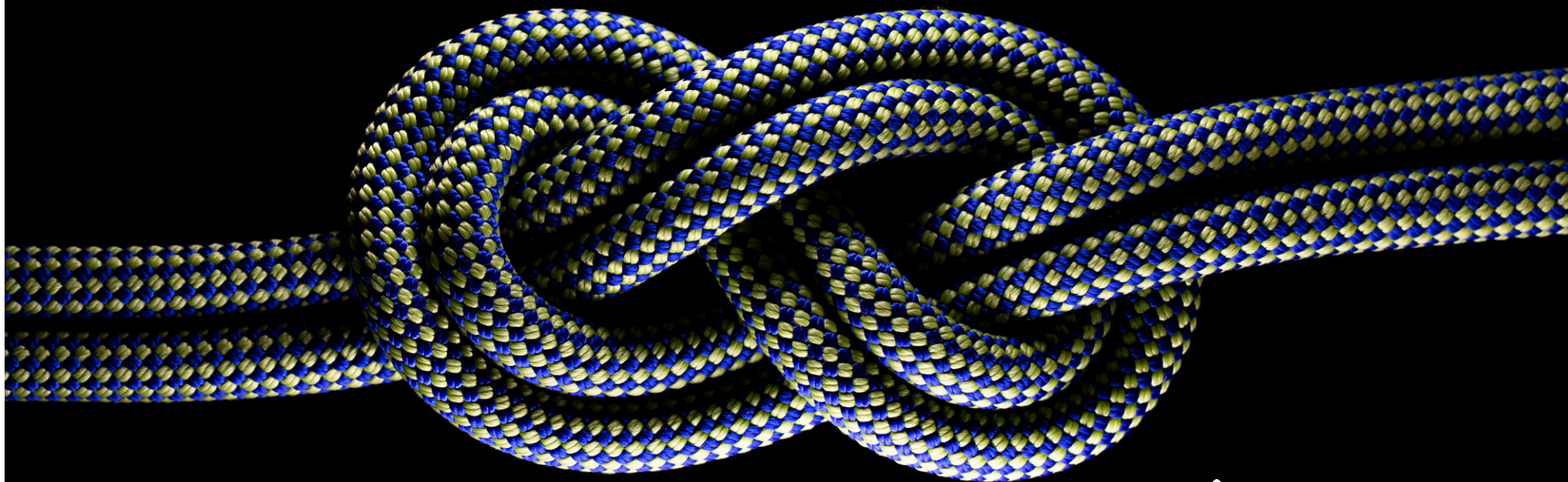


ESSENTIAL KNOTS



WHAT KNOTS TO USE

Consider a task to be done to secure an item. It could be fixing a rope or tape to a pole. It could be using a rope for pulling an object. It could be tightening a rope to secure a tent or stop it from flapping in the wind. It might be tying poles together to make a shelter.

In the past rope and cord was the only available item to use to secure things of every kind - from closing your shoes or making a parcel to hauling in a large rope from a ship.

Today, there are many inventions that do an excellent job of these tasks - velco tape, ratchet straps, cable ties, duct tape and packing tape and indeed they often do a better job than the use of rope or cord. However, the versatility of rope and cordage has yet to be surpassed. A simple length of string or paracord coupled with a knowledge of the best knots to use can become a life long skill that can be used for many tasks and situations.

As the Scout Motto states 'Be Prepared'

Today, ropes are used in the main in a climbing situation or as part of safety mechanisms (window cleaning rigs) such as employed in industrial situation or rescue settings. Despite the complexity of these situations the knots used are down to an essential 4-6 knots.

Fixing knots used for fixing a rope to an object - while there are many there are essentially two knots which are still the best ones to use.

This resource presents the essential knots and most common knots used for the purpose they have been designed. If you can learn them and use them regularly you will develop your knot tying skill. While there are thousands of knots that can be learnt - most are developments of the essential knots, or are fancy knots used for bracelets or origami rather than practical daily use.



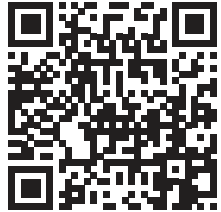
Knot tips

A knot should be easy to tie and untie in all conditions (wet, icy, heavy weather). It should do the job that it was designed for and maintains its strength under strain.

The strength of a knot is determined by the material used to tie the knot. Its strength is derived from the materials used in the rope and the friction that is created in the knot.

Use extra hitches or secure knots (on essential knots) to give extra strength and reliability if required.

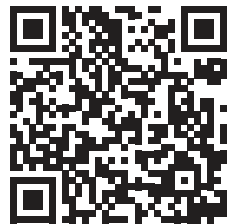
JOINING KNOTS



Reef knot



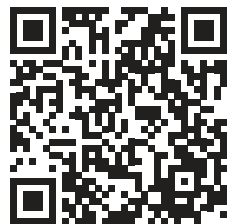
Perhaps the most common knot known to people. It is easy to tie and used in rope work and first aid. It does have a tendency to work loose when not under tension so not the best knot for joining ropes together.



Sheet bend



The sheet bend is similar in construction to the reef knot. It is easy to tie and was used in shipping and harbours to bring ashore heavy lines. It can be improved by doing extra turns to provide more friction in the knot structure.



Double Fisherman knot



The double fisherman knot is a very secure way of joining two ropes together. It is comprised of two knots working together to create its strength. The same knot with up to ten turns is used to join fishing line.

LOOP KNOTS



Bowline

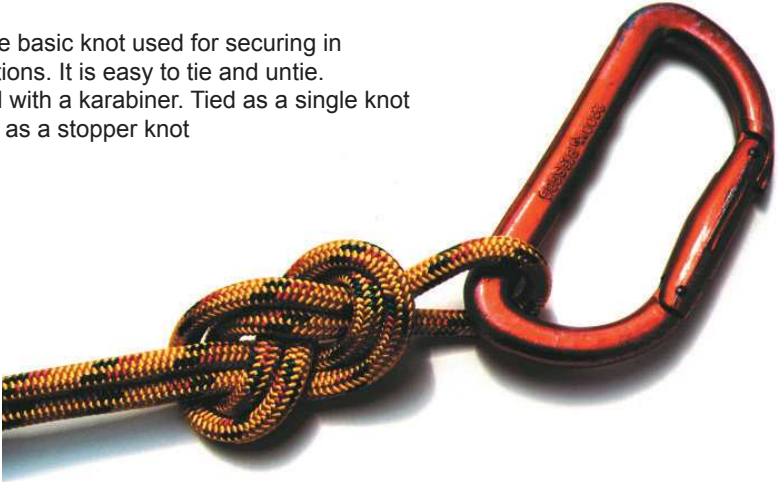
Non slip loop knot - commonly used in sailing. A stopper knot can also be added if the knot is created in wet rope and to prevent the knot slipping.



Figure of eight loop



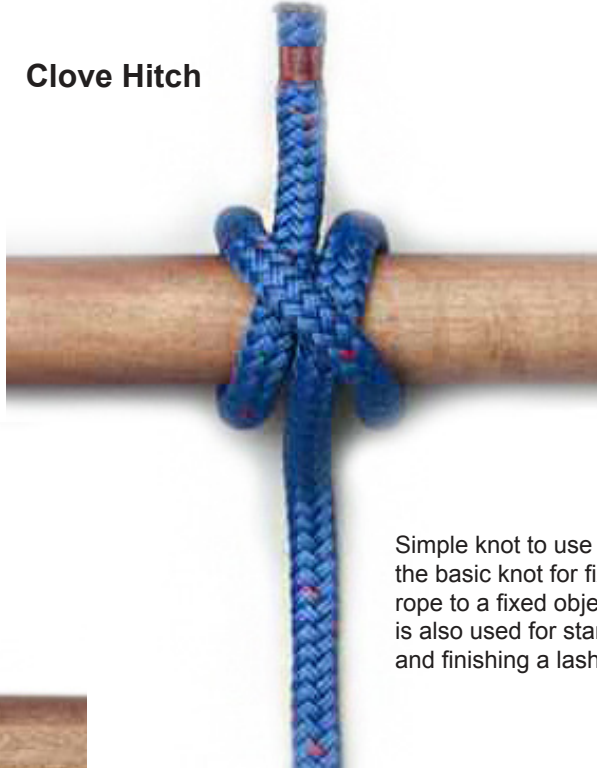
This knot is the basic knot used for securing in climbing situations. It is easy to tie and untie. Normally used with a karabiner. Tied as a single knot it can be used as a stopper knot



FIXING KNOTS

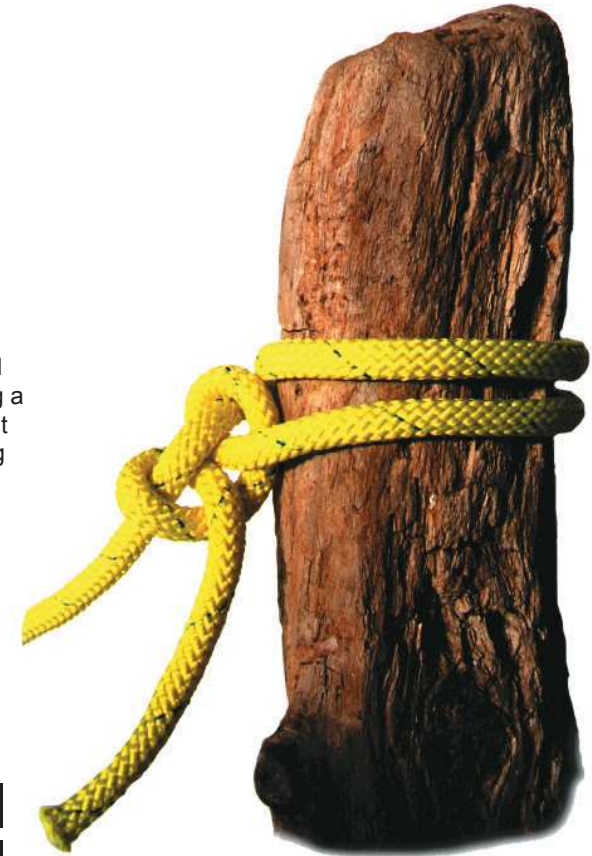


Clove Hitch



Simple knot to use and the basic knot for fixing a rope to a fixed object. It is also used for starting and finishing a lashing

Round turn and two half hitches



This knot places the strain on the loops around the timber rather than the hitches making it easy to open after use.



Constrictor Knot

This knot is similar to the Clove Hitch but provides more friction and grip.



TENSION KNOTS



Taut line hitch

This hitch can be slid up and down a line. It can be used to apply tension to a rope or as a guy rope knot.



Trucker hitch

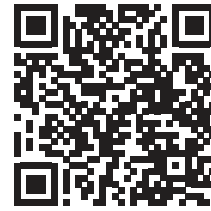
This hitch acts like a pulley system taking up tension in the rope.

FRICION KNOTS

Pruzik Knot

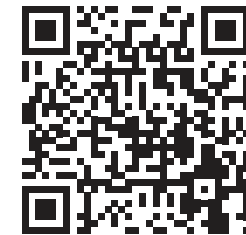


The pruzik Knot is a friction knot. It moves easily when not under tension but one weight is applied to the loop it does not move. Primarily used by climbers, cavers and rescuers to control movement and act as a safety device. It is also useful when climbing ropes using a series of pruzik knots.



Bachmann Knot

The Bachmann knot is similar to the pruzik knot in that it works the same way - as a friction based knot. The knot is created using a karabiner that also acts as a handle to move the knot. It is particularly useful in cold and wet conditions.



The Italian Hitch (also known as the Munter knot) is primarily used by climbers, cavers, and rescuers to control friction in a life-lining or belay system. It can also be used as an abseiling knot.

Italian Hitch