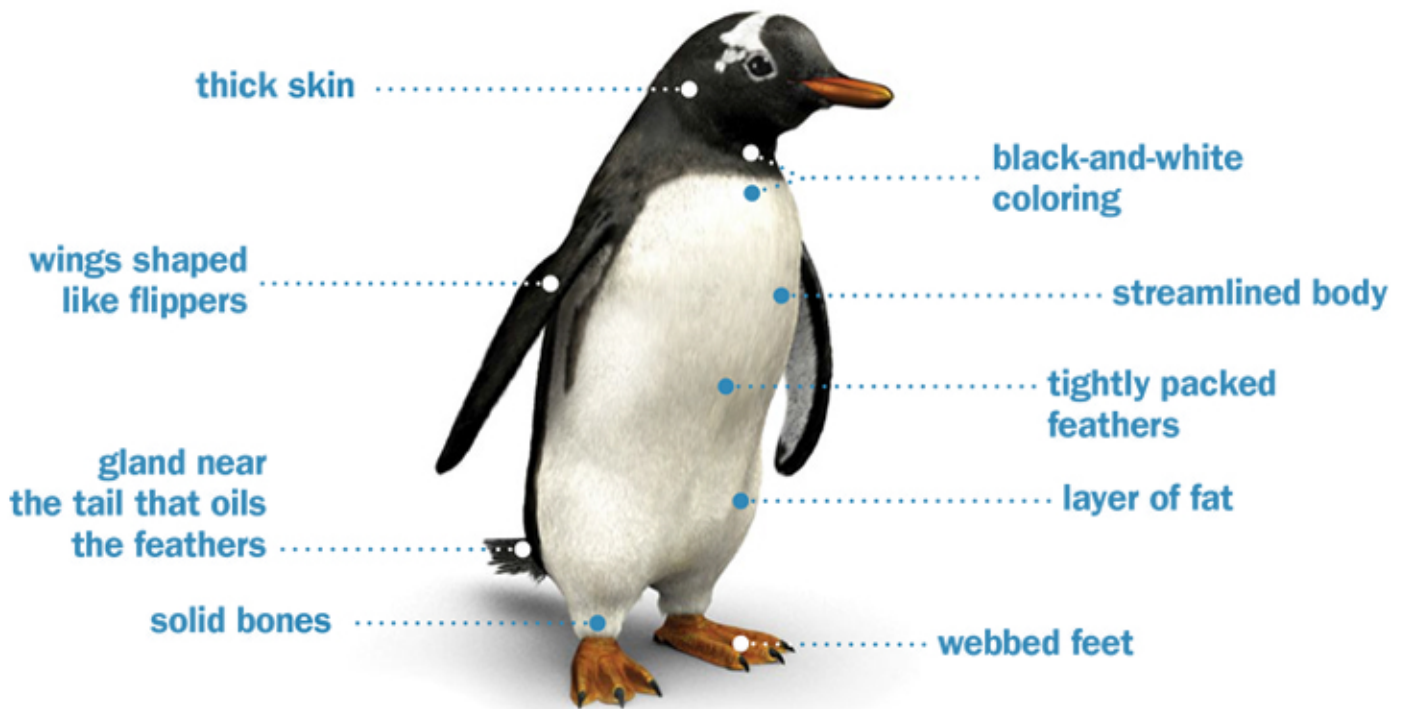


Penguin Adaptations

Rockhopper, Adélie, gentoo, and king penguins live mainly on islands just north of Antarctica. They spend more than half their time in the freezing water. Penguin bodies are built for cold weather. They have special features so they can swim and hunt in the cold waters.



Try these simple experiments. Then answer your teacher's **Observation Questions**.

Adaptation A:
Penguins have webbed feet to help them swim.

Fill a sink with water. Push one hand down in the water, with fingers outstretched. Then place a plastic bag over the same hand and close it at the wrist with a rubber band. Now try pushing your hand through the water again.

Adaptation B:
Most birds have hollow bones. Penguins have solid bones to help them stay underwater.

Fill a sink with water. Fill one balloon with air and one with water. Try to sink both balloons.

Adaptation C:
Penguin feathers have oil on them for waterproofing.

Unroll a cardboard tube and cut two identical shapes from it. Cover one with petroleum jelly. Try sprinkling each one with water. Then hold each one underwater to the count of 10.

Adaptation D:
Penguins have black backs to help them stay warm.

Fill two identical bottles with water. Paint one white and one black. Leave them in the sun for 20 minutes. Then measure the temperature of the water inside each bottle.