

**VERTEBRATES**

The African elephant is the largest animal on land. It is a vertebrate.

Why is it classified as a vertebrate?

It has a backbone

What other animals are vertebrates?

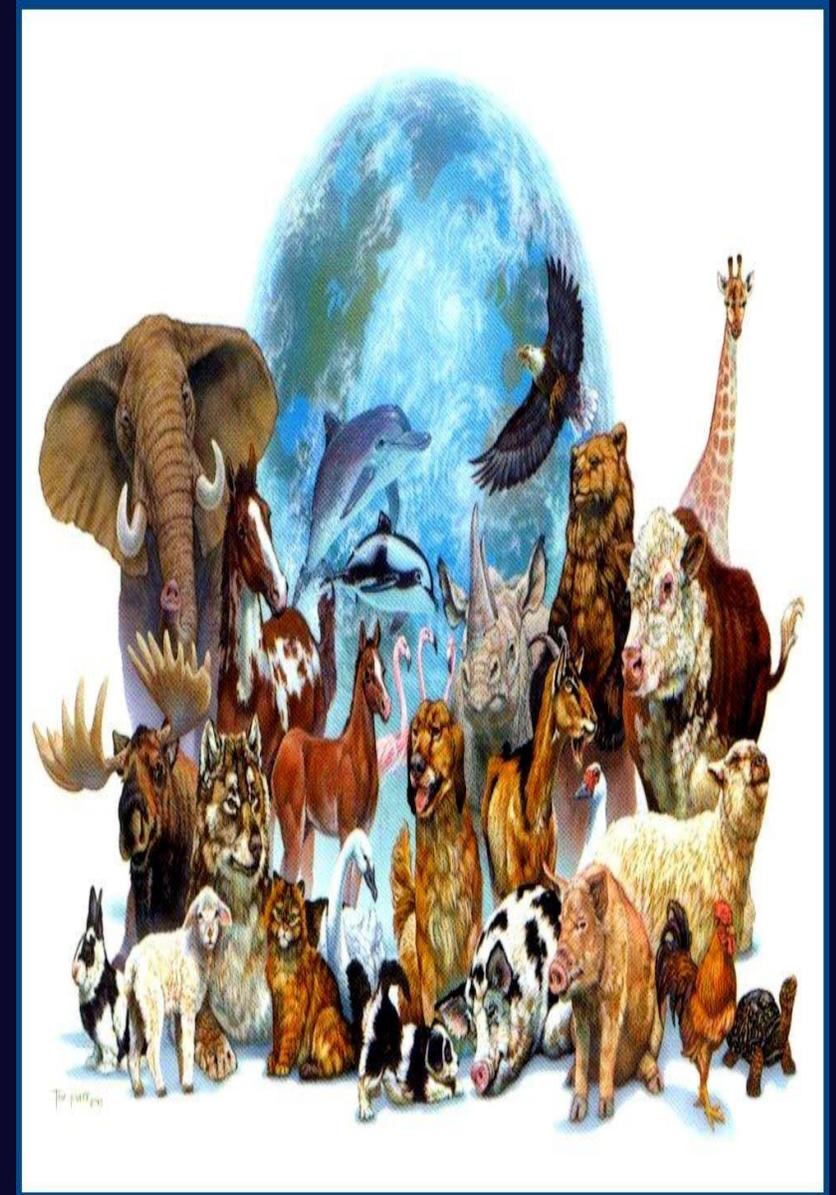
Human beings, dogs, cats, lions, fish, birds.



Why is it important to classify animals?

There are more than a million different kinds of animals on the Earth, they are different but they are similar too.

We can classify based on their characteristics, there are some groups and in these groups there are animals which have similar characteristics.



# FLASHBACK

LIVING THINGS CAN BE  
CLASSIFIED INTO ANIMALS AND  
PLANTS.



# INVERTEBRATES AND VERTEBRATES!!!

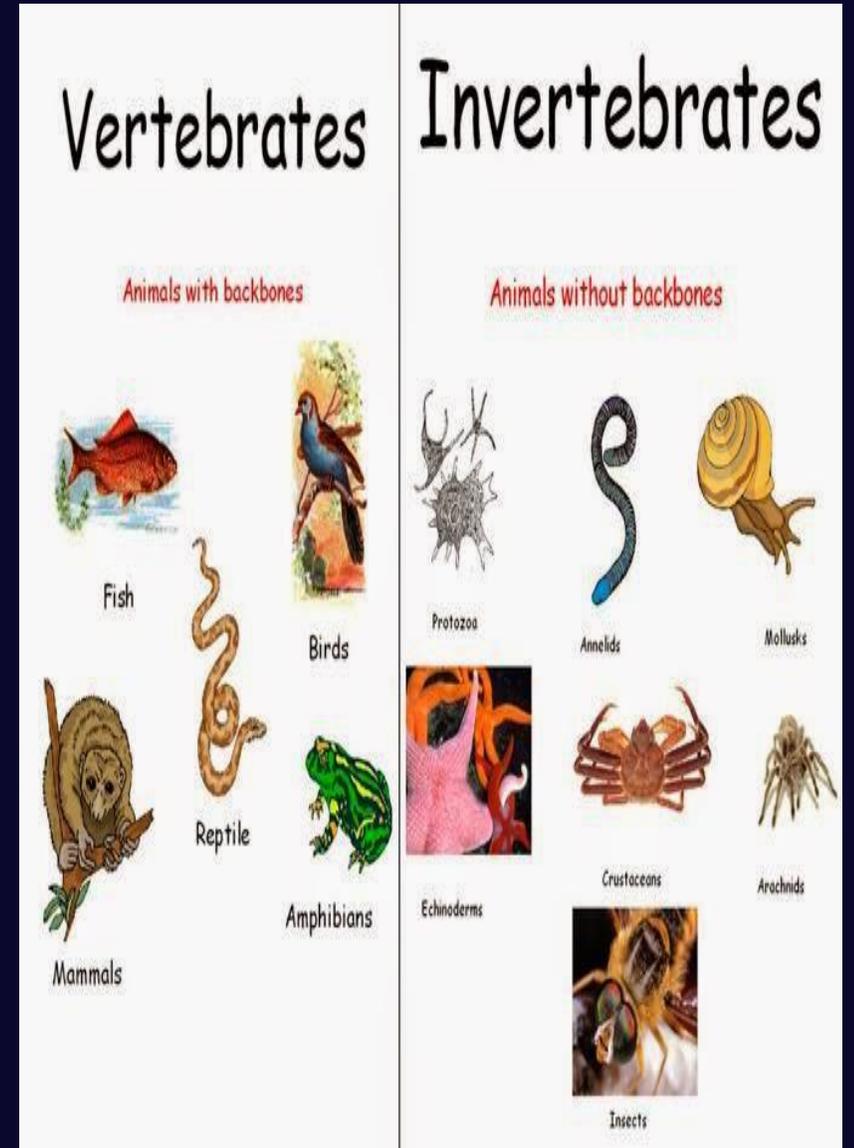
Animals can be divided into two main groups.

**INVERTEBRATES:** Invertebrates are animals without a backbone. Snails, jellyfish and butterflies are examples of invertebrates.

## VERTEBRATES:

Vertebrates are animals with a backbone. Monkeys, peacocks, goldfish and crocodiles are examples of vertebrates.

Vertebrates can be classified into five groups.



# Vertebrates

Mammals

Birds

Fish

Amphibians

Reptiles

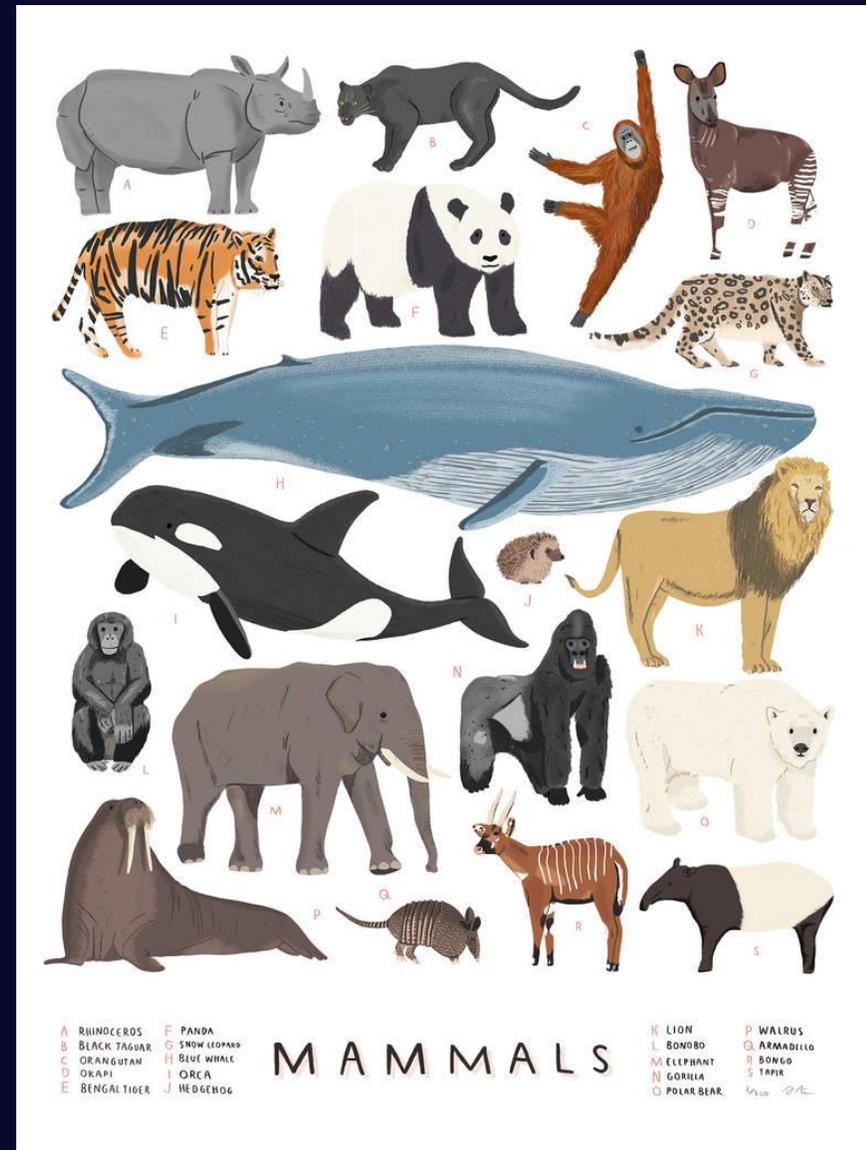


# MAMMALS

**HABITAT:** they can be found in a wide variety (cold-warm, land - underwater) of places.

**BODY COVERING:** Mammals are the only with hair on their bodies.

**STRUCTURE:** Most mammals walk on four legs, some fly (bats), dolphins and whales have fish-like shapes.



**BREATHING:** Mammals breathe using their lungs.

**REPRODUCTION:** Most mammals give birth to their young and suckle them. These babies feed on their mother's milk.

**EXAMPLES:** Zebras, giraffes and antelopes.

**Activity 4.1**  
**Activity Book pages 17, 18**



# BIRDS

**HABITAT:** Birds can be found in a wide variety of cold and warmer places.

**BODY COVERING:** Birds are the only animals with feathers, these help them to fly. However not all birds can fly.



**STRUCTURE:** all birds have a beak, two wings and two legs.

**BREATHING:** Birds breathe using their lungs.

**REPRODUCTION:** Birds reproduce by laying eggs, these are protected by a hard shell.

**EXAMPLES:** pelicans, geese, robins and ducks.

**Activity 4.2 – 4.3**  
**Activity Book pages 19, 20, 21, 22**



THAT'S  
COOL

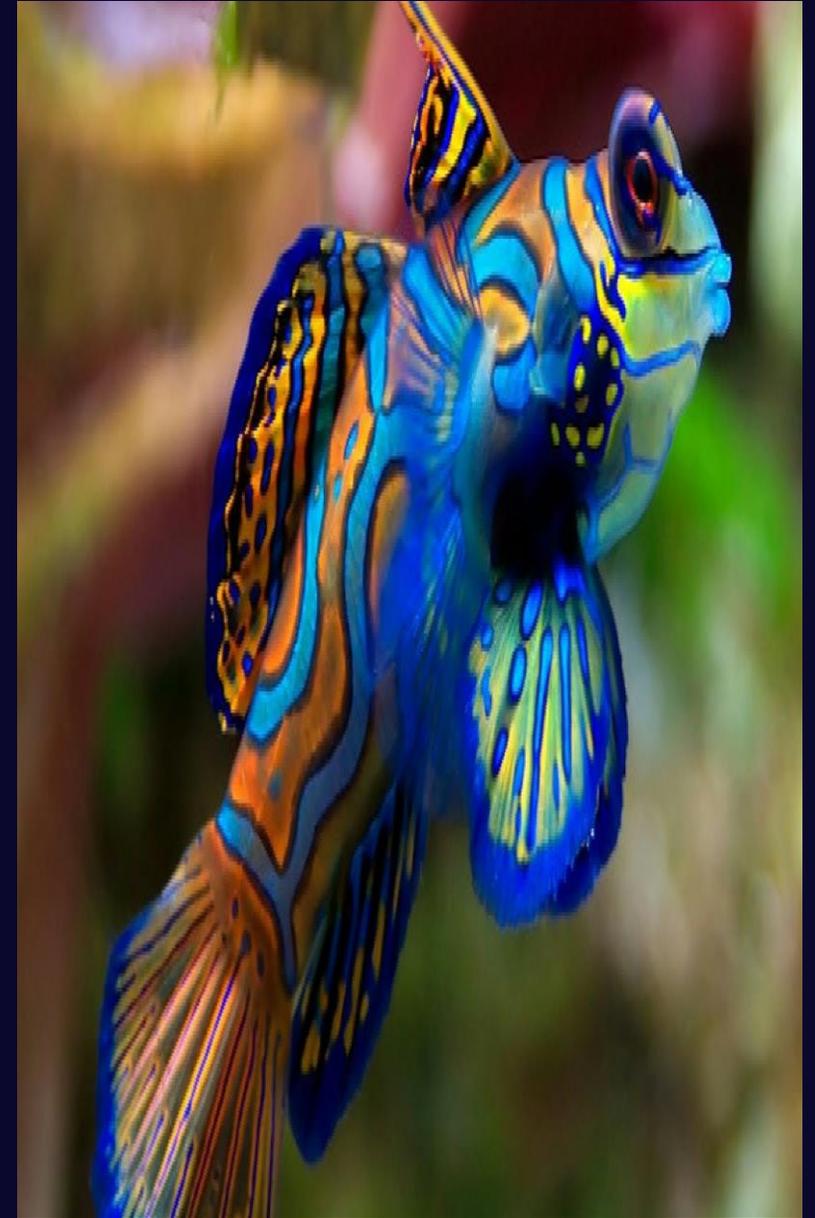


The ostrich is the biggest of all birds. It has eyes bigger than a hummingbird. It lays the biggest eggs among all animals too, it's a flightless bird, it's the largest of all birds, it can run at great speeds

# Fish

**HABITAT:** Some fish live in saltwater and some fish live in freshwater. They can be found in: lakes, ponds, rivers and seas.

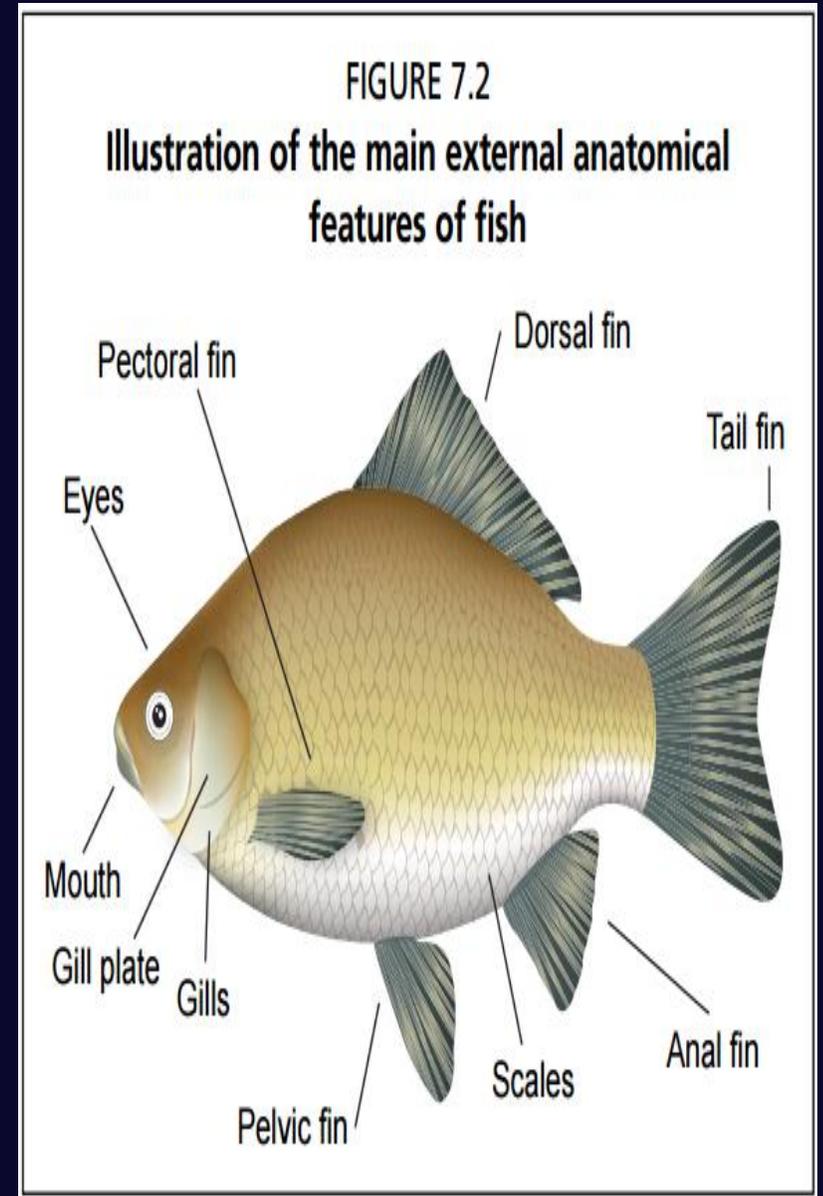
**BODY COVERING:** The bodies of most fish are covered with scales.



**STRUCTURE:** Fish have gills, gill covers and fins. Their fins help them swim.

**BREATHING:** Fish breathe in water, using their gills to help them.

**REPRODUCTION:** Most fish such as the carp and the angelfish reproduce by laying eggs.



# WE CARE

Catching fish in large numbers may cause problems for other sea animals that depend on fish for food. Turtles and dolphins may also be killed as they are accidentally caught in fishing nets.



# THAT'S COOL

THE GUPPY IS A SPECIAL FISH,  
IT'S KNOWN AS THE  
MILLIONFISH, IT GIVES BIRTH TO  
ITS YOUNG INSTEAD OF LAYING  
EGGS,



# AMPHIBIANS

**HABITAT:** Amphibians can live both on land and in water.

**BODY COVERING:** The skin of amphibians is always kept moist, they don't have scales, feathers or hairs.

**STRUCTURE:** amphibians have structures which allow them to move in land and in water. They are cold-blooded animals, its body temperature changes with its environment.

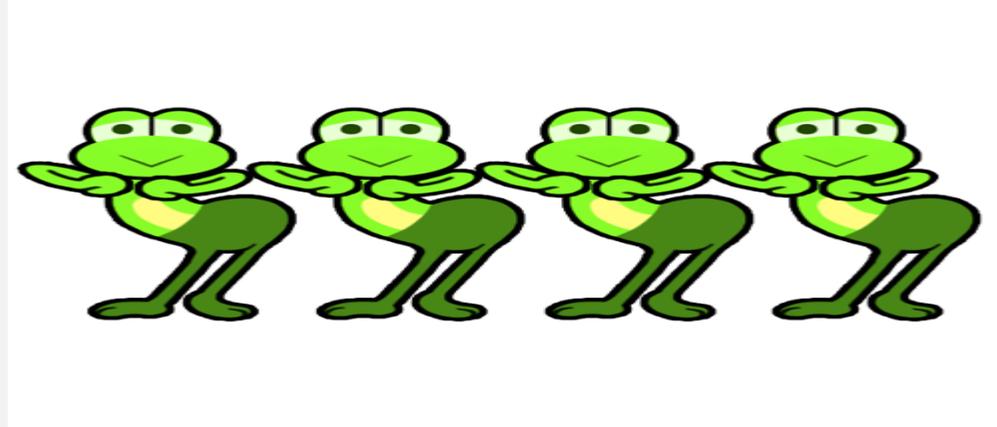


**BREATHING:** Adult amphibians breathe through their skin and lungs.

**REPRODUCTION:** Amphibians lay their eggs in water. The Young of amphibians look like small fish and live in water. They breathe through their gills.



EXAMPLES: Salamanders and frogs.

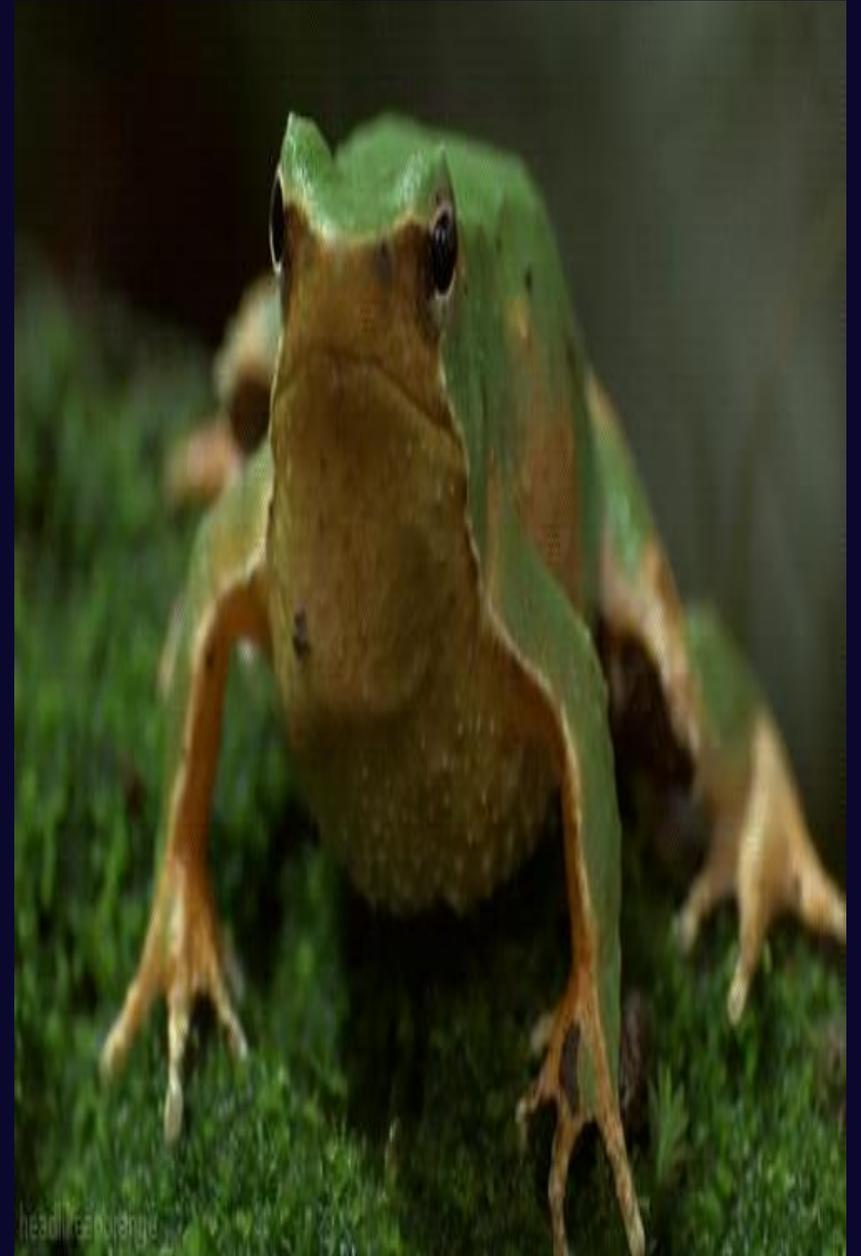


Salamanders have four legs for walking on land and a tail to help to swim.



# THAT'S COOL

- Instead of drinking, frogs absorb water through their skin.
- The skin of a frog is highly permeable. So, frogs can absorb oxygen and water directly from their skin, specially around the pelvic area. Frogs are also prone to water loss because of the high permeability of their skin. They have evolved many features to prevent such water loss.



# REPTILES

**HABITAT:** Reptiles can be found both on land and in water.

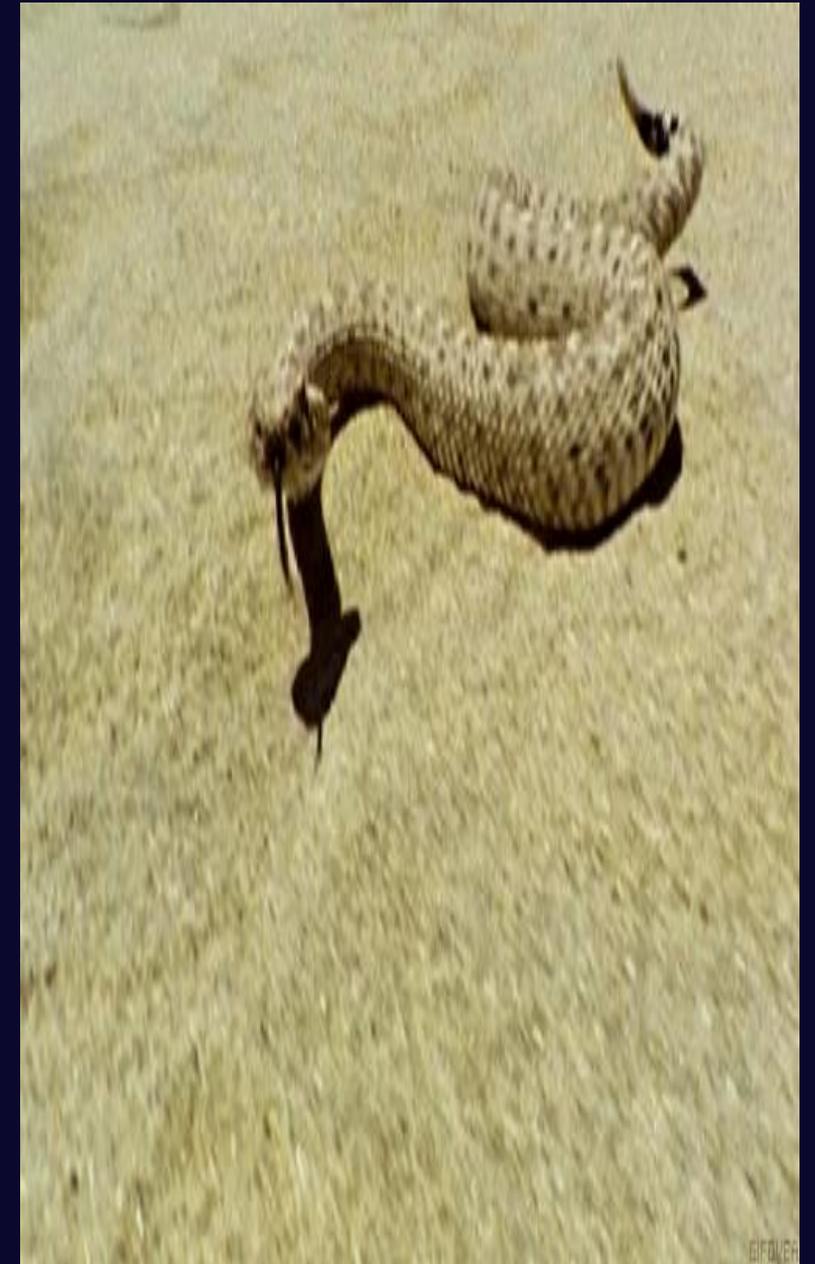
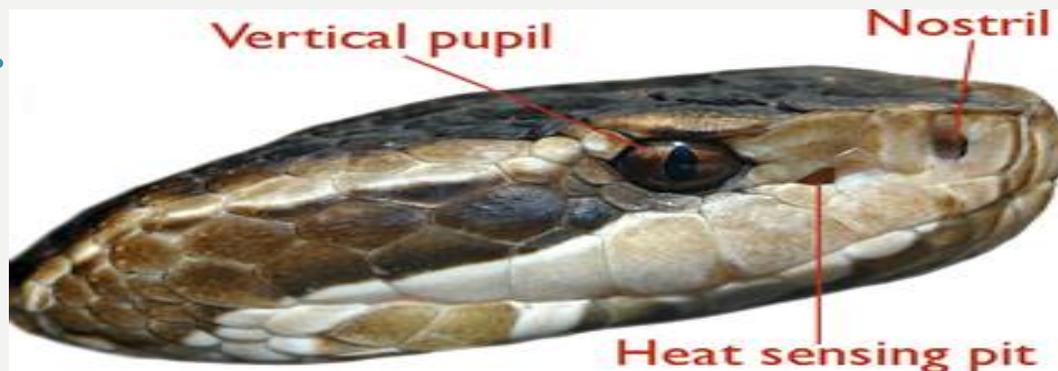
**BODY COVERING:** Their bodies are dry and covered with scales. Tortoises, turtles and terrapins belong to a special group of reptiles which don't have scales, they are protected by a hard shell.



- **STRUCTURE:** Most reptiles walk on four legs. Some reptiles such as snakes do not have legs. Reptiles are cold-blooded animals.

- **BREATHING:** Reptiles breathe through their lungs.

Snakes take in oxygen through their nostrils.



**REPRODUCTION:** Most reptiles lay eggs with hard shells. Their Young hatch from the eggs when they are fully formed and take care of themselves from the time they hatch.

**Examples:** Lizards, tortoises and snakes.



# EXPLORE!!

One way chamaleon lizards escape from their enemies is by changing the color of their skin. Can you describe another way lizards are able to escape from their enemies?



# Question!!!

Which group of vertebrates do we belong to?

Why?

We belong to the group of mammals because we have hair on our bodies, use our lungs to breathe and give birth to Young which feed on the mother's milk



We classify

Animals

to help us

Identify animals

to help us

Understand animals better

into

Invertebrates

which are

Animals without a backbone

Vertebrates

which are

Animals with a backbone

which are further classified into

Mammals

Birds

Fish

Amphibians

Reptiles

