

UNIT 2. VERTEBRATES



PRIMARY 4 / Natural Science
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ANIMALS EVOLUTION

Some scientists found remains of dinosaurs that had wings and feathers. Nowadays, they know that the first animals on Earths were fish and the rest of animals we can see today descend from the evolution of those fish.

Classification of animals

Carnivores

Animals that **eat other animals**



Herbivores

Animals that **only eat plants**

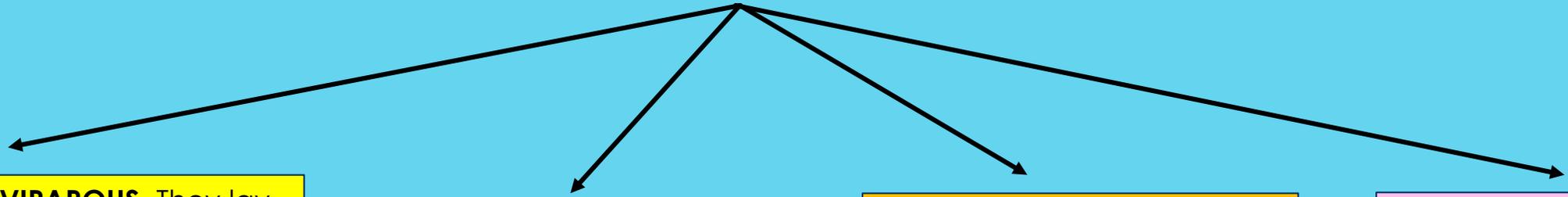


Omnivores

Animals that **eat both animals and plants**



FISH



They are **OVIPAROUS**. They lay lots of eggs in the water but they don't look after them.

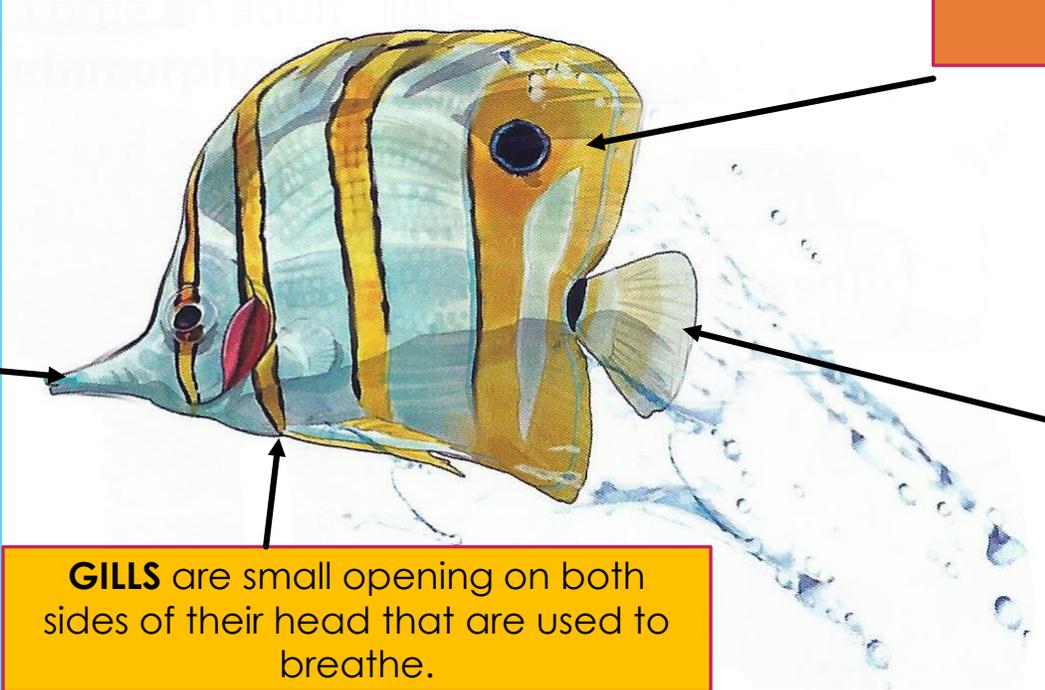
Most of them are **CARNIVORES** like sharks.

Some fish are **HERBIVORES** like salmon.

Other are **OMNIVORES** such as the goldfish.

What do fish look like?

Some fish have teeth, like the piranha.
Other fish like the swordfish, don't have teeth.

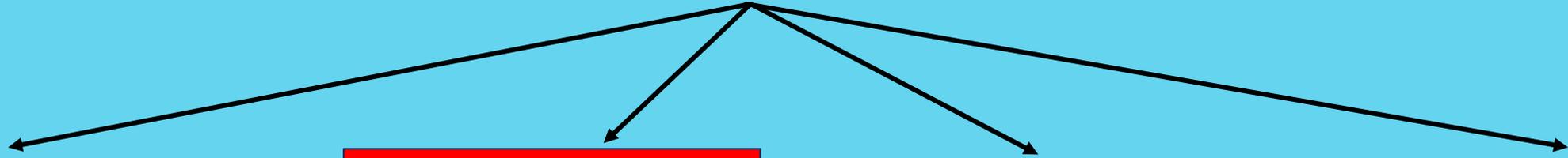


Fish are covered in **SCALES**.

Fish have **FINS** which help them to move through the water.
They also have a **TAIL**.

GILLS are small opening on both sides of their head that are used to breathe.

AMPHIBIANS



All amphibians are **CARNIVORES**. They eat insects and spiders.

All amphibians are **OVIPAROUS**. They lay eggs in the water but they don't look after them.

When they are young, most amphibians live in water and breathe through **GILLS**.

Adults amphibians have lungs to breathe and they can also breathe through their **SKIN** when it is wet.



Salamander
They have four **LIMBS**



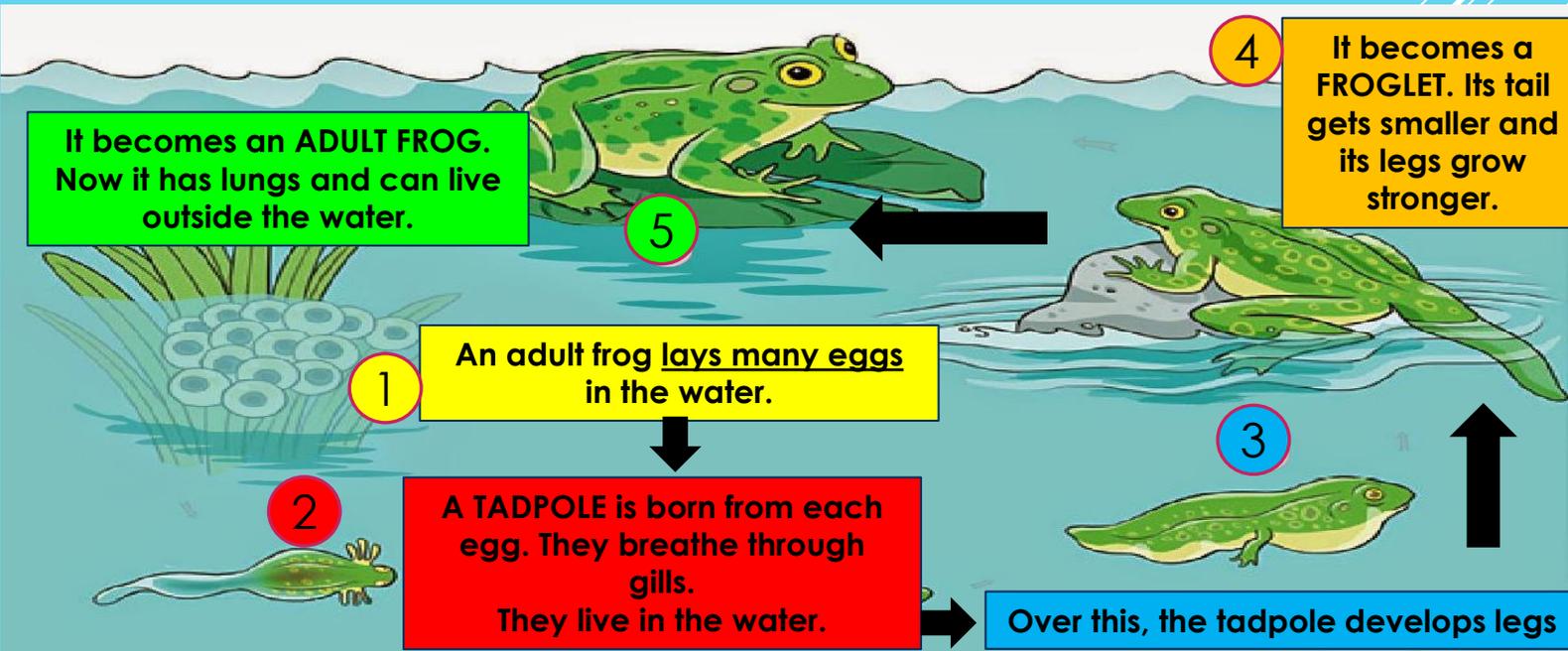
Toad
- They have **moist SKIN**.
- Their **tongue** is long and sticky. "They use it to catch their food".



Newt
Some amphibians have a **TAIL**, such as the salamander and the newt

The life cycle of a frog (Metamorphosis)

After they born, young amphibians go through a number of changes to become an adult. This transformation is called **METAMORPHOSIS**.



It becomes an **ADULT FROG**. Now it has lungs and can live outside the water.

1. An adult frog **lays many eggs** in the water.

2. A **TADPOLE** is born from each egg. They breathe through **gills**. They live in the water.

Over this, the tadpole develops legs

4. It becomes a **FROGLET**. Its tail gets smaller and its legs grow stronger.

All reptiles are **CARNIVORES**. There are a few reptiles, like the iguana, that are **HERBIVORES**.

How do reptiles live?

They are **OVIPAROUS**. Most of them don't look after their eggs after they hatch.

All reptiles breathe through **LUNGS**.

REPTILES

What do reptiles look like?



Snake



Turtle



Chameleon

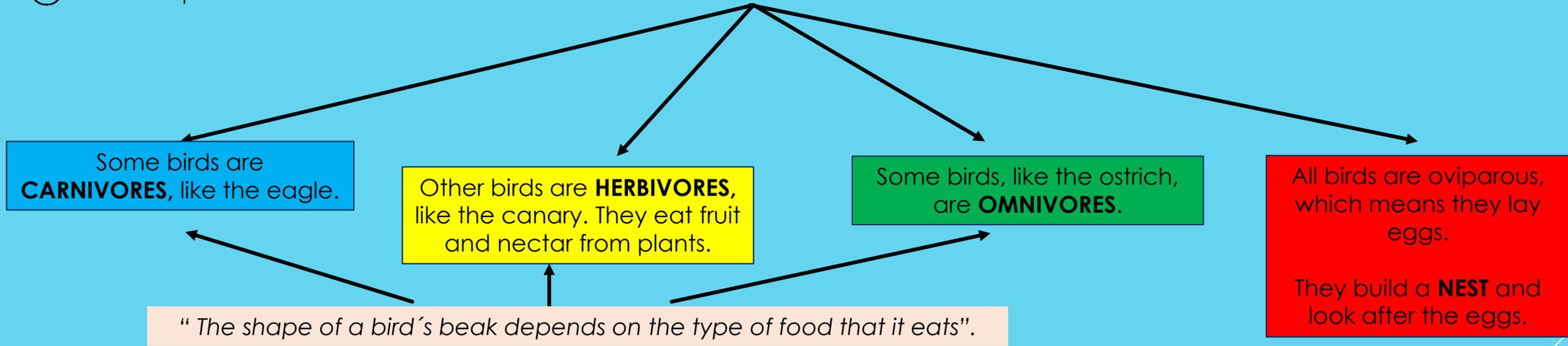


Crocodile

Most reptiles have four short limbs like feet.
However some reptiles, like snakes, haven't legs.

Reptiles are covered by dry scaly skin.
Some reptiles, like the turtle, have a **hard SHELL** on its back to protect its body.

BIRDS



What do birds look like?



Kingfisher

Their body is covered in **FEATHERS** which protect them from the cold and the rain.



Ostrich

They have **four limbs**. They have two legs or feet on the lower part of their body and are covered by **SCALES**. Wings are the other two limbs.



Hummingbird

They have a beak at the end of their mouth and they don't have **teeth**.



Swallow

They have **WINGS** on the upper part of their body. Most birds use their wings to fly.



Eagle

Birds breathe through their **LUNGS**.



Blue tit

MAMMALS

They can be **CARNIVORES** like lion, **HERBIVORES** like cows or **OMNIVORES** like human beings.

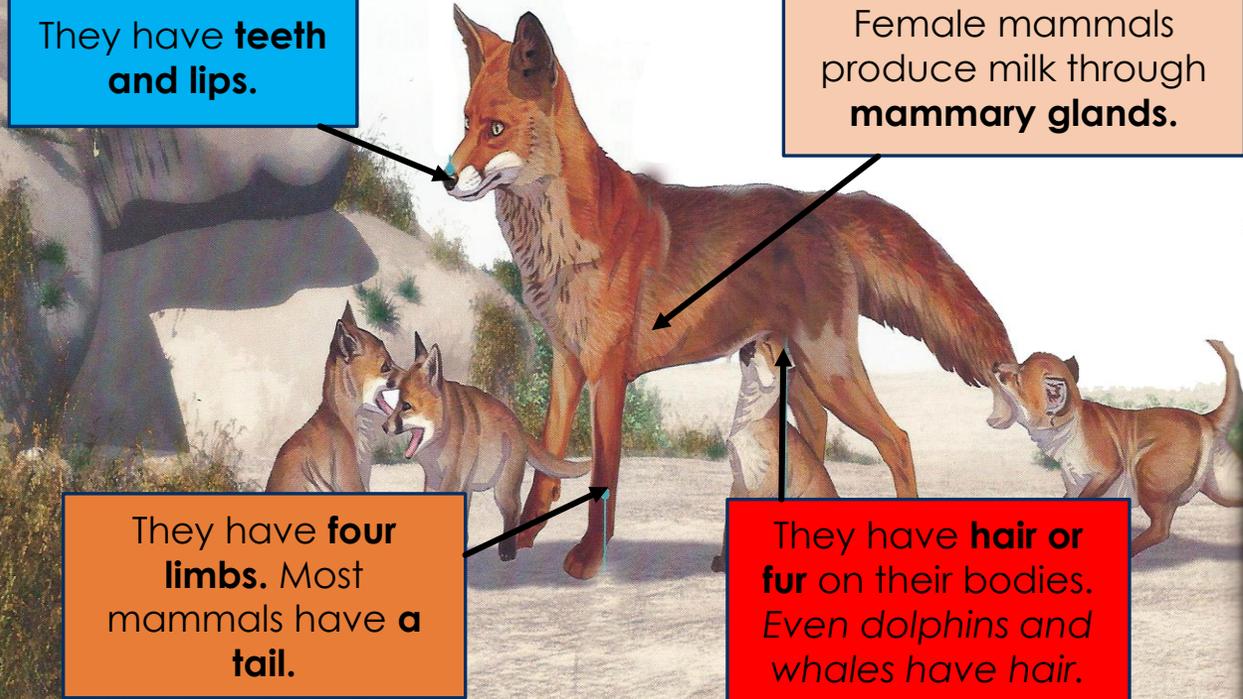
All mammals are **VIVIPAROUS**, which means that they grow inside their mothers before they are born.

All mammals breathe through their **LUNGS**.
Mammals that live in the sea swim underwater and then rise to the surface to breathe.

What do mammals look like?

They have **teeth and lips**.

Female mammals produce milk through **mammary glands**.



They have **four limbs**. Most mammals have a **tail**.

They have **hair or fur** on their bodies. *Even dolphins and whales have hair.*



Killer whale

Aquatic mammals have **FINS** to help them swim.



Bat

The only mammals which flies because it has **WINGS**.



Kangaroo

Mammals that walk on the earth have **LEGS**.



Dolphin

They have **LUNGS**