



## Connecting Math to Our Lives and Communities

### Tying a Knot

#### Introduction

Knots are all around us! From tying our shoelaces and neckties to complicated surgical procedures, knots can be used in countless situations! The earliest fossilized fragments of ropes and knots date back 15,000 to 17,000 years ago! These dates make knot technology older than the wheel or the axe! Knots have been an important part of building fishing nets, hunting traps, and basket making.

In the Mi'kmaq legend "Rabbit Snares the Moon" a rabbit, or apli'kmuj, who hunts by using snares and traps to feed themselves and their grandmother is troubled when their catches begin to be stolen at night. To catch the thief who is stealing from their traps, the rabbit fastens a trap so cleverly that they are sure that they will catch the robber. Rabbit's trap does the trick, and they end up catching the man in the moon! As rabbit attempts to approach the man in the moon the bright light blinds and hurts their eyes and till this day rabbits are seen rapidly blinking with pink around their eyes due to the damage that rabbit endured that night. Rabbit finally releases the man in the moon on the condition that he never steals from rabbit's traps again or return to our Earth. This is just a brief overview of this legend, for the full legend visit our website and look in the food security knot module!

Just like rabbit from this legend cleverly fastened knots can allow for humans to hunt and catch delicious and nourishing food! In this activity we will explore tying basic knots and finish by fastening our own na'puktagn, or snare.

#### Math Connections

- Measurement
- Patterns
- Geometry

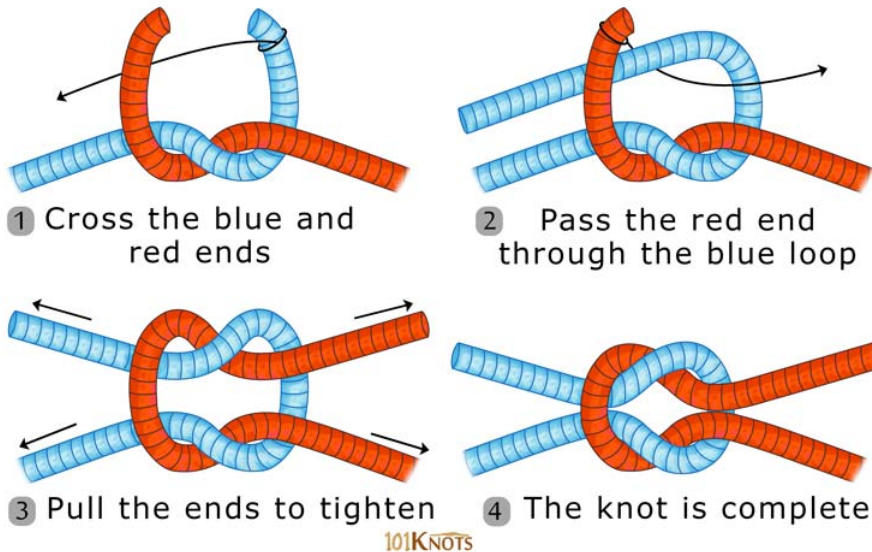
#### Materials

- Measuring device
- Rope
- Wire
- Scissors

## Activity

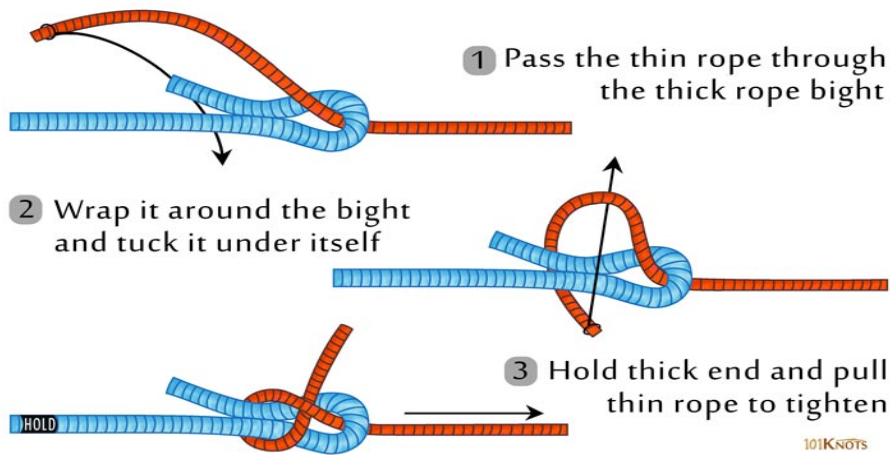
1. The Square (Reef) Knot: This knot is used to tie the ends of two separate ropes of the same thickness together. This knot is only suited for light duty use as it can slip and come undone. To begin cut two 20cm long pieces of rope and follow the directions below!

### Square (Reef) Knot Instructions



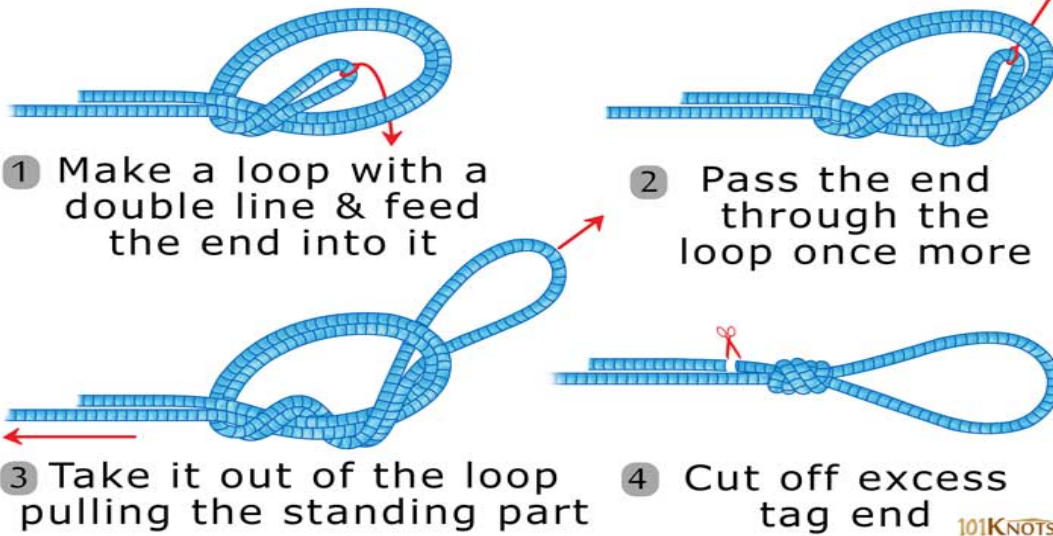
2. The Sheet Bend: This knot is also known as a weaver's knot, and like the square knot it is used to tie the ends of two rope together. This knot works well with two ropes of different thickness but can be used on rope of the same size as well. This is a more studier alternative to the square knot! To begin cut two 20cm long pieces of rope and follow the directions below!

### Sheet Bend Step By Step



3. The Surgeons loop: This knot is used in fishing to add a loop to the end of lines and allows for the lines to be connected to other loops. This is a strong and reliable knot. To begin cut 40cm long piece of rope and follow the directions below!

## Surgeon's Loop Instructions

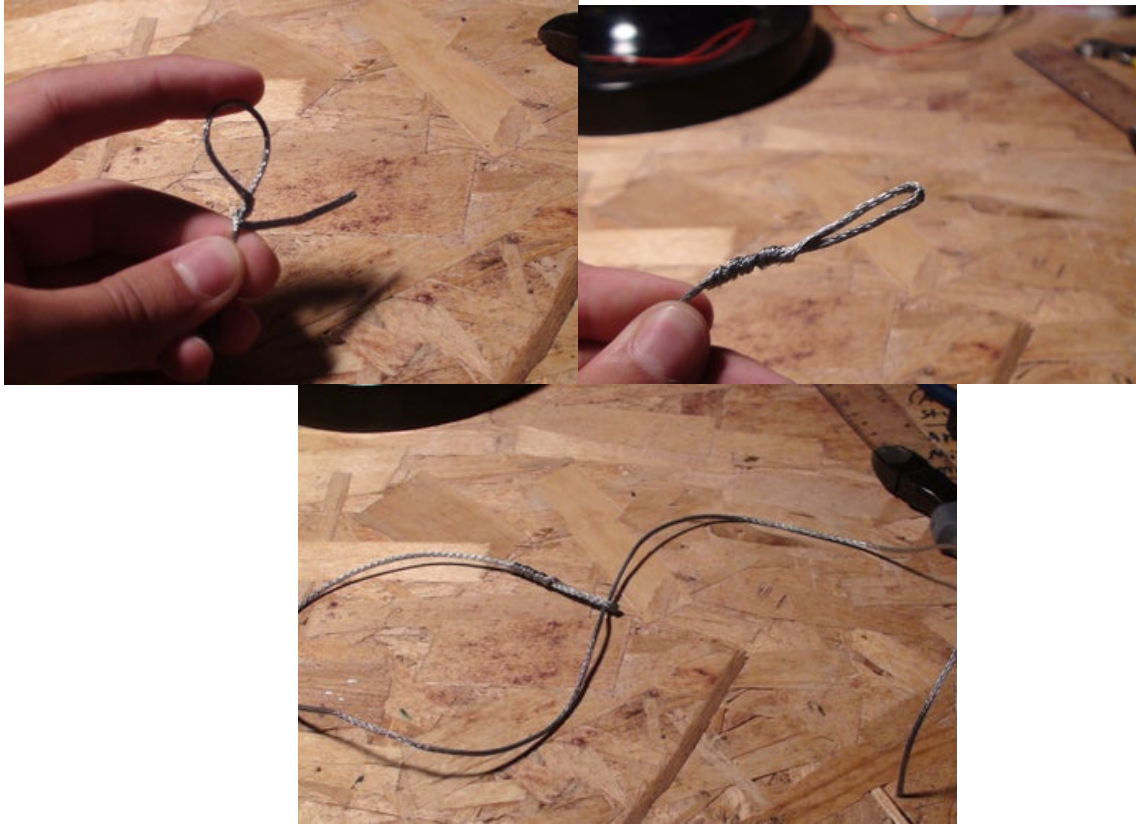


Great job with your knots! If you enjoy camping, hunting, or fishing you may have already been familiar with these basic knots.

- What are other times in your life that you have used knots?
- Is it useful to know a variety of these knots?
- Does it matter the size, strength, or thickness of the rope/material that you are using?

## OPTIONAL:

Building a rabbit snare:



1. To build your snare take the 76cm long wire that has been included in your CMTOLC kits.
2. Make a small loop in one end and twist the end of the wire around itself to hold the loop in place.
3. Thread the other end through the hole to create a large loop.
4. Following the same steps as above create a smaller loop on the opposite end of your wire this can be used to attach your snare to a stick if you choose to use it to catch rabbits. For more information on setting a rabbit snare head to our CMTOLC website under the Food Security Section.

**Send us a photo of your knots at Connecting Math To Our Lives and Communities email ([cmtolcstfx@gmail.com](mailto:cmtolcstfx@gmail.com))! ☺**