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WHY IS THE OCEAN BLUE?

Not all sea water is blue. Water of the Gulf Stream, off the eastern coast of the United States, is a deep blue, but water of a similar current off Japan is so dark that it has been named Kuroshio (Black Stream). In other areas water may be various shades of green, brown, or brownish-red.

The sea is blue for the same reason that the sky is blue. The blue of the sea is caused by scattering of sunlight by tiny particles suspended in the water. Blue light, being of short wave length, is scattered more effectively than light of longer wave lengths.

Although waters of the open ocean are commonly some shade of blue, especially in tropical or subtropical regions, green water is commonly seen near coasts. This is caused by yellow pigments being mixed with blue water. Microscopic floating plants (phytoplankton) are one source of the yellow pigment. Other microscopic plants may color the water brown or brownish-red. Near shore silt or sediment in suspension can give waters a brownish hue; outflow of large rivers can often be observed many miles offshore by the coloration of suspended soil particles.

The color of the sea changes constantly because of clouds passing across the face of the sun or because of the angle of the sun's rays passing through the atmosphere.

Oceanographers record the color of the ocean by comparison with a series of bottles of colored water known as the Forel scale. ("Questions About The Oceans," U.S. Naval Oceanographic Office.)