

The National Curriculum Outdoors: Years 3, 4, 5 and 6: Knots and lashing instructions

Tape knot (also known as a water knot or ring bend)

The tubular webbing used in some of the activities in the *National Curriculum Outdoors* books can be purchased from retailers selling climbing, lifting and riding equipment – simply search online for ‘tubular webbing’.

We recommend using 25 mm wide strong polyester tubular webbing. It has low water absorption, is rot-, UV- and mildew-resistant and can be easily washed in the washing machine. The white one is softer to handle.

To join the ends of the webbing, e.g. to create a closed shape, or to join multiple tapes for larger groups, we recommend that a tape knot (also known as a water knot or ring bend) is used, as it is strong under pressure but easily untied after use, even when wet.



1. Tie a loose overhand knot at one end of the webbing.



2. Trace back through the knot, rethreading the other end of the webbing (also known as the ‘bitter end’) through the first overhand knot.



3. Neaten the knot so the ends are the same length and pull it tight.



4. To undo, simply push the ends of the webbing towards the knot and it will ‘loosen’ so that it can be untied.



Square lashing

Some of the activities in the *National Curriculum Outdoors* books use lashing to join crossed sticks and frames.

To join two sticks at right angles we recommend the use of square lashing. When tied correctly it has the appearance of a square.



1. Tie a clove hitch to the upright stick ensuring the long (live) end of the cord is toward you, then place the second (crossed) stick across it.



2. Pass the live end of the cord down and over the crossed stick, then upwards over the front of the crossed stick and back around and behind the upright stick. Repeat this.



3. Change direction by turning the cord to the front and travelling it behind the crossed stick, over the front of the upright stick, then up and behind the cross stick and up and to the front of the upright stick again

4. Repeat two or three times, making sure that the cord is pulled tightly to keep it neat and tight.



5. Next wind the cord two or three times between the two sticks and pull as tightly as you can. This is known as 'frapping' and has a tightening effect.



6. Tie the two live and dead ends of the cord together using a clove hitch or square knot.

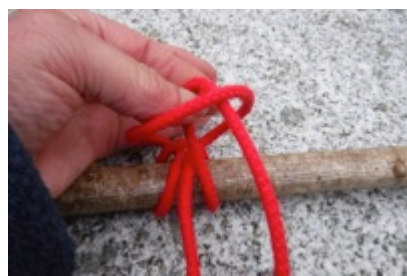
Highwayman's hitch



1. Take a bight (loop) of rope behind the bar or pole.



2. Reach through back of bight one to take another bight (bight two) from the left hand standing part and pull this through bight one.



3. Reach through bight two to take a bight from the right hand standing part and pull this through, tightening by gently pulling the standing parts.



4. Test the knot by pulling hard each of the remaining ends. One will stay put – this will be the working end; the other will release.

Information about other knots referred to in the *National Curriculum Outdoors* books can be found here:

- Square lashing <https://scoutpioneering.com/videos/lashing-videos/square-lashing/>
- Clove hitch <https://scoutpioneering.com/videos/pioneering-knots/clove-hitch-and-half-hitches/>
- Tripod lashing <https://scoutpioneering.com/videos/lashing-videos/tripod-lashing/>
- Marlin hitch <https://scoutpioneering.com/tag/lashing-a-rope-ladder/>
- Floor lashing <https://scoutpioneering.com/videos/lashing-videos/floor-lashing/>
- Diagonal lashing <https://scoutpioneering.com/videos/lashing-videos/diagonal-lashing/>