

Estimating wind speed

Use the scale below by observing the movement of objects on the land and at sea. Don't look at the waves breaking right near shore to make your decision about wind speed – these are breaking because of the shallowness of the ocean floor near the shore, not because of wind. The wind speed you record should be an estimate of what the conditions were like during the entire time you worked in the field, so take notice both at the beginning and end of the field trip. Also, we sometimes have gusts, or shorter periods, of higher winds. These conditions can be noted like this: "Winds 4-7 mph with gusts 13-18 mph." Use the mph estimates, not the description.

Modified Beaufort Scale

Speed (mph)	Description	Signs on land	Signs for sea
0-1	Calm	Smoke rises vertically	Sea like a mirror
1-3	Light air	Directions of wind shown by smoke drift but not by heavier items	Ripples with the appearance of scales appear, but without white crests
4-7	Light breeze	Wind felt on face, leaves rustle	Small wavelets, still short, but more pronounced. Crests have a glassy appearance and do not break.
8-12	Gentle breeze	Leaves and small twigs in constant motion; wind extends small flag	Large wavelets. Crests begin to break. Foam of a glassy appearance. Some scattered white caps.
13-18	Moderate breeze	Raises dust and loose paper; small branches are moved	Small waves, becoming larger; fairly frequent white caps.
19-24	Fresh breeze	Small trees begin to sway	Moderate waves, taking a more pronounced long form; many white caps. Chance of some spray.
25-31	Strong breeze	Large branches in motion; whistling heard in telephone wires, umbrellas used with difficulty	Large waves begin to form; the white foam crests are more extensive everywhere. Some spray.
32-38	Near gale	Whole trees in motion; hard to walk against the wind	Sea heaps up and white foam from breaking waves begins to be blown in streaks along the direction of the wind.
39-46	Gale	Breaks twigs off trees; generally impedes walking	Moderately high waves of greater length; edges of crests begin to break into foam. The foam is blown in well-marked streaks along the direction of the wind.