Ocean tides are capable of generating currents that move, transport, and deposit sediments. Tidal processes are both significant and widespread throughout much of the Earth's surface. These processes can be monitored in shallow water and also in deep water, where tides in the open ocean are often termed ‘semidiurnal’ tides. The effect of the lunar orbit on the Earth's rotation is referred to as a ‘tidal effect’ that results in the tides mainly being semi-diurnal. The tidal influence on the ocean caused by the position of the Sun and Moon is referred to as the tidal cycle. The tidal cycle is the interval of time it takes for the Sun and Moon to return to their original positions in the sky. The tidal cycle is related to the changing phases of the tide. Daily high tides are higher when the Earth, Moon, and Sun are in alignment; these are referred to as ‘spring tides’ and tides at quarter phase are referred to as ‘neap tides’. Tides during or near apogee (low spring) are referred to as full or new moon tides. The semi-diurnal spring and low spring tides, which correspond to spring and neap tides, are referred to as ‘spring tides’ and ‘neap tides’, respectively. Tides during full or new moon are referred to as ‘spring tides’ and tides at quarter phase are referred to as ‘neap tides’.

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