

# Penguin Adaptations

A quick illustrated overview

teaching resources with QR codes



(peng-adapt01.php)

**1 - Penguins waddle when they walk** - this saves them energy because they are tall with short legs.



(peng-adapt02.php)

**2 - Penguins move fastest on snow and ice by "tobogganing"** - they lie on their front and push themselves with their feet, they can go faster than you can run.



(peng-adapt03.php)

**3 - Penguins have strong claws and strong short legs**, these grip onto slippery rocks or ice when they come out of the sea.



(peng-adapt04.php)

**4 - Penguins pull their feet in close for streamlining when swimming**, like an aircraft pulling in its wheels Penguins can stick a foot out as a water-brake, they can turn and head back where they came in 1/5th of a second.



(peng-adapt05.php)

**5 - Penguin "wings" are adapted to be short, stiff flippers for "flying" in water.** The elbow and wrist joints are fixed to give a rigid flipper for swimming underwater.



(peng-adapt06.php)

**6 - Penguins collect air in their feathers by preening** especially before going to sea, it insulates against the cold. This trapped air helps the penguin swim at top speed by releasing as tiny bubbles which reduce drag, very useful when escaping predators.



(peng-adapt07.php)

**7 - All penguins apart from King and Emperor penguins build a nest.** They are a low pile of stones so if the temperature rises and snow melts, the nest is not flooded.



(peng-adapt08.php)

**8 - Emperor and King penguin parents keep their egg and then the young chick on their feet**, it is covered by a flap of skin called a brood pouch until they are large enough to keep themselves warm.



(peng-adapt09.php)

**9 - Penguins often nest in large colonies** which makes it easier to head out to sea together, this helps them fish for food better and avoid predators both in the sea and on land.



(peng-adapt10.php)

**10 - Like other birds, penguins lay eggs** which have to be kept warm all the time, the parents take it in turns to look after the egg or go to sea to feed.



(peng-adapt11.php)

**11 - Chicks are fed on the nest by the parents** until they are big enough to join a creche for protection against predators, this lets both parents to go to sea at the same time to catch more food.



(peng-adapt12.php)

**12 - Smaller penguins migrate north to escape the hard Antarctic winter**, they return in the short summer to make the most of abundant food and rear their chicks.



(peng-adapt13.php)**13 - Emperor penguins form huddles to keep warm in the coldest weather**, they take it in turns to be on the outside or in the middle!



(peng-adapt14.php)

**14 - Penguins gather at the ice edge** in groups before jumping in the sea. This confuses any predators that might be about and increases each penguins chance of survival.



(peng-adapt15.php)

**15 - During a deep dive, a penguins' heart rate slows** from 80-100 down to 20 beats per minute to let them dive for longer.