

PENGUIN ADAPTATIONS

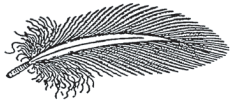
Worksheet

Penguins are not just cute waddlers. They are specially adapted to living and hunting in the open ocean and to nesting in coastline areas of varying temperatures.

Feather structure

Featherless patch

Salt gland



Feathers

Nictitating membrane

Muscles

Beak

Blubber

Camouflage

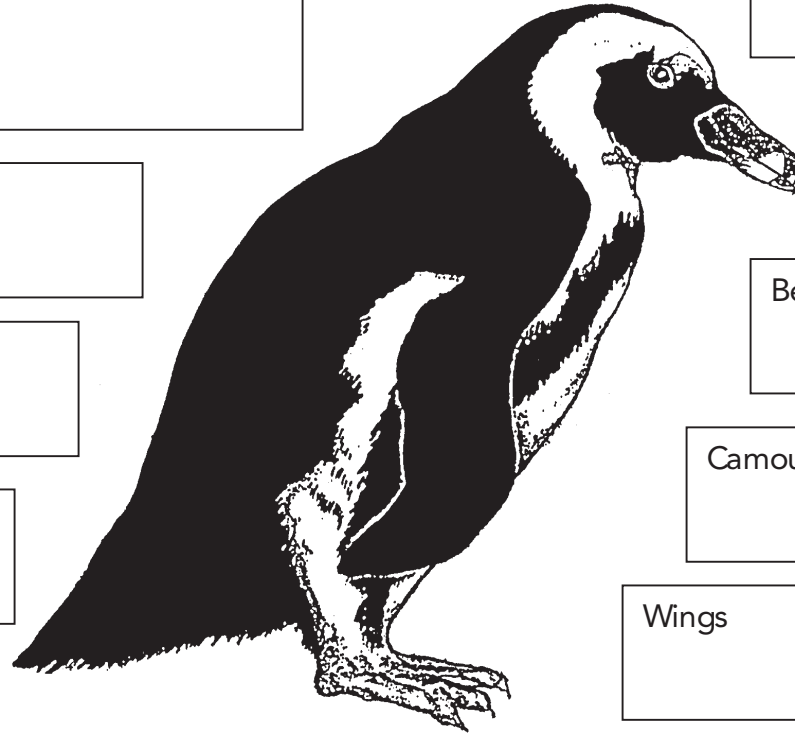
Body shape

Wings

Bones

Feet

Oil gland



New England
Aquarium



PENGUIN ADAPTATIONS

Penguins are not just cute waddlers. They are specially adapted to living and hunting in the open ocean and to nesting in coastline areas of varying temperatures.

Feathers: fluffy down near skin for insulation; stiff, overlapping tips for waterproofing

Featherless patch of skin for heat dispersion

Salt gland near eye to remove excess salt



Dense, overlapping feathers packed approximately 70 per square inch

Nictitating membrane: clear covering over the eyes that acts like goggles for underwater vision

Muscles store oxygen, allowing for prolonged dives of a few minutes or more

Sharp, hooked beak for catching fish, krill and squid; Velcro-like tongue to hold on to their slippery food

Layer of blubber for some insulation

Countershading for camouflage in the open ocean

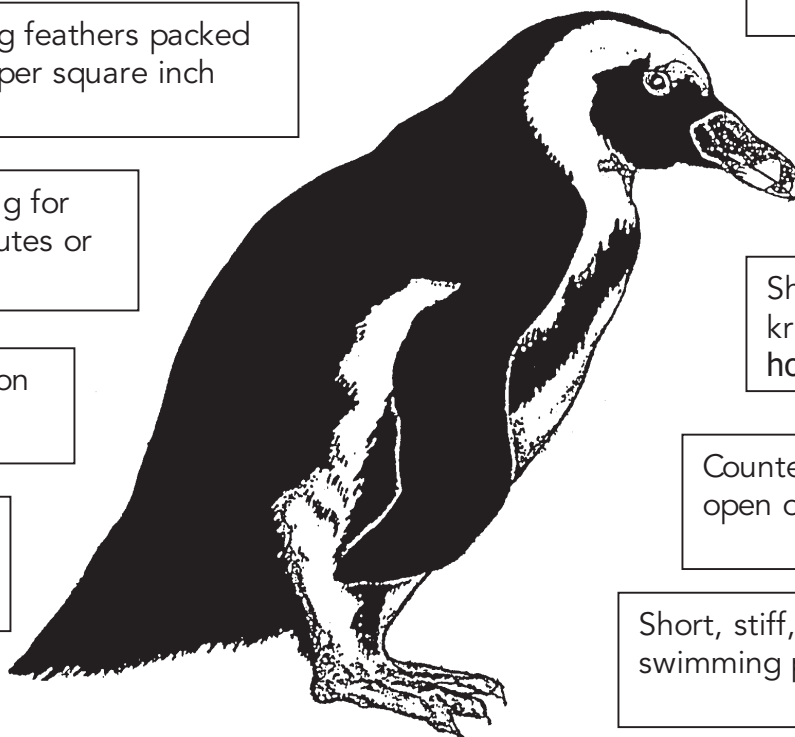
Torpedo-shaped body for efficient propulsion under water

Short, stiff, paddle-like wings for swimming power

Solid, heavy bones for diving and underwater swimming

Webbed feet for steering

Oil gland at base of tail for conditioning feathers



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