

# Knot Masters Program

Presented by Troop 366 | Panama City, FL

The Knot Masters program helps Scouts to learn the knots they need for advancement, Scouters to become proficient in knot tying, and keeps knot tying skills sharp. Scouts and Scouters are encouraged to participate. As Scouts learn, they will in turn teach and encourage each other. The real fun of Knot Masters is in the competition (Knot Master Challenge).

## The Program:

- There are six (6) skill levels in the program.
- A different color rope represents each level.
- Everyone starts out with a White rope.
- Each color change represents an increase in skill and knowledge.
- Skill levels are achieved one meeting or activity at a time.
- If caught hitting or striking a person with the rope, you will automatically lose 1 level. Caught twice and you will forfeit your right to participate in the program.
- If there is any dispute/disagreement, Knot Masters are the final judges at all times.
- To introduce a new knot (not on the list) you must provide a detailed drawing demonstrating how to tie the knot along with its purpose. The new knot will be reviewed by the Knot Master board and voted on if they should be added to the Advanced Knot Masters skill level.
- The rope becomes part of your Field ('Class A') and Utility ('Class B') uniforms. If you show up at a meeting or activity without your rope, you are allowed to wear one of the patrol's white ropes. If you come to two meetings or activities in a row without your rope, you will automatically return to the next lower level attained. Lost ropes may be replaced for \$2.00 each.

## Advancements:

- The Troop Knot Master is the final judge on all advancements. SM and ASM's can review and OK advancements until enough Knot Master Scouts become familiar with the program.
- Patrol Method should be used. Patrol Leaders will report advancements to the Troop Knot Master.
- All knots on the skill level you are seeking must be demonstrated along with the proper purpose. You are allowed to keep the white rope, however all other ropes must be exchanged for your new level.
- When you are able to tie all of the knots of the level you are advancing to, and know their purpose, you may trade in your current level rope color for the next higher level color until all levels are completed.
- You are only allowed two attempts to demonstrate your knowledge of each knot.
- You can only advance 1 level per meeting or troop event.

## Challenges:

- You may challenge a fellow scout to tie a knot at or below their current level.
- Only one challenge per person per day is allowed.
- You must be equal to or above the person you are challenging.
- If you cannot tie the knots relating to your competency you will move down one level and cannot change to a higher level until the next meeting or activity.
- The challenger must also demonstrate their knowledge by tying the knot successfully. If they are unable to tie the knot, they too will move down one level and cannot change to a higher level until the next meeting or activity.
- Any Scout or Adult can challenge the knot tying ability of any other scout or adult at any time except during the business part of a troop or patrol meeting.
- You are only allowed two attempts to demonstrate your knowledge of the knot.

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## The Colors and Skill Levels:

- **White** – Learning
- **Tan** – Scout – Whip Rope, Fuse Rope, Lark’s Head Knot, Square Knot, explain when to use all knots.
- **Green** – Scout, 2<sup>nd</sup> Class – All previous levels, Bowline (regular), Clove Hitch, Rolling Hitch, Taut-Line Hitch, Timber Hitch, Two Half Hitches, explain when to use all knots.
- **Red** – Scout, 1<sup>st</sup> Class – All previous levels, Bowline (one handed), Diagonal Lash, Shear Lash, Square Lash, explain when to use all knots.
- **Blue** – Advanced Scout – All previous levels, Alpine Butterfly, Bowline on a Bight, Carrick Bend, Double Sheet Bend, Figure Eight, Mooring Hitch, Round Turn with 2 half hitches, Sheet Bend, Sheepshank, Slippery Sheet Bend, explain when to use all knots.
- **Purple** – Knot Master – All previous levels, Barrel Hitch, Draw Hitch, Eye Splice, Fisherman’s Knot, Honda, One listed optional knot, explain when to use all knots.
- **‘Camo’** – Advanced Knot Master – All previous levels, Constrictor Hitch, Hunter’s Bend, Masthead Knot, Prusik Hitch, Earned Pioneering Merit Badge (adults complete all requirements even if MB was earned as a Scout), Introduce one new optional knot, explain when to use all knots.

## Use of Knots and Lashing

### Tan – Scout level

#### Whipping

The ends of every rope should be whipped to keep them from unraveling. There are several methods of doing this. For ropes of polypropylene and other synthetic fiber, whipping may be done by applying a hot iron or flame to the ends to fuse the strands. Natural or Double Braided rope should be whipped with a smaller string. A rule of thumb is that the length of the whipping should be at least as long as the diameter of the rope.

#### Lark’s Head Knot

Used to loosely attach a rope to a spar or ring; for tying a line into a tarp or tent grommets. This is a knot to be avoided when a secure attachment is required as the knot will slip fairly easily along the spar.

#### Square Knot

Used for tying tow rope ends together, either the ends of the same rope or the ends of different ropes of the same diameter.

### Green – Scout , 2<sup>nd</sup> Class level

#### Bowline

Makes a fixed loop that will not slip and is easy to untie. Useful in rescue situations and creating a rope tackle to lift heavy objects by serving as the pulley. To provide loops in your line to slip over a stake.

#### Clove Hitch

Used in starting and finishing most lashings. Because it passes around an object in only one direction, it puts very little strain on the rope fibers.

#### Rolling Hitch

Used to tie a rope to a stake or spar; to attach a light tackle double the rope over to form a bight.

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**Taut-Line Hitch** Used to tie a tent guy line; can tighten or loosen the line by pushing the hitch up or down on the standing part.

**Timber Hitch** Used for dragging a heavy object like a log. Also useful in pioneering when two timbers are "Sprung Together".

**Two Half Hitches** Used for attaching a rope to a pole or boat mooring.

## Red – Scout , 1<sup>st</sup> Class level

**Bowline (One Handed)** Makes a fixed loop that will not slip and is easy to untie. Useful in rescue situations and creating a rope tackle to lift heavy objects by serving as the pulley. To provide loops in your line to slip over a stake.

**Diagonal Lash** Used to bind two poles together that cross each other but do not touch (or are likely to be pulled apart) when their ends are lashed in place in a structure. Often used for securing diagonal braces used to hold a structure rigid.

**Shear Lash** Often used to bind adjacent poles together. It is also a good way to reinforce a broken or weak pole. The frapping turns are used to tighten the lashing. A loose Sheer Lashing made around the ends of two poles will allow the poles to be opened out and used as an A-frame.

**Square Lash** Used to hold two poles that cross each other (usually at a 90-degree angle although not necessarily).

## Blue – Advanced Scout

**Alpine Butterfly** Best knot for making a nonslip loop in the middle of a rope; works better than other knots that do the same thing because it doesn't jam when strained and is easy to untie. Used when pulling a heavy object for hand/shoulder loops. Can also be used to tie up horses or anchor canoes on shore.

**Bowline on a Bight** Same as above only two loops are formed. With the two loops a person can sit in one loop and have the second loop as a back support or under the armpits.

**Carrick Bend** Used when you have to tie the ends of two large ropes together; to tie two ropes of any size together when the rope is wet or slippery and when you need a knot that will untie easily. While many knots reduce the strength considerably, a Carrick Bend reduces its strength on slightly.

**Double Sheet Bend** Used to tie a small pliable rope to a large stiff rope or to a slippery rope.

**Figure Eight Knot** Used in such places as the end of a string when trying a package with a slipknot or in the end of a rope to prevent slipping. May be tied in the standing part of the rope as well to check it from sliding through a block, hole, or part of another knot. May be used temporarily to stop fraying when a rope is not whipped.

**Mooring Hitch** A good knot to moor a boat because it can be released quickly while still holding fast; a "slippery" knot that gives a secure hitch.

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## Round Turn With 2 Half Hitches

Used for guy lines, as it won't jam and is easy to untie when adjustments are needed. Used at both ends of large hand and foot ropes for a monkey bridge. Will not reduce the strength of the rope.

## Sheepshank

Used to temporarily shorten a rope or to by-pass a weak spot in the rope.

## Sheet Bend

Used for joining two rope ends, especially if the ropes are of different sizes or when the rope is slippery or wet.

## Slippery Sheet Bend

Ordinary sheet bend with a bight left in the smaller rope which can be untied quickly (Slippery), merely by a tug on the free end of the rope. Valuable knot for use when you expect to tie and untie often.

### Purple – Knot Master

## Barrel Hitch

Used for lifting an object, such as a barrel or can, which needs to remain upright while lifting.

## Draw Hitch

Used to make a temporary hitch while making adjustments in your setup (to be replaced with a more secure hitch); when used with a long line to lower equipment, release it, then retrieve your line for another load. It is not a knot that you would tie and leave unattended because an accidental pull on the right lead will cause it to quickly fall away. Quick release knot.

## Eye Splice

Strongest type of rope loop. Creates a fixed loop at the end of a rope. Used for a lariat, end of a guy line, forming a strop, a rope into a tent grommet, creating a block in a block and tackle, and at each end of a rope for use as a sling.

## Fisherman's Knot

Used for joining two fine lines such as fishing leaders; to tie the ends of a short length of rope to form a grommet; used when ropes are wet or when used on some types of man-made fiber ropes that tend to slip easily.

## Honda

Used as a fixed loop in the end of a rope to put over a stake or spar; as a running loop when you want the knot to get tighter as you pull. Knot which forms the fixed loop at the end of a rope useful for creating a lariat loop.

### 'Camo' – Advanced Knot Master

## Constrictor Hitch

Based upon the clove hitch. Used interchangeably with clove hitch, except once pulled tight it is hard to untie; to start a lashing; to make a good temporary whipping at the cut end of a rope; to start a splice to stop off the unlaidd rope strands to prevent unraveling.

## Hunter's Bend

Used to join two ropes. It has a distinct shape, does not distort, and is very easily untied. It is an excellent knot for nylon rope. Nylon ropes need something extra in the knot for safety, and the double lock of Hunter's Bend makes it ideal for this.

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## **Masthead Knot**

Used to attach guy lines at the top of a pole; to keep a spar in a vertical position for any purpose. It must be supported with cleats to keep it from slipping down the spar. Square Lash Used whenever spars cross at an angle, touching each other where they cross.

## **Prusik Hitch**

Used to make hand and foot loops for climbing another rope or vertical spar; to make hand/shoulder loops as an aid to hauling a heavy object such as a log; to hook a light tackle on a vertical or horizontal spar; to provide the grip and loop to tie into another line with a sheet bend; to provide a safety brake against back-slipping on a load lifting line.

## **Optional Knots**

## **Surgeon's Knot**

Used for tying two rope ends together, either the ends of the same rope or the ends of different ropes or the same diameter. A square knot with an extra twist. The purpose of the extra twist is to give added friction to hold until the second crossing is made.

## **Turk's Head**

Decorative knot. Commonly used as neckerchief slides in Scouting.

## **Jug Knot**

Can be used to toggle the bottle to a belt so that the bottle can be used as a canteen.