Not Just Knots Capstone Project
Braided Dog Leash

Skill level: beginner, immediate, advanced

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If you have beginning-level knot tying skills, a dog leash is a great practical project. The directions below assume you are using two high-contrast colors, which makes it much easier to see the strands. By using just one color and adding extra touches, a dog leash can also be a challenging project for someone with advanced-level skills.

Materials

Cordage (see step 1 below for how much and what to buy)
Collar clip
Decorative cord (optional)
Split ring (optional)

Tools

Scissors or wire cutters
String or rubber bands
Small pliers or forceps
Hot hobby knife or lighter

What to Do

Preparation

1. Before you buy cordage, decide how long you want the leash to be. Common dog leashes are 6 feet long, and leashes of that length require a total of 38 feet of cordage. If you use two colors, you need 19 feet of each one. For a shorter leash (4 feet), you need a total of 30 feet of cordage, and for a longer leash (9 feet) you need a total of 52 feet of cordage. Your leash may end up slightly longer or shorter because cordage and tightness vary. (See cordage table on next page.)
How much cordage do I need?

<table>
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<tr>
<th>Approximate finished length</th>
<th>Length of four starting pieces</th>
<th>Total cordage needed</th>
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<tr>
<td>4 feet</td>
<td>7½ feet</td>
<td>30 feet</td>
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<tr>
<td>6 feet</td>
<td>9½ feet</td>
<td>38 feet</td>
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<tr>
<td>9 feet</td>
<td>13 feet</td>
<td>52 feet</td>
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2. Cut the cordage into four working lengths. For a 6-foot leash, use four pieces that are each 9½ feet long. For a 4-foot leash, use four pieces that are each 7½ feet long, and for a 9-foot leash, use four pieces that are 13 feet long. If you are using two colors, you have two lengths of each.

3. Pull out and cut off three inches of core from both ends of each piece. With your project helper or another adult, use a hobby knife or lighter to fuse the ends. This keeps them from unraveling.

Be careful! Nylon melts at 428 degrees Fahrenheit (220 degrees Celsius). It will stick to your skin and burn.

Braiding

4. Use string to tie one end of each of the four pieces of cord together. You can whip them together as shown or simply use a strong knot.

5. Start braiding using the square braid. The square braid is formed when two pieces (in this case, purple) are moved out of the way to the left and right. The two other pieces (in this case, yellow) are moved to the left and right, crossing one another. In the picture, notice the left yellow strand goes UNDER the right yellow strand. Every time you make a crossing, the left yellow strand will go UNDER the right yellow strand. Now change to the other two strands.
6. The two other pieces (in this case, purple) are moved to the left and right, crossing one another. In the picture, notice the right purple strand goes UNDER the left purple strand. Every time you make a crossing, the right purple strand will go UNDER the left purple strand. Change back to the other two strands.

7. The square braid looks like the photograph at the right. The colored strands are at 90 degrees to one another, one set purple, and the other set yellow. Continue braiding until there are seven inches of cordage remaining.

Adding the Collar Clip

8. Slip the collar clip over the end just past the unbraided strands. Fold the braid and, using rubber bands to secure it, squeeze it around the closed end of the collar clip.
9. Using forceps or small pliers, carefully weave the loose strands into the main part of the leash. Be careful to match the colors, light to light, and dark to dark. The pictures show forceps and pliers being used to pull the strands through at the start of the splice. (You can use either.) Pull the ends into the main part of the leash and make the splice as tight as possible. Continue splicing the free ends into the main part of the leash for about three inches.

10. Remove the rubber bands from the cordage. The picture shows all four strands spliced into the main part of the leash. Use a hobby knife and cut off the loose ends, or use wire cutters or scissors and fuse them.

This completes splicing the collar clip onto the leash. Your leash should look something like this.

Making the Hand Grip

11. Go to other end of leash and measure back 7 inches from the end. Put whipping or a knot around the leash at this location. After you’ve put on the whipping or knot, unbraid the strands up to the knot.
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<td>12.</td>
<td>Measure back 18 inches from the knot just created and put another knot at this location. Move the stands so the two knots are side by side. This forms the hand loop. Using forceps or pliers, start to splice the strands into the main part of the leash. Remember to keep the colors together and to</td>
</tr>
<tr>
<td>13.</td>
<td>Continue splicing the loose strands into the main part of the leash. After you’ve spliced in a couple of strands, remove the knots around the main part of the leash. Pull the strands tightly into the main part of the leash.</td>
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14. Continue splicing until you’ve run out of cord. Use a hobby knife and cut off the loose ends, or use wire cutters or scissors and fuse them.

Congratulations! You’ve finished the leash!

Options

Attach a Split Ring
Measure about two inches below the hand loop. Using pliers, open the split ring and run it between two strands of the cordage. When you roll up the leash after using it, you can clip the collar clip to this ring so it is always easy to find. It is also a handy place to carry plastic bags.

Attach Decorative Knots
To decorate your leash, use extra cordage for tying a three lead by four bight (3L4B) Turk’s Head knot to cover the splicing at the clip end the hand loop end.

Congratulations! You’ve just improved your leash!