

Beaufort Wind Scale on Land

The Beaufort Wind Scale was devised in 1805 by Francis Beaufort. The scale used the state of the sea to estimate wind speed. Over the years the scale has been modified for use on land. While different versions have been developed they are all based on the same premise; wind speed may be estimated by observing how wind affects objects around us. Using the Beaufort Wind Scale teaches how to observe. Speeds are in miles and kilometers per hour.

Description	Wind Speed	Conditions
Calm	Less than 1 mph Less than 1 km/h	Calm. Smoke rises vertically.
Light Air	1 – 3 mph 1.1 – 5.5 km/h	Smoke drift indicates wind direction. Wind vanes cease moving.
Light Breeze	4 – 7 mph 5.6 – 11 km/h	Wind felt on exposed skin. Leaves rustle and wind vanes begin to move.
Gentle Breeze	8 – 12 mph 12 – 19 km/h	Leaves and small twigs constantly moving. Light flags extended.
Moderate Breeze	13 – 18 mph 20 – 29 km/h	Dust and loose paper raised. Small branches begin to move.
Fresh Breeze	19 – 24 mph 30 – 39 km/h	Branches of moderate size move. Small trees with leaves begin to sway.
Strong Breeze	25 – 31 mph 40 – 50 km/h	Large branches in motion. Whistling heard in overhead wires. Plastic garbage cans tip over. Umbrella usage difficult.
High Wind	32 – 38 mph 51 – 61 km/h	Whole trees in motion. Effort needed to walk against the wind.
Gale	39 – 46 mph 62 – 74 km/h	Some twigs broken from trees. Cars veer on the road. Walking is seriously hindered.
Strong Gale	47 – 54 mph 75 – 88 km/h	Some branches break off trees and some small trees blow over. Temporary signs and barricades blow over.
Whole Gale	55 – 63 mph 89 – 102 km/hr	Trees are broken off or uprooted, saplings bent and deformed. Poorly attached asphalt shingles peel off roofs.
Violent Storm	64 – 73 mph 103 – 118 km/hr	Widespread damage to vegetation. Many roofing surfaces are Damages. Damaged asphalt tiles may break completely away.
Hurricane	74 mph + 119 km/h +	Very widespread damage to vegetation. Some windows may break. Severe structural damage. Mobile homes, poorly constructed sheds and barns are damaged. Flying debris possible.