

Practical Knot Tying For Geeks

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The basic idea

We're going to start with the two simplest possible knots, the overhand knot and figure-of-eight knot, and show how to build them up into more complex knots that cover most of the things you might want to do with rope.

You will need:

Two 30-100cm lengths of 3-7mm cord, preferably in different colours, plus a stick/pen/karabiner/spanner/chair leg/etc to tie them around. Paracord is ideal, shoelaces are fine, yarn or thread are probably too fiddly for learning, climbing rope is manageable but bulkier than ideal, giant Napoleonic rigging hawsers are Right Out. Suitable materials will be supplied at the in-person session, but if you're joining in at home, you'll need to supply your own.

Stopper knots

The overhand knot, <https://www.animatedknots.com/overhand-knot>

The double/triple/etc overhand knot (an overhand with more turns),
<https://www.animatedknots.com/double-overhand-stopper-knot>

The figure-of-eight knot, <https://www.animatedknots.com/figure-8-knot>

Bends (knots which join two ropes together)

The fisherman's bend (a bend made of two overhand knots)

The double/triple/etc fisherman's bend (a bend made of two double overhand knots),
<https://www.animatedknots.com/double-fishermans-bend-knot> - please ignore the recommendation on that page to use it for abseil ropes and use an EDK instead!

The Double Flat Overhand Bend aka the European Death Knot (another bend made of two overhand knots, which presents a flat surface to one side so is good if the knot must slide over a surface), <https://www.animatedknots.com/flat-overhand-bend-knot>

The water knot (yet another bend made of two overhand knots, works well when tied in webbing or ribbon), <https://www.animatedknots.com/water-knot>

The figure-of-eight bend, <https://www.animatedknots.com/figure-8-bend-knot>

Hitches (knots which attach a rope to a solid object)

The half-hitch (a variant of the overhand knot),
<https://www.animatedknots.com/half-hitch-knot>

The round turn and two half-hitches (a more secure hitch),
<https://www.animatedknots.com/round-turn-two-half-hitches-knot>

Loop knots

The overhand loop, <https://www.youtube.com/watch?v=6d4M568QTK4>

The slip knot, <https://www.animatedknots.com/slip-knot>

The packer's knot (a slip knot plus an overhand knot to stop it loosening). I think this is equivalent to what Animated Knots call a butcher's knot

(<https://www.animatedknots.com/butchers-knot>) but not to what they call a packer's knot!

Another packer's knot, this time with the overhand knot inside the loop to stop it getting too tight, e.g when going around someone's waist. I couldn't find this one on Animated Knots, but you can hopefully work it out from that description!

The figure-of-eight loop, either tied in the bight or rewoven,

<https://www.animatedknots.com/figure-8-follow-through-loop-knot>

Any knot can be made releasable by using a bight of rope instead of the working end

The highwayman's hitch (a releasable hitch made entirely out of the "use a bight instead of the working end" trick), <https://www.animatedknots.com/highwaymans-hitch-knot>

Slide-and-grip knots

The Prusik knot (a knot that grips when under tension, but slides freely when unloaded),

<https://www.animatedknots.com/prusik-knot>

The Klemheist knot (a variant on the Prusik knot),

<https://www.animatedknots.com/klemheist-knot>

The Prusik used as an adjustable loop knot; I'm not sure if this has an official name, but the

Tarbuck knot (<http://knots-guide.blogspot.com/2008/04/t.html>) and taut-line hitch

(<https://www.animatedknots.com/midshipmans-hitch-knot>) are very similar.