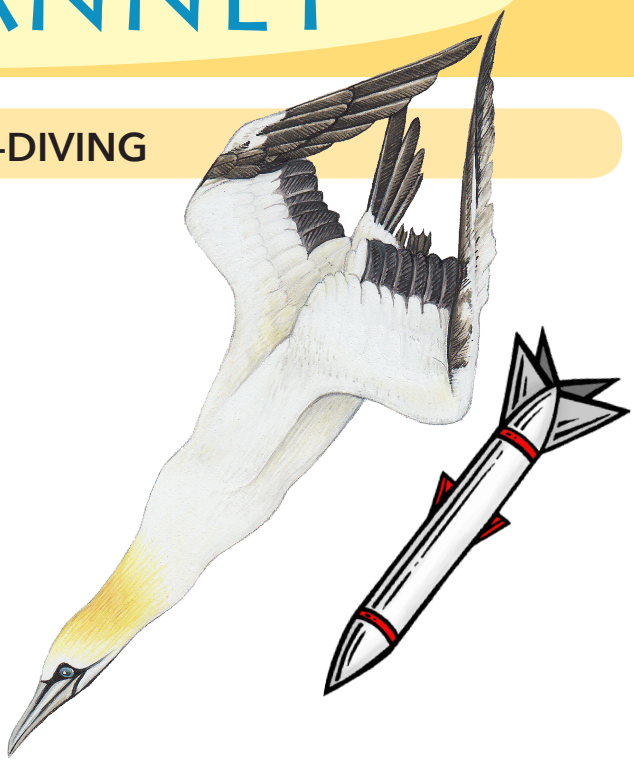
CAPE GANNET

PHYSICAL ADAPTATIONS FOR PLUNGE-DIVING



Cape Gannets are supreme **plunge-divers**, designed to attack shoals of pelagic fish such as sardine and anchovy from the air.

How do they do this without injuring themselves? Gannets have a **reinforced skull** and specially adapted **neck muscles** to help absorb impact with the water.

Gannets have **air sacs** under the skin of their head, neck and chest, which act like bubble-wrap to cushion the impact as they hit the water at high speed.

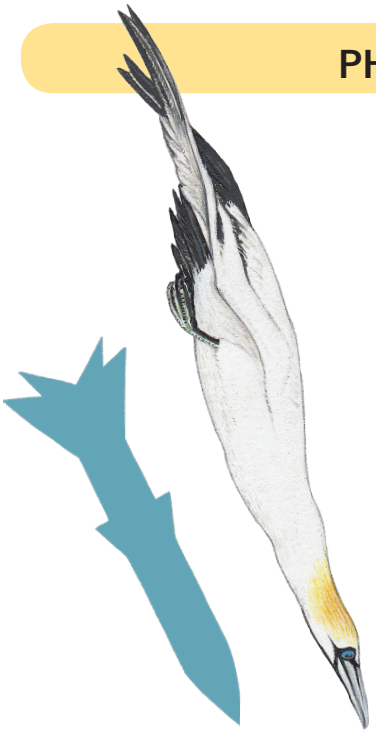
By tucking in their wings and extending their long necks and pointed bills, shock is minimised by their **streamlined, missile-shaped** body.

Gannets lack **external nostrils,** preventing water from being being forced into their heads when hitting the water. Their nostrils are concealed by a protective layer of hard tissue.

Interesting numbers

Plunge-dive from heights of up to **30 m**
Plummet at speeds of up to **100 km/hr**
Propelled for up to **10 m** below the surface of the water surface using momentum
Swim to depths of more than **20 m** to hunt for prey

PHYSICAL ADAPTATIONS FOR UNDERWATER HUNTING



The streamlined body shape of the gannet helps to maintain its forward **momentum** underwater when plunge-diving. This missile-shape **reduces drag** through the water. Most fish are caught on the initial descent, when they rely on their speed and the element of surprise to catch their unsuspecting prey.

Momentum from the dive propels the birds to about 10 m deep, but they can **swim** using their powerful, slightly folded wings and large, webbed feet to pursue prey to greater depths, occasionally reaching more than 20 m below the surface.

Their eyes are positioned far enough forward on their face to give them **binocular vision**, allowing them to judge distances accurately from both above and below the water, essential tools for successful hunting in the vast ocean.

References:
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Created by
Leigh Wolfaardt