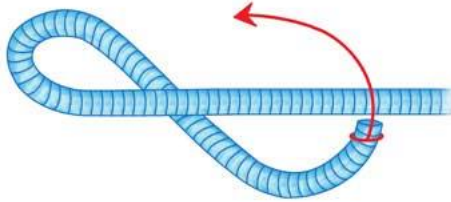
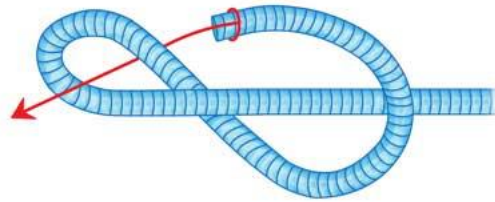


1. Replicate tying a Figure Eight Knot by first drawing each step in the boxes below.

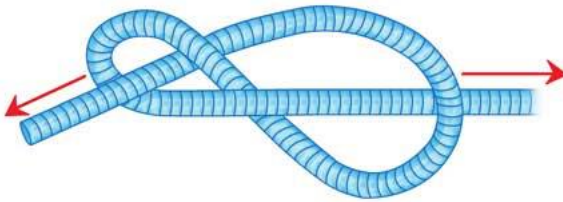
Figure 8 Knot Instructions



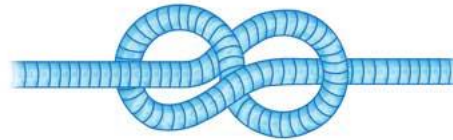
1 Make a loop with an end



2 Now pass the end through it



3 Pull both sides to adjust the knot



4 The finished knot resembles an "8"

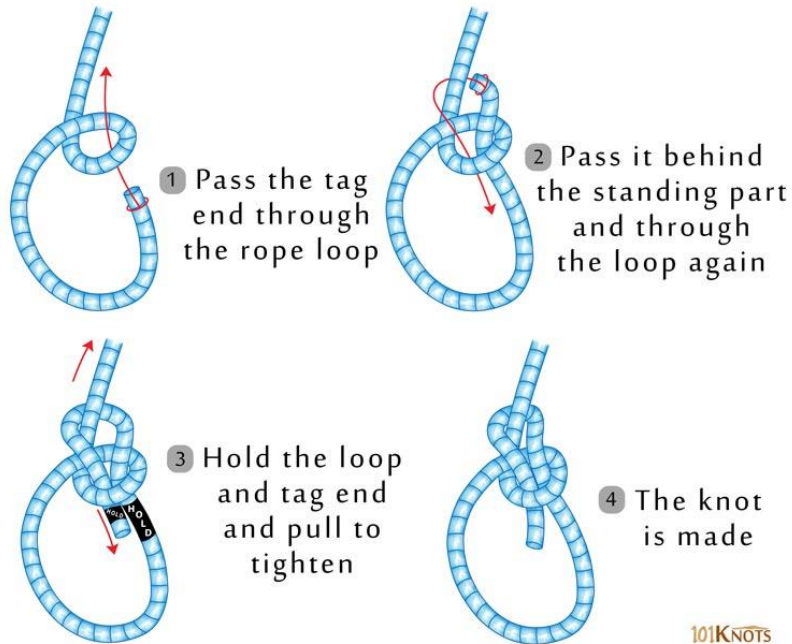
101KNOTS

1	2
3	4

After you have drawn each step, find one piece of rope or yarn and try to tie the Figure Eight Knot yourself! You can look back on the video and try to tie it along with Dan.

2. Replicate tying a Bowline Knot by first drawing each step in the boxes below.

Bowline Knot Directions



1	2
3	4

After you have drawn each step, use the same piece of rope or yarn and try to tie the Bowline Knot yourself! You can look back on the video and try to tie it along with Dan.

3. Using your Bowline Knot, find a few objects of varying weights around your house. Design a way to attach these objects to your Bowline Knot, hypothesize whether you think the knot will hold the weight and then test it! Fill in the data sheet below.

Object	Hypothesis: <i>Will the Knot Hold?</i>	Results

Conclusion: Please summarize your results in a few sentences. (*Why did you choose each object? Did it support your hypothesis or not? What were the results of each test? What would you do differently in the future to be more successful?*)

4. Sailing is a great way to utilize wind for movement instead of non-renewable sources such as oil and gasoline. What are some of the pros and cons to using wind as the energy source to propel a boat through water?

Pros	Cons

Try to design a wind-powered boat that eliminates a few of the cons that you came up with. Draw your design and label the parts. Try to use eco-friendly materials, but there is no budget for your design, so get creative!