

Changing Seasons on Long Island

Our climate and weather conditions constantly hint at Earth's eternal dance with the Sun in space. The cool autumn climate of beautiful coastal Long Island in New York, for example, is as such only because of uneven heating along Earth's surface.

The season itself depends on the Earth's orbit. As the Earth reaches a position where the Sun's rays fall more directly on the Equator, North America moves out the Sun's warm glow. With this gradual change, the shores of Long Island become colder and the autumnal equinox approaches. On a colder day, the particles of water in clouds will protect the surface from some of the Sun's rays; at night, those same particles trap heat and keep the surface warm. Nevertheless, as the Earth's tilt shifts North America away from the Sun, a drop in temperature will become clear.

It won't get too cold, though. Long Island's proximity to the Atlantic helps to moderate temperature, and keeps it in a small range. Water has a high specific heat, and takes more energy to heat than land; water also gives off heat more slowly. This is one reason why the coasts of Long Island are milder than the deserts of Nevada.

Of course, sea breezes will bring billowing clouds and ferocious storms to this area as well. The differences in air pressure will push winds to the warm land where air pressure is low, where water will condense and clouds will form. Precipitation will fall, cleansing the streets of New York City with pure water. And if it gets cold enough, water will further condense into snow. The serene atmosphere of Long Island in early December has no equal. And it is Earth's processes, constantly whirring and working, that are responsible for this heartbreaking beauty.