

LESSON FOUR

What are the different animal kingdoms?



Do now



Complete the multiple choice quiz below

1. Which word describes differences between organisms of the same species?
 - a. Characteristics
 - b. Evolution
 - c. Variation
 - d. Fossilisation

2. Which **two reasons** below explain why the fossil record is not complete?
 - a. The bodies of many animals decomposed before they were covered
 - b. There were not many organisms in the past
 - c. Fossils have been burned up as fuel
 - d. Some fossils were in rock that has been melted to make magma

3. Why are some new characteristics passed on over time?
 - a. Animals choose to change
 - b. The new characteristic helps the organisms to survive so they reproduce
 - c. Weaker organisms stay alive for longer
 - d. New organisms appear on their own out of nowhere



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LESSON FOUR

By the end of this lesson you will be able to...

- categorize different living creatures that exist now and have existed over time
- state the 5 types of animal kingdoms
- explain how we can identify animals from each kingdom
- explain how an evolutionary tree can show how each animal kingdom is related to each other

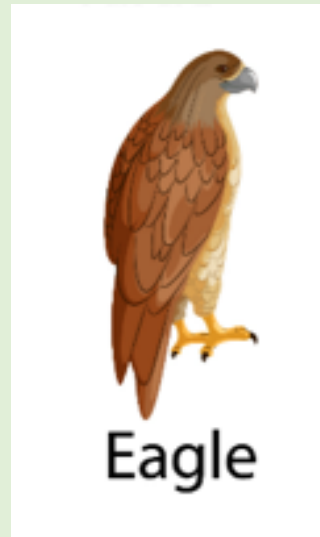
Recap: theory of evolution

1. There is variation between species.
2. The organisms that are best adapted survive.
3. These organisms are more likely to reproduce and pass on their characteristics to their offspring.
4. This happens over and over again until all the organisms have the same characteristic.

What are some similarities and differences between the animals?



Toad



Eagle



Tiger



Salmon



Turtle



Read the comprehension about kingdoms

All living things that exist have been put in categories according to different kinds of characteristics that they have. Each of these categories are called 'kingdoms'. These kingdoms are called by latin names: Animalia, Plantae, Fungi, Prokaryotes and Protoctista.

Prokaryotes and Protoctista are micro-organisms (so small that we can't see

them) such as bacteria and viruses. Animalia is the kingdom of animals – organisms that eat other organisms like Rabbits or Whales. Plantae is the kingdom of plants – organisms that create they own food using sunlight such as trees or flowers. Fungi grow from the remains of other organisms such as mushrooms or yeast.





Find answers the to the questions below in the text above

1. What are the names of each of the kingdoms

_____, _____, _____,
_____, _____.

2. Match up the kingdoms with the characteristics that we observe in that kingdom

Prokaryotes and Protoctista

Animalia

Plantae

Fungi

grow from the remains of other organisms

the kingdom of animals – organisms that eat other organisms

are micro-organisms (so small that we can't see them)

the kingdom of plants – organisms that create they own food using sunlight



Give an example of a species that might live in each kingdom.

Prokaryotes/Protocista: _____

Animalia: _____

Plantae: _____

Fungi: _____



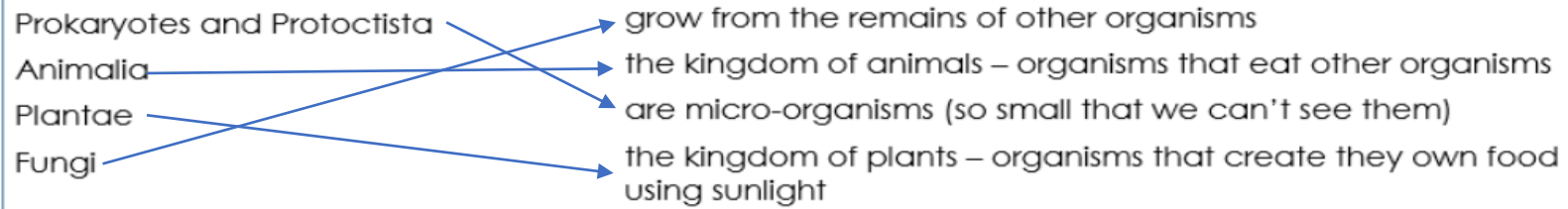
Find answers to the questions below in the text above

1. What are the names of each of the kingdoms

Prokaryotes , Protocista , Animalia ,

Plantae , Fungi .

2. Match up the kingdoms with the characteristics that we observe in that kingdom



Give an example of a species that might live in each kingdom.

Prokaryotes/Protocista: viruses/ bacteria

Animalia: any animal e.g. rabbits or whales

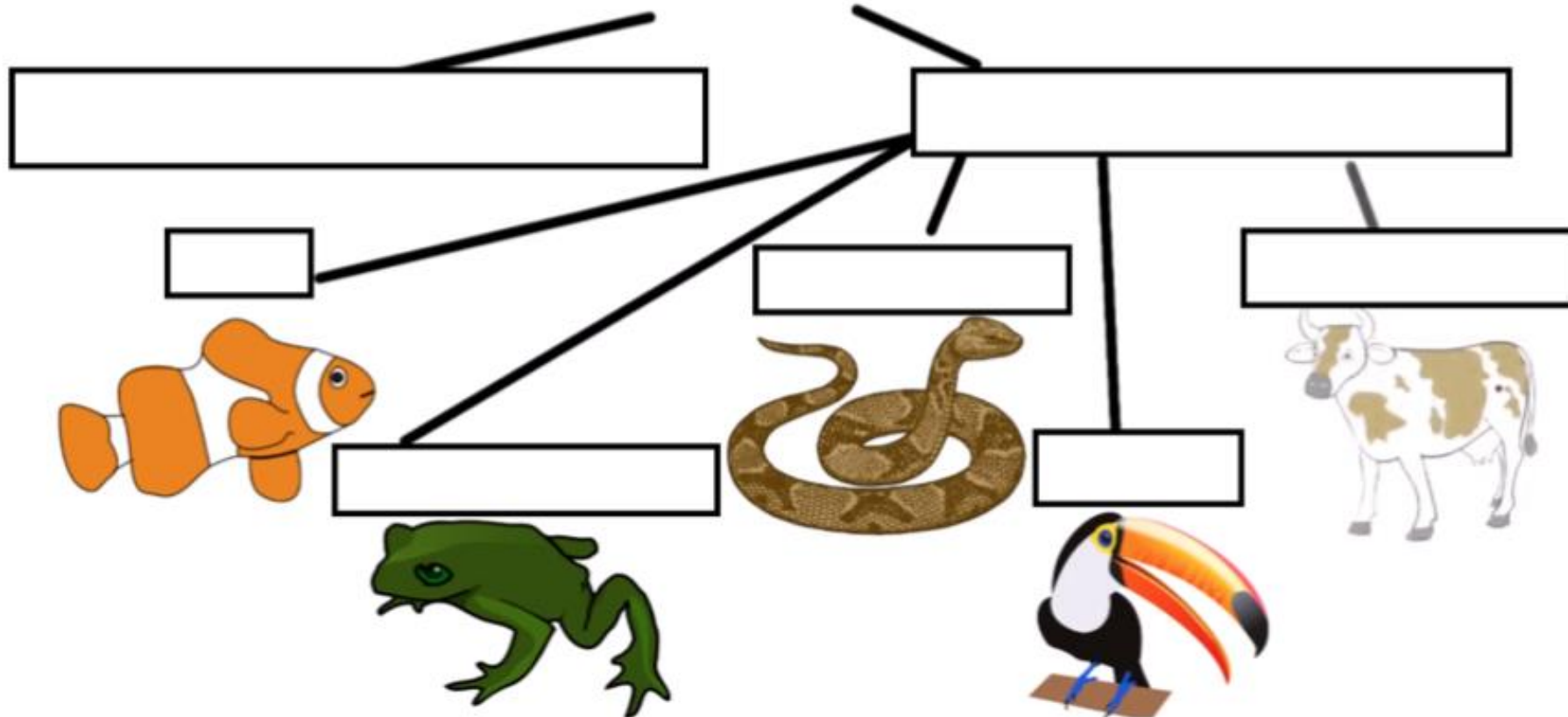
Plantae: Any plant e.g. grass, sunflower etc.

Fungi: Mushrooms or yeast



Watch the [video](#) and fill in the categories of animals in the diagram below

ANIMALS



- vertebrates
- invertebrates
- amphibians
- birds
- reptiles
- fish
- mammals



What is different about vertebrates and invertebrates?

Vertebrates have _____ . Invertebrates do not have _____.

Give 3 examples of invertebrates:

1) _____

2) _____

3) _____

Vertebrates have _____ **spines** _____. Invertebrates do not have _____ **spines** _____.

Give 3 examples of invertebrates:

- 1) **Star fish** _____
- 2) **Spiders** _____
- 3) **Jellyfish** _____ **AND MANY MORE**





Read the comprehension about each animal kingdoms and answer the questions below

Animal kingdoms are 5 main types of categories of vertebrates that exist. We can tell the difference between each kingdom by the characteristics. The names of each of the animal kingdoms are Fish, Mammals, Reptiles, Birds and Amphibians.

Fish are cold-blooded organisms (which means they do control their own body temperature) that live in water. They breathe by extracting oxygen as they swim using their gills. They have scales across their skin and lay eggs when they reproduce. Some examples are goldfish and sharks.

Add information about fish to the table below.



Salmon

Mammals are warm blooded organisms that have either hair or fur. They breathe by drawing air into their lungs and give birth to offspring that are alive. All mammal babies are given milk by their mothers to help them when they are born. Some examples are horses and cats.



Tiger

Reptiles have dry, scaly skin and are cold blooded like fish. Also like fish, they lay eggs but do so on land where the majority of reptiles spend all of their time. They either have short legs or no legs at all. Some examples are snakes and crocodiles.

Add information about reptiles to the table below.



Birds have feathers instead of scales or fur and almost all birds can fly. They lay eggs which hatch into their offspring and are warm blooded. They have two wings and two legs and have beaks or bills. Some examples of birds are chickens and ostriches.

Add information about birds to the table below.



Eagle

Amphibians are cold blooded and can live on land or in water. They simply have skin which is always kept moist. They lay their eggs in water and their young hatch and grow until they are large enough to also spend time on land. Some examples of amphibians are frogs and newts.

Add information about amphibians to the table below.



Toad



Fill in the table below to show say what characteristics each animal kingdom has:



Animal Kingdom	Cold blooded or warm	Fur, feathers or scales?	Eggs or live young?	Legs?	Give 2 examples
Fish					
Mammal					
Reptile					
Birds					
Amphibians					



Look at the 'evolutionary tree' below. This shows us a history of how different living organisms evolved away from each other.

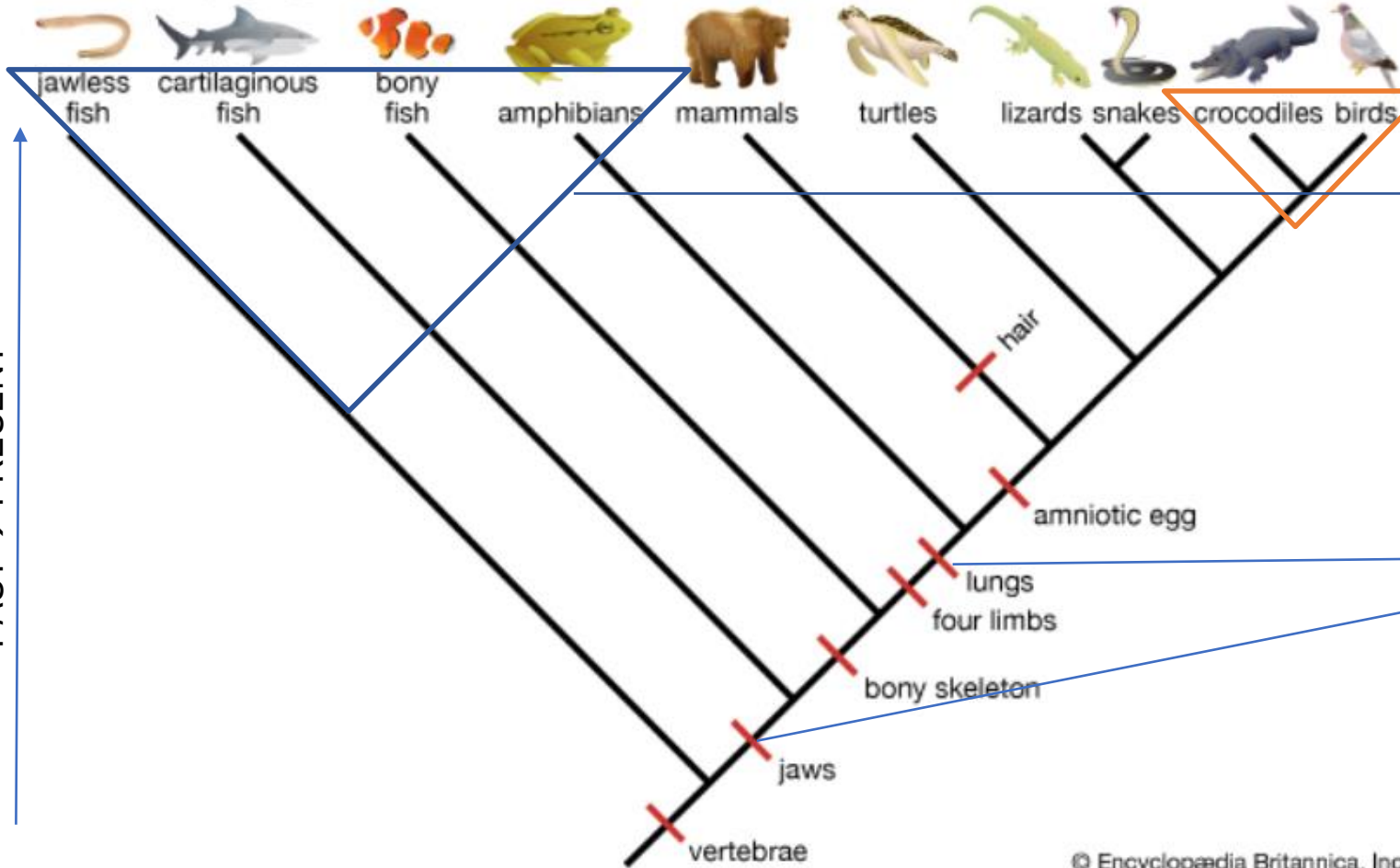
Each split in the line shows when living creatures evolved away from each other.

The fewer splits in the lines the more closely related the creatures are e.g. crocodiles and birds.

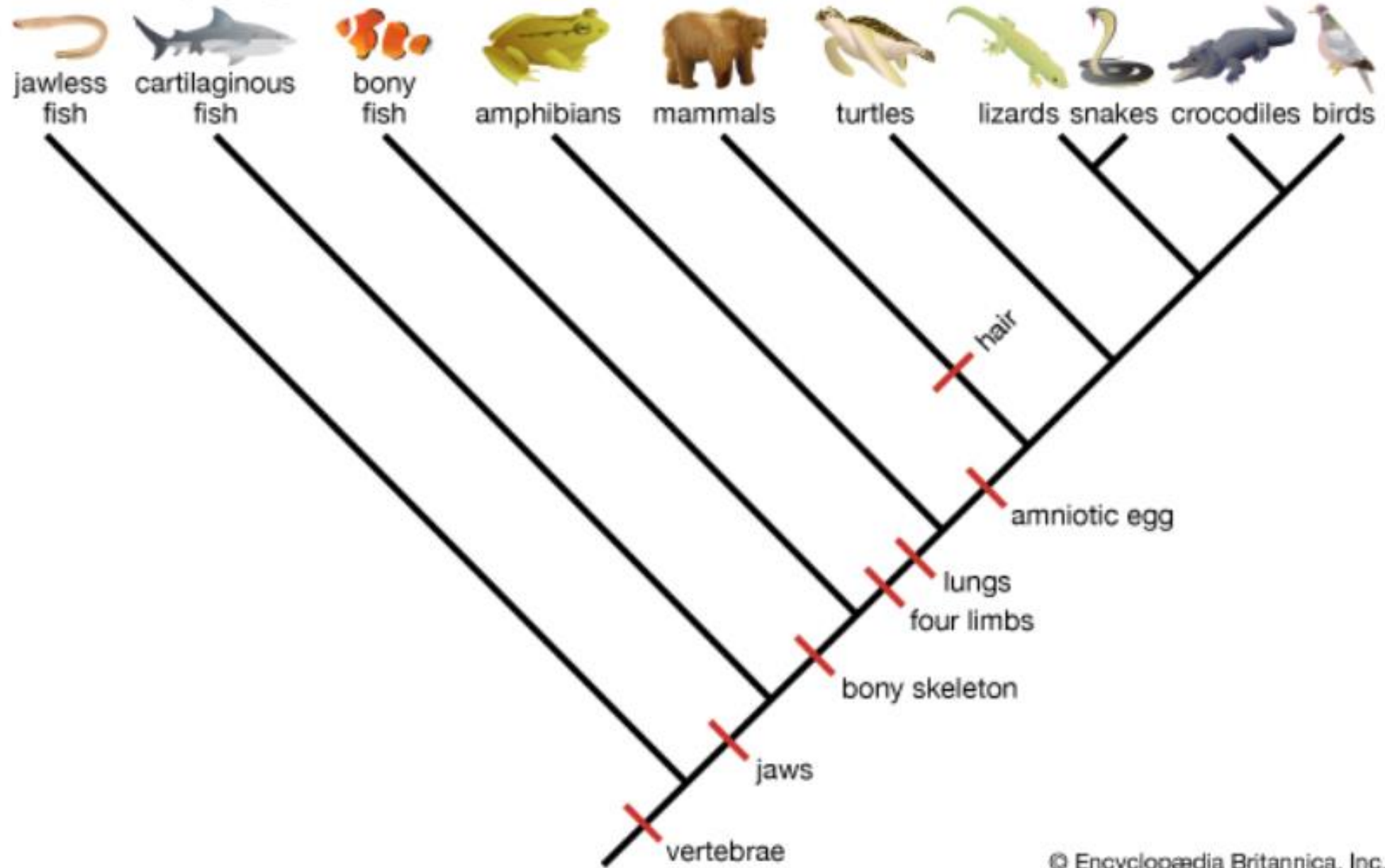
The more splits in the lines the less closely related the creatures are e.g. jawless fish and amphibians.

NEW CHARACTERISTIC

Vertebrate phylogenetic tree



Vertebrate phylogenetic tree





Answer the questions below:

1) Which living organisms are most closely related to each other?

2) Which living organisms are least closely related to each other?



Answer the questions below:



1) Which living organisms are most closely related to each other?

lizards and snakes or crocodiles and birds

2) Which living organisms are least closely related to each other?

jawless fish and birds

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