeman to create a living willow archway in their playground. This project has snowballed into other projects with schools in our community, and this fall I am happy to be helping students at Headwaters Academy create a staked willow sculpture.

I decided to create this lesson plan because teachers need to provide creative experiences for their kids outside of the classroom before they get to college. My hope is that The Human Loom will help kids connect to the natural world right where they are, and help them realize their own unique creative potential.
Introduction

Project Exchange
What do you give and what do you get?

If you choose to participate in The Human Loom Project, at the very least, you will get to take a break from the books, emails and papers on your desk, and go outside. “In nature, nothing is perfect and everything is perfect. Trees can be contorted, bent in weird ways, and they’re still beautiful.” You and your students will be using your minds and bodies to create a beautifully imperfect place out of living materials.

Depending on where you live, this may cause you to sweat, require you to drink water and may leave you a little winded; yet the more time you can devote to the project, the better the payout. In one class period you may weave together enough material to create a place for a few students to sit under. I recommend that you devote one week in the fall, and again in the spring to participate in the Human Loom Project. The more time you can allow yourself and your students to get outside, move deliberately and then contemplate what you create, the more likely you will want to revisit the project year after year. If you rush the project, it may not be as well received and may be forgotten.

Regardless, you will obtain something from The Human Loom Project. This may include but is not limited to: a break from grading, a break from reading and more time spent interacting one on one with students. The project will help students draw connections between science and art and enable them to create beautiful sculptures that they can be proud of. These woven willows can provide a place to read and play with your students, as well as a place they can take their families, and possibly their own children, for years to come.

Project Logistics
Where, when and how much?

What kind of landscapes are near your school? Illustration 1.1 is a graphic study I did of how vegetation manifests itself in the patchwork landscapes of Iowa. The Human Loom Project works well with either living willow shrubs or willow cuttings. You must have access to willow material that is large enough to be woven together (See illustration 1.2). Living willow shrub thickets around 10’-12’ tall and above are ideal. A site with multiple thickets can facilitate a large project. If your school has access to a large riparian area with multiple willow thicket clusters consider involving other classes to create a large living structure in the floodplain.

If your school does not have access to any living willow shrubs, you will need to acquire cuttings from a large willow tree or shrub that can be staked into the ground. While this will take more time to set up and take longer for the willows to take root and grow, this option allows for you to better control the size and location of your future living structure.
Consider creating your living structure inside a courtyard, inside your schools edible garden or in the playground. By firmly staking willow cuttings into the ground, students will be able to weave together stakes to create spaces. Willow cuttings should be long and large enough to hold their own when staked into the ground. Cuttings that are too thin will easily break. A cutting at least 1” in diameter at the widest part is a good starting point. A pick up truck load should suffice.

The best time to weave is before or after the fragile willow buds are forming. Creating the structure in fall, allowing it to sit dormant over the winter and watching it come to life in the spring is amazing; however starting early in the spring will have the same effect. Avoid creating the structure when it is too cold (late fall or late winter). Willows will bud at different times every year, but a good rule of thumb is to start the project as soon as the first spring flowers are in bloom.

Another important factor to consider is time. How many hours a day are you able to spend with your class? Do you switch every period or are you with the same class all day? If you are in a junior high or high school, consider breaking apart the three components of the project into three separate class activities, a total of three hours. If you are with your students all day, you have more flexibility to set aside a few hours in the spring and fall to work on the Human Loom Project.
Illustration 1.2
Ideal spacing of willows for weaving along a stream
Willow trees can grow just about anywhere, and will grow quickly when watered frequently. Talk to your school’s principal and grounds crew to set aside a 20' by 20' space outside to start growing willows. Depending on your school’s location, different willows will grow better than others. Research potential willow shrubs that grow natively in your area. I recommend selecting species that grow in clusters with long shoots. In Iowa, sandbar willow (Salix exigua) stands were my favorite. When in doubt, contact a local Department of Natural Resources Ecologist to assist in helping you procure live willow cuttings. I have included a diagram below to help you stake live cuttings that will grow into live shrubs.

Illustration 1.3
Willow staking diagrams
A masterplan is a guiding document that landscape architects create, then reference during the construction of a project. Having a guiding document when your class participates in the Human Loom Project will help everyone get on the same page during the creation of your living masterpiece. The masterplan can be simple and does not need to include scaled dimensions and specific callouts. More than anything, this is chance for you and your class to visualize what you will be creating. Below is an example of a simple masterplan for the Human Loom Project.
The Human Loom Project

Go Outside
Get out of the classroom and into nature!
(15-30 minutes)

What is it like when you leave your school building? Not all schools have the same access to open space. Going outside may be difficult at some schools because of traffic, barriers or other impedances. If you have concerns about finding a suitable location within walking distance from your school, consider leveraging local contacts and your neighborhood network to find a safe and accessible area to utilize as a project site.

In urban areas, take your class on a walk in the neighborhood to a green space. In rural or suburban areas, walk the perimeter of the school grounds. End the walk at the desired location for the Human Loom Project. After arriving ask the students to sit or stand in a circle and take turns answering a question that will help them relate to their surroundings.

Example question for younger students: Name three things you enjoy about this place?
Note: Listen to the responses of your students. Can you notice any patterns of things that they are interested in? Encourage younger students to observe nature at micro and macro scales while they explore the site. Consider having younger students lie on the ground and look at the soil or have them study the motion of branches swaying in the wind. Is there more there than meets the eye, perhaps interesting smells or sounds that the students are aware of?

Example question for older students: Imagine this place 10 years from now; what is it like?
Note: Listen to the responses of your students and try and draw connections between what they are observing and what they are learning in class. This exercise is intended to expand students’ individual perceptions of place, identity, diversity and society, sustainability and nature. This a great time to talk about current issues in the community, local developments or even climate change and a sustainable future for the neighborhood.

Remember to use this time to allow you and your students to immerse yourselves in the outdoor environment. Do not feel obligated to fill the entire 30 minutes with discussion. Are your students aware of where they are? Listen to what they say about the place and encourage them to talk with each other about what they observe.
The Human Loom Project

Move Deliberately
Use your body consciously, skillfully and creatively!
(30 minutes or more)

You have gotten outside, seen the location. Now it is time to move your body, to create, to bend and weave. Anyone can participate in the Human Loom Project, regardless of age or ability. The ultimate goal is to, as a class, become a human loom. A human loom is able to transform and create, combining separate entities into a cohesive whole.

Weaving together complex information into something beautiful is an essential duty that landscape architects perform. The Human Loom Project is an opportunity for students to workshop with design principals at a scale that is fun and challenging. Above all, the Human Loom Project is a team building exercise. It will be impossible for your class to weave together a lasting structure without working together with a collective vision.

The following illustrations and descriptions outline a typical progression of The Human Loom Project:

The teacher and their students arrive at a riparian area containing large living willow shrub clusters. Students should receive natural fiber cord that they can use to tie together large willow branches. The teacher should help divide students up into pairs to begin weaving (5 minutes).
Together the teams begin to bend branches toward each other, from one shrub thicket into another one. After the larger branches have been tethered together with twine, smaller branches can easily be woven into the sturdy form created by the larger branches.

Begin to create volumes, arches and globes from the branches. Consider how a branch will bend and be able to weave into another. Stabilize weak areas with more woven branches and consider tying down branches that tend to want to fly away from the emerging structure.
Set a progress goal and stop when that has been reached. It is better to finish a section and revisit later than to leave the structure looking unfinished, where it will more likely be tampered with or break apart. Remember, the Human Loom Project is a living thing, it will grow and develop over time. You do not need to rush the project to completion on one movement session. Stop the students 15 minutes before you need to return to the building and have them sit down under the structure. Take a progress photo.

**Relax, Breathe, Look Around**
Contemplate the place you created together
(15 Minutes)

In the third stage of The Human Loom Project, move away from motion to stillness. Students have just been actively playing and creating, so they may be reluctant to stop what they’re doing. Make sure to circle up again. This time, instead of asking a question, tell them to sit and meditate upon what has just happened. Encourage students to write down their ideas, providing paper, or having students bring along a sketchbook to draw the shapes that they see in the woven willow structure. Have the students hold onto these ideas and drawings for later.
Conclusion
Conclusion

Project Take Away
What happened, what did I learn?

Every time I have created a living woven willow sculpture, something new happens that I couldn’t have expected. I imagine that your experience participating in the Human Loom Project will be full of first times and new experiences. I’m sure that what happens with your class will surprise you, excite you and give you a reason to revisit the project season after season.

What I am particularly interested in is the longevity of this project and how these places will continue to impact students, their families, their school and their neighborhood years down the road. I decided to share my interest in weaving willows with kids because I believe they harness the potential that the future needs. A resilient future rests on the shoulders of youth that care about their planet.

Recent news of climate change, globalization and urbanization are going to become more important for today’s youth than any generation before them. How can you continue to help your students understand sustainability, resiliency and the natural world? A great way to start is with The Human Loom Project every fall.

Seasonal Repetition
Continue building upon your Creation!

The best part about participating in the Human Loom Project with your students is that the place you create will continue to live and grow each season. New branches to weave will continue to grow back, and depending on how wet the site is, this could happen very quickly. Setting aside twice a year to continue working on the project will help your students have a metric to gauge their own growth and development. Who knows, maybe the willow structure will survive longer than you. Maybe the grandchildren of your students will attend the same school and sit in the same place your class once started creating.