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Queen's University Indigenous Land-Based Learning STEM
Queen's University Biological Station

Rope Making Activity

Rope/Cordage Introduction

Anishinaabe Knowledge Keeper Caleb Musgrave from Hiawatha First Nation in Ontario has an educational YouTube channel called:

- Canadian Bushcraft (https://rb.gy/jq6c6) and a Podcast called
- *The Canadian Bushcraft Podcast* (https://rb.gy/gd1ee).

Through his online teachings Caleb shares that:

Cordage is made of fibres. The more fibres that are added the stronger a cable is. Also, there are many different materials that rope, or cordage can be made from. These materials include:

- *Tree Bark:* Many hardwoods and some softwoods barks can be used to make cordage. In Ontario basswood, hickory, willow, white cedar, leatherwood, and silverberry/wolf willow can be used.
- Annuals and Perennials: The outer bark of some annuals and perennials can also be used. This is best harvested in the fall. Milkweed including common milkweed, swamp milkweed, spreading dogbane, Indian Hemp/ Hemp dogbane, velvet leaf, stinging nettle, wood nettle, and fireweed work best.

In order to separate the bark a process called retting is used. Retting allows the bark of the plant to sit in a damp environment. This form of controlled rotting allows bacteria in the environment to begin breaking down the connective tissues and pectin that bind fibres together.

- *Roots:* Conifer trees such as spruce, pine, cedar, tamarack and fir offer strong materials for cordage making in their roots. The bark of roots needs to be peeled off. Boiling roots makes them more pliable. This creates great material for lashing things together.
- *Grasses:* Cattails and other water grasses such as greater bulrushes can be twisted into strong cables. Grasses are best harvested when they go to seed.
- Vines: Internationally, there are many vines used to make cordage. In Ontario there are
 not many that are used because they are either toxic or too fragile. The one exception is
 Wild Grape Vine.
- *Shoots:* Young saplings or shrubs can also be twisted to make cordage until the wood fibres become supple. For this, willows, dogwoods, birches, leatherwood, maple, elm, hickory, and other hardwoods are best. The Anishinaabe traditionally made rabbit snares out of slender red osier dogwood/red willow shoots.
- *Rawhide:* Animals fibres are typically stronger than plant fibres because they are comprised of protein as opposed to cellulose. Rawhide is prepared by fleshing and dehairing and cutting into long strips.



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- *Tendons:* Dried tendons from almost any mammal, bird or reptile can be twisted into strong cable. Deer and elk tendons work especially well.
- Guts: Intestines can be used after they are washed thoroughly and stretched out to dry.

How Do You Make Rope/Cordage?

- 1. First, Take the wing of cattail and roll it down your leg until the tension gets tight. This motion of rolling should create it to twist on itself. Once it twists, it will fold onto itself and create a loop.
- 2. Once you have a loop, pinch it between your thumb and index finger on your non-dominant hand. When it is held in place, determine which is the top string and which is the bottom string.
- 3. Use your dominant hand to grab the top string. Roll or twist that hand forward. Grab the bottom string and pinch it between the middle finger and the index finger of the dominant hand. Twist the dominant hand backwards, pulling the bottom fibre back with you, to the starting position. You will continue this pattern of grabbing the top strand, rolling your hand forward, grabbing the bottom strand with the free middle finger and pulling back. Roll forward, grab, pull back! Eventually, you will see how the cords twist onto each other. Another way to make cordage with lighter materials is to twist the fibres together using that same rolling motion on your leg.



- 4. If you want to extend your cordage, get another cattail string/wing, and add it onto each existing (top and bottom) fibre as close to the twist as you can. Continuewith the same motions (roll forward, grab, pull back) so that the new piece is just incorporated into the twist.
- 5. When you are finished, you can create a simple knot to tie it off.

There are multiple ways of making cordage. You can check out these resources for support!

- Nativetech.org (http://www.nativetech.org/cordage/index.html)
- Basics of Cordage (https://www.youtube.com/watch?v=HUhuqtHR3Rc)
- Cattails and Reverse Twist Cordage (https://www.youtube.com/watch?v=ckqckOag2eI&t=212s)
- Make Natural Cordage in Minutes (https://www.youtube.com/watch?v=X3I_ele6Ums)