

Build Your Own Windsock!

Here you'll learn about the history of windsocks, how they work, and how to make your very own at home!

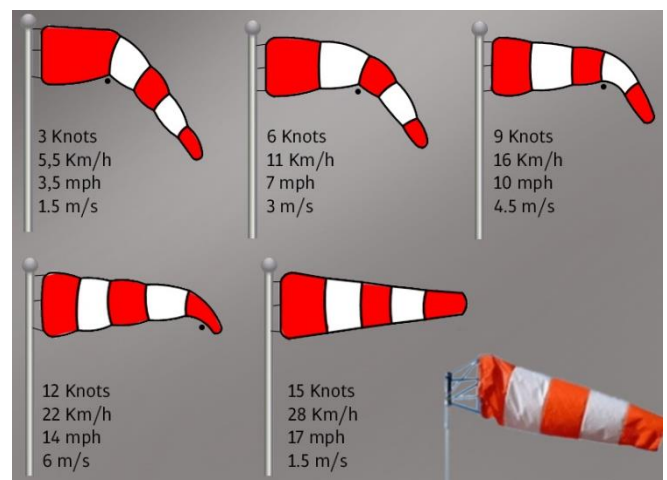
What is a windsock and how does it work?

A windsock is a cone-shaped textile tube that looks like giant sock. Windsocks typically are used at airports to indicate the direction, speed, and strength of the wind to pilots. Windsocks are also used at chemical plants, where there is risk of gaseous leakage. They are sometimes located alongside highways at windy locations. Windsocks can also be used as a safety precaution. Many firefighters and rescue workers use windsocks to determine the direction of the wind to estimate which way the fire may move, and how to keep themselves safe.



Wind speed is indicated by the windsock's angle relative to the mounting pole; in low winds, the windsock droops; in high winds it fills with air and flies horizontally. Wind direction is the *opposite* of the direction in which the windsock is pointing (so a windsock pointing due north indicates a southerly wind).

Alternating stripes of orange and white were initially used to help to estimate the speed of wind. Each stripe adds up 3 knots to the estimated wind speed. However, some circle frames mountings cause windsocks to be held open at one end, indicating a velocity of 3 knots, even though anemometers would show no wind speed. A fully extended windsock suggests a wind speed of 15 knots (28 km/h; 17 mph) or greater.



A quick history of windsocks!

Windsocks were originally created by the Japanese hundreds of years ago and with a completely different use than today. In Japan and China, windsocks were hung outside the house on bamboo poles for various reasons, like celebrating the birth of a child. Originally, windsocks were made of paper or silk, and were designed to look like fish. Many times, the family crest would be represented on the windsock.

Dating back to the Roman empire, windsocks were used more like flags, so each windsock would represent a different military group.



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Materials

- Toilet paper roll
- Blue paint/markers
- White paper
- Scissors
- Black marker
- Tape or glue
- Tissue paper in rainbow colors
- String for hanging
- Hole puncher
- Chalk

Time: 30 minutes to build

Instructions

1. Start by painting your toilet paper roll blue. Set aside to dry.
2. Take your white paper and cut out the shape of a cloud. For added fun give your cloud a smiley face!
3. Once your toilet paper roll is dry, punch two holes on either side
4. Lace a string through the wholes to make a handle loop
5. Tape/glue your paper cloud to the toilet paper roll
6. Cut long strips of tissue paper and tape/glue them to the inside of the toilet paper roll
7. While your windsock is drying, take your chalk, go outside and draw a compass rose on the ground
8. Once your windsock is completely dry, take it outside and test it to see if you can tell what direction the wind is blowing!
9. Remember, your windsock with point the opposite way the wind is actually travelling!

