Weather Station

installation instructions

NOTES: Please check for any damage caused by the shipping company and take appropriate steps to file a claim, if needed. Pay particular attention to the instrument panel to make sure there is absolutely no damage to the instruments. If you find any damage at all, take pictures of it and **do not accept the shipment!** We can't file a claim if you accept the shipment. Email the photos to us with an explanation.

*Please call **Digsafe** and check for any underground utilities before digging anywhere.

Materials needed (change as needed)

Cordless driver, T30 star drive bit, 2 small pipe wrenches, phillips head bit, 4' piece of rebar to stir the concrete in the post hole, 2 pieces of 1x3 x8' strapping (from each of 2 pieces of strapping, cut off a 12" piece and make a point on the ends of the 12" pieces to make stakes), 4 sheetrock screws, post hole shovel, level, ladder (maybe, depending on how tall you are), 80 lb bags of premixed concrete (not included). Concrete amounts can be easily calculated at http://www.quikrete.com/Calculator/Main.asp. Amount required depends on how deep you dig the holes. You'll obviously need water to mix the concrete.

NOTE: 3 things are critical to make this Weather Station accurate and operable. The first, is that it needs to be installed perfectly plumb, so use your level on two adjacent sides to make sure the post is absolutely vertical. The second thing to note is that the instruments must not face South or you will get inaccurate readings. Facing the instruments due north is probably the best idea. The third thing is that the anemometer readout unit in the to right needs to be leveled by adjusting it until the built in level shows the bubble right in the middle of the little window.

1) Find a suitable location on your site that is not under trees or building overhangs, and dig an ~8" hole 3 feet or so deep.
2) Attach are 2, 2x6 pressure treated extensions to be attached on opposite sides at the bottom of the post, with their 45º cut tops 12" up on the sides of the post. Attach the A cleat to the A side of the post with four 3 1/2" structural screws and the same for cleat and side B.
3) Drop the post with extensions into the hole. Turn it so the notches on the post face the direction in which you want the instruments to face. There are 3 ground marks on the post: the highest one closest to the top (which would make the instruments lowest to the ground at about 23") is for young kids 2-3; the middle mark (at 27") is for kids 4-5, and the lowest (at 36") for kids 8+.
4) The instruments are not toys, and the very top instrument, the anemometer pick-up vane is quite delicate, so it should be kept as high as possible. With this in mind, adjust the height of the post using drainage stone in the hole at the bottom of the post extensions.
5) Once you have the height properly adjusted, use the strapping and stakes to keep the post plumb. You'll need to use your level on 2 adjacent sides of the post to make

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sure it is perfectly vertical. Once the stakes are in the ground, a single screw through the strapping into the post and stakes at the other end is all you need to hold this post vertical.

6) Backfill the post with dirt, or with concrete for a more permanent mounting.
7) The instruments are pre-mounted on the panel, so after carefully unwrapping the panel and checking for damage, lift it into place. The cleats behind the panel should fit snugly into the slots cut into the post. Fasten from **behind the post** with hardware included.
8) Find the NSEW indicator and the metal pipe with 2 flanges and the anemometer vane attached to the top flange. Unscrew the bottom flange, and slip the NSEW unit facing upright onto the metal pipe. Wait before tightening the screw.
9) Screw the bottom flange onto the threaded pipe as tightly as possible using your two pipe wrenches.
10) Get ready to mount this flange/pipe unit to the top of the post it should be turned so that the two small holes coming out of the red anemometer vane are pointed to the right. Use the four screws included to attach the flange to the top of the post.
11) Take out the compass on your Smart phone. Now you can orient the NSEW indicator in the proper direction (the N facing due north), and tighten the screw to hold it in place.
12) There is a double white tube in the package. This directs the air that blows into the pickup vane, down to the white box called the “indicator” (located on the top right of the panel). The indicator measures the speed of the wind.
13) There is more than enough of the double white tubing. Some people like to locate the indicator quite a ways from the pickup vane, so we don’t cut the tube short. However, you can see that not much is needed. We recommend getting a rough idea of how long it should be, then add another foot, then cut.
14) Separate the top of the tubing about 6” down, and slip the **red striped tube over the top pipe** on the pick up vane. Cut the plain white tube a little shorter, and slip it over the lower pipe.
15) Push the other end of the double tube through the hole in the back of the mounting panel. Trial “fit” the tubes to the indicator, then cut, then separate the ends of the tubes.
16) At the wind indicator unit, the **red striped tube slips over the left connector labeled “high” (above fill plug)**, and the plain tube slips over the right connector labeled “low”. These tubes carry air pressure info down to the anemometer wind indicator unit.
17) Now follow the directions to put the red liquid into the anemometer wind indicator unit.
18) Your weather station is now ready to be enjoyed! Because some of the instruments are delicate, please make sure your children respect them and treat them with care.

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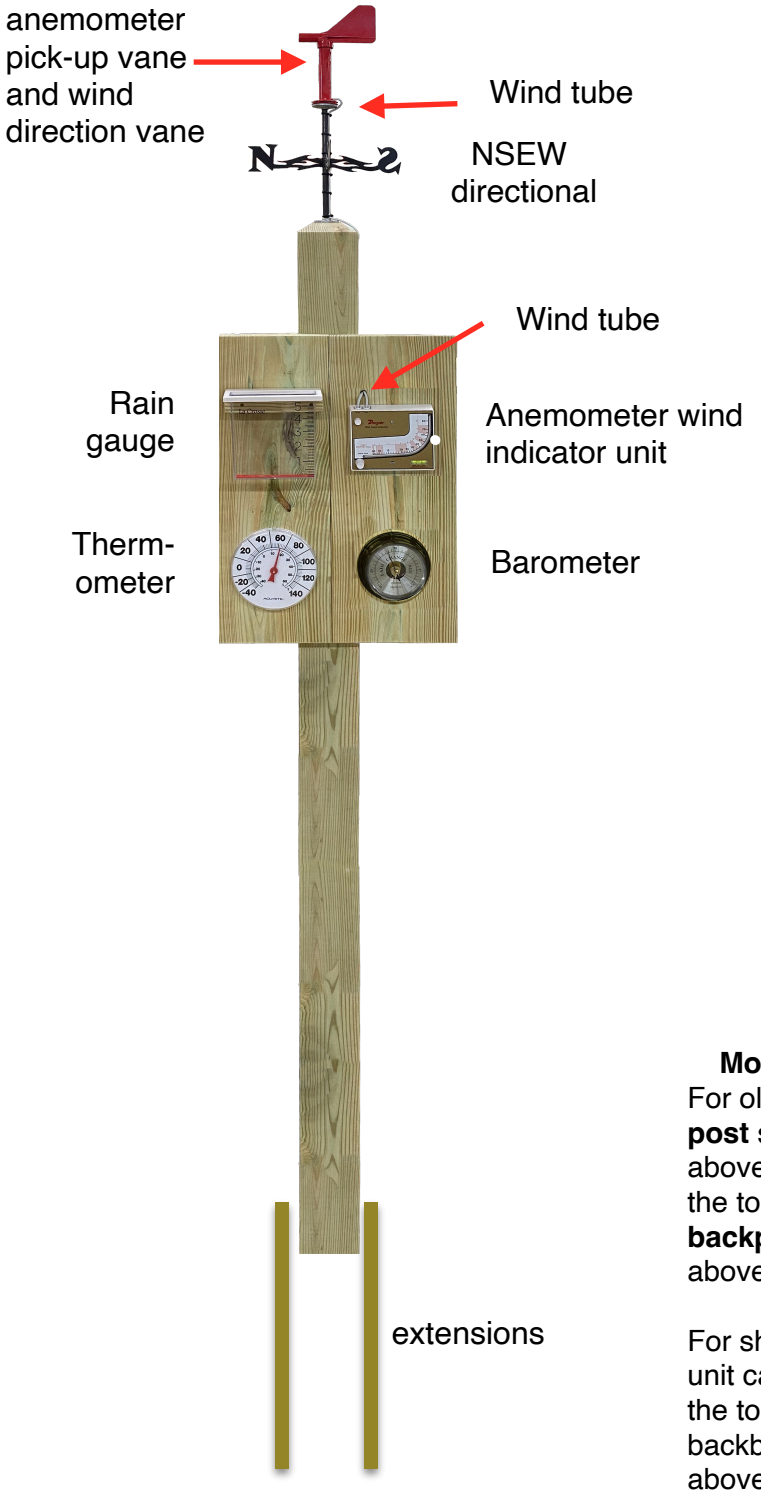
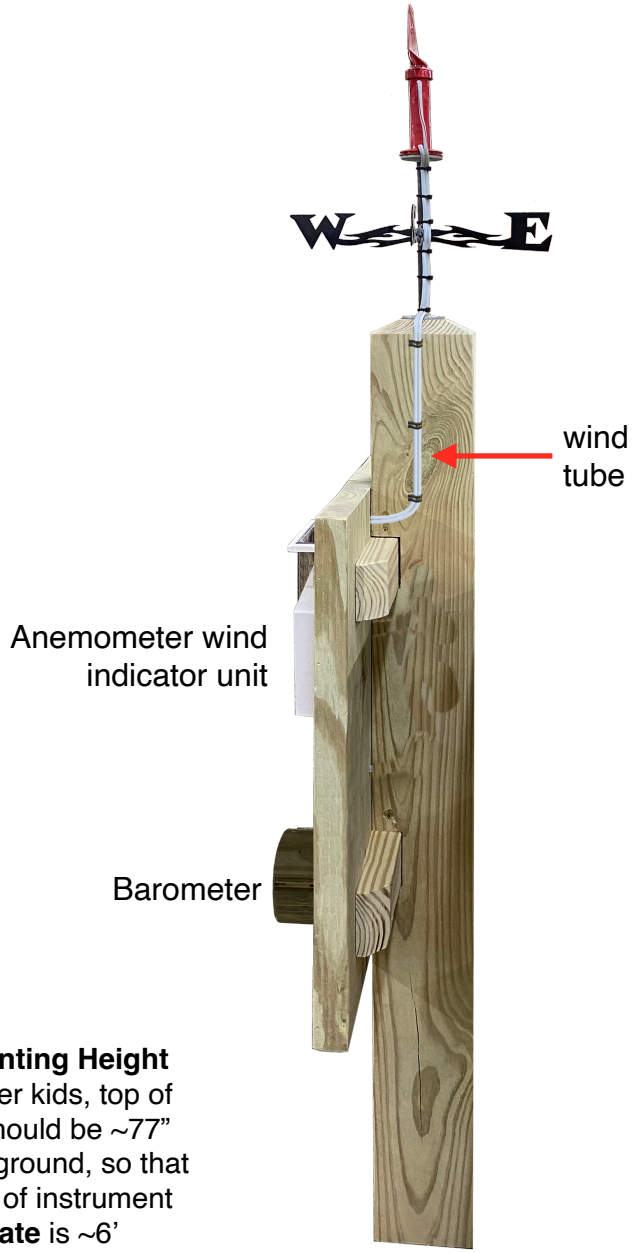
19) This wood on this Weather Station is treated with kid-friendly preservative, but as is the case with all wood facing the elements, it needs to be cared for, so check it periodically for rough spots, splinters, etc, and sand them out, and treat it with kid-friendly wood preservative (we have it available if you can't find it) once or twice a year to keep the wood from deteriorating.





Mounting Height

For older kids, top of **post** should be ~77" above ground, so that the top of instrument **backplate** is ~6' above the ground.

For shorter kids, the unit can be lowered so the top of the backboard is ~5' above the ground.