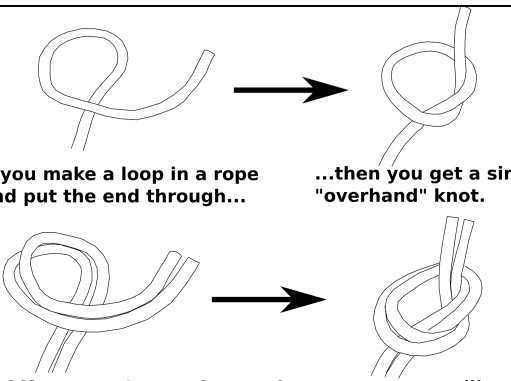
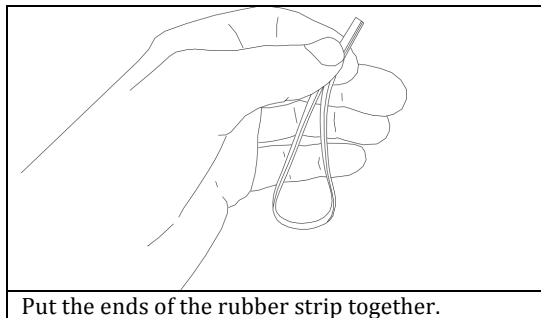
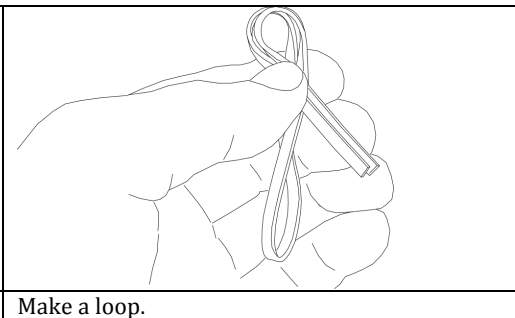
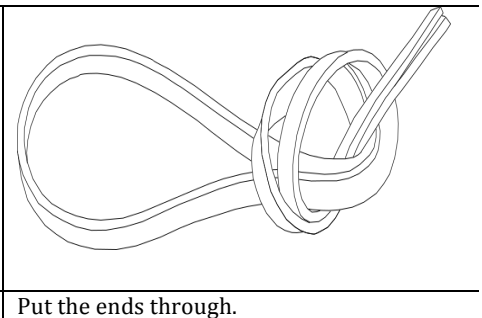
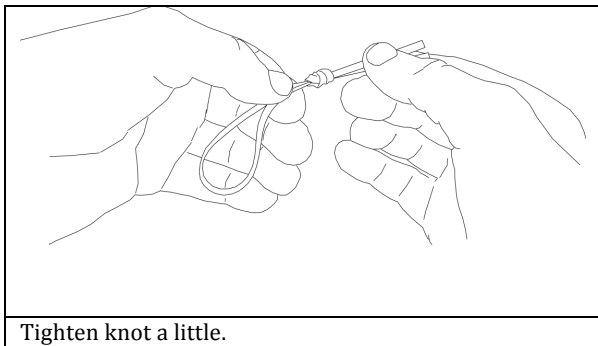
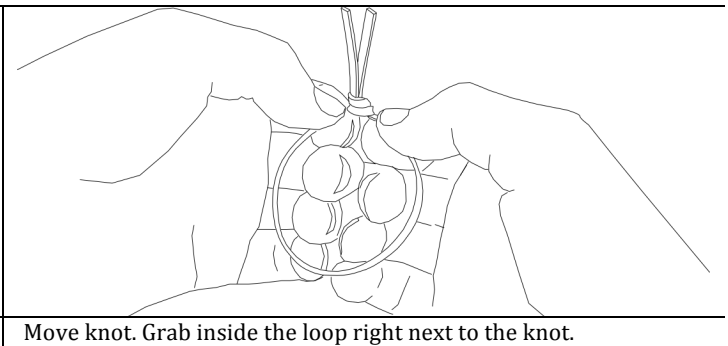
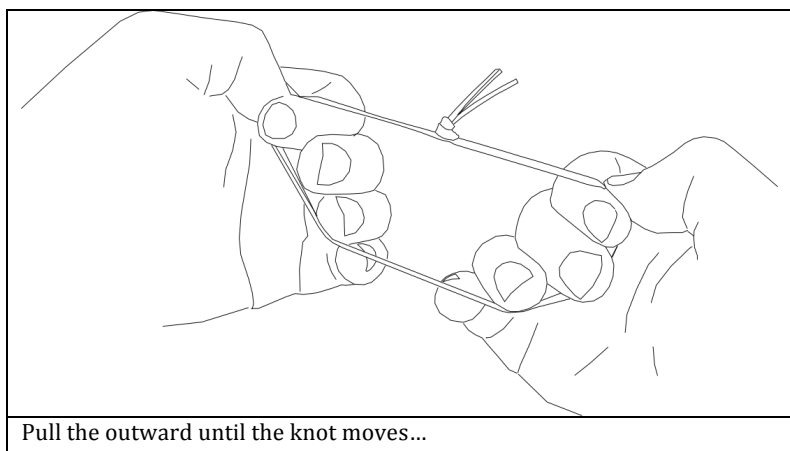
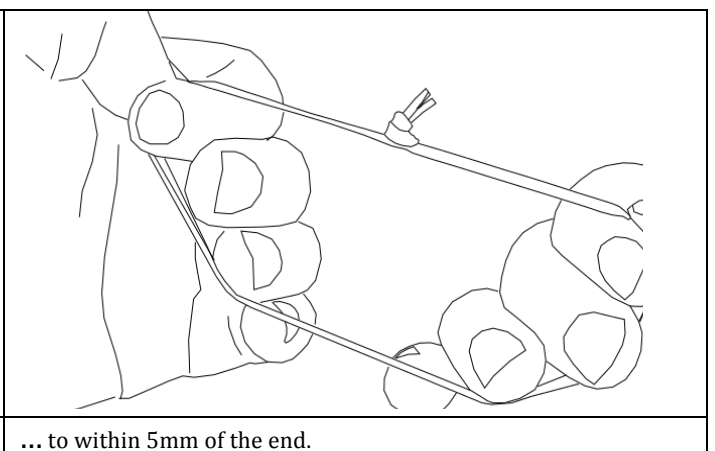


CUT THE RUBBER BAND TO LENGTH AND TIE THE KNOT

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| <p>Cut a rubber band piece to 28 centimeters or 11 inches unstretched</p> <p>Hint: The long way of an 8 ½ by 11 inch printer paper is an easy gage for the right length.</p> |  <p>If you make a loop in a rope and put the end through... ...then you get a simple "overhand" knot.</p> <p>And if you put 2 strands together and tie as if they are one... ...yes, you still get an overhand knot!</p> | <p>A bit of trivia: serious rock climbers who use rope rigging and knots know this one as the "European Death Knot". It is also called the Offset Water Knot, Offset Overhand Bend, Flat Overhand Bend, Thumb Knot, Thumb Bend, Creeler's Knot, Openhand Knot.</p> <p>OK, back to work!</p> |
| <p>Cut the rubber band.</p> | <p>The "overhand" knot is the simplest.</p> | |

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| <p>Put the ends of the rubber strip together.</p> | <p>Make a loop.</p> | <p>Put the ends through.</p> |

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|---|--|---|
|  | <p>The loop is too small and the ends are wasted rubber. But with this special rubber band, we can solve both things moving the knot close to the end!</p> |  |
| <p>Tighten knot a little.</p> | | <p>Move knot. Grab inside the loop right next to the knot.</p> |

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| <p>Pull the outward until the knot moves...</p> | <p>... to within 5mm of the end.</p> |

You can get more winds --and therefore more power--if you rub a small amount of baby shampoo (or even some liquid soap) into the rubber band after tying. Do NOT use oil, grease or any petroleum product on the rubber band—it will destroy it. While you're at it, add a drop to the propeller bearing/beads. Store the rubber in a dry place, away from direct light. More about Dragonfly Helicopters at sciencetoymaker.org.