

THE AMERICAN BIOLOGY TEACHER



About Our Cover

These polar bears (*Ursus maritimus*) are fighting over the remains of a beluga whale (*Delphinapterus leucas*) calf. The smaller, battle-scarred female with cubs is desperate enough for food to challenge a much larger male. Times are tough. Both are rather undernourished as their warm summer begins to wane and their fat reserves lessen. The remnant ice pack of midsummer provides a meager hunting ground, and battles are frequent.

The indigenous Inupiat cultures inhabiting the North American Arctic refer to these iconic marine mammals as *nanook*. Mature males often reach 1500 pounds and are considered the largest land predators on earth. Their sister species, the Kodiak brown bear, is similar in size but more omnivorous. Polar bears, with their striking adaptations to the cold, are solitary wanderers and most at home in winter conditions as they search for seals popping up for air at holes in the icy surface.

The narrow niche of these marine mammals and their dependence on sea ice as a feeding ground make polar bears particularly vulnerable to climate change. The shrinking coverage of ice, in both time and space, can reduce feeding opportunities and occasionally drive bears into conflict with humans. This is never a good thing for the health of polar bear populations. Although a polar bear can survive 6–8 months without eating, it needs to consume about 60 seals each year to maintain a healthy life span of 20–30 years.

The bears shown here are members of a subpopulation occupying the Svalbard Islands. These Norwegian-owned islands in the Mid-Atlantic span latitude 80° north, and this subpopulation ranges from Spitsbergen eastward to the Russian archipelagos of Franz Josef Land. This photo was taken by Dr. Darrell Vodopich (darrell_vodopich@baylor.edu; biologyimaging.com), using a Canon 5D MkII, 400-mm lens, 1/1000 sec., and ISO 3200.

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