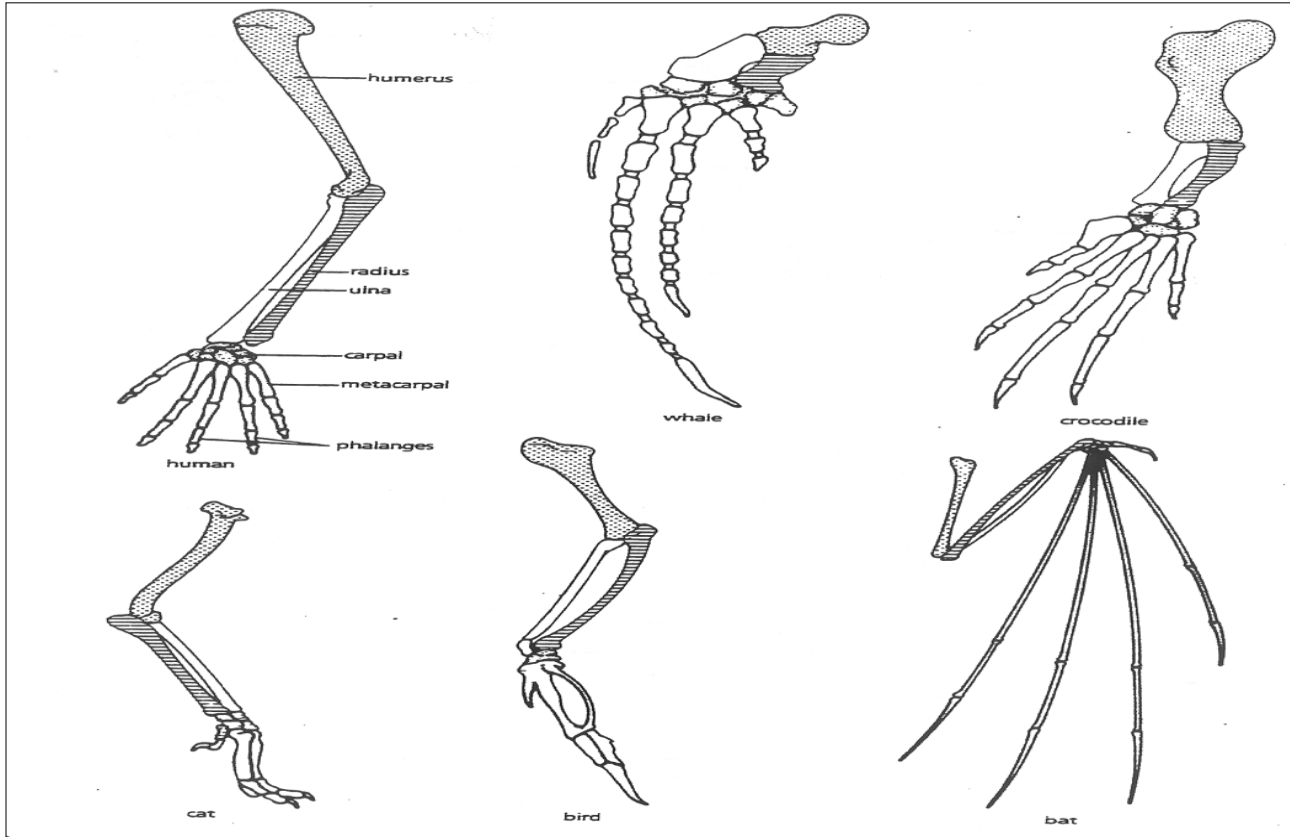


# EVIDENCE FOR EVOLUTION

## HOMOLOGOUS STRUCTURES

1. Look carefully at these bones. Can you see anything *similar* (the same)?



2. Describe the *function* of each set of bones below:

ANIMAL	FUNCTION (what is it used for?)
Human	
Whale	
Cat	
Bat	
Bird	
Crocodile	

3. Are the bones arranged (organized) almost the same way in each animal? \_\_\_\_\_

These structures are called homologous structures. They have the same structure as each other, but are used for different functions.

Name:

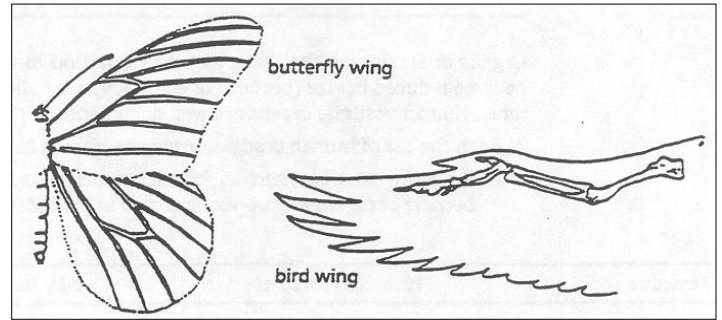
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## ANALOGOUS STRUCTURES

4. Look at the drawings? What is the **function** of each of them?

5. Are the structures different? How?



Sometimes *unrelated* animals have organs with **similar function**, yet are very **different** in structure and form. Structures that have the **same function**, but **different structure** (bones) are called **analogous** structures.

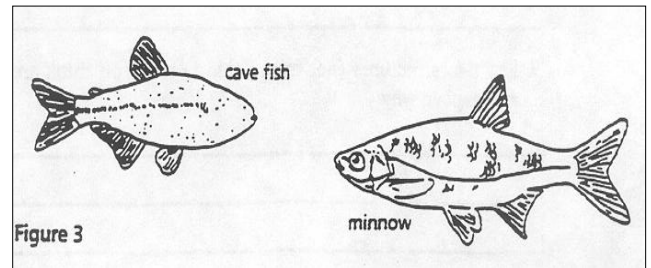
## VESTIGIAL STRUCTURES

If we don't use a structure in our bodies, over time it can get *smaller* or even become *removed*.

**Example: A penguin doesn't fly, so its wings have become very small over time.**

Here is another example:

*The cave fish and minnow are related, but the cave fish is blind (it has NO EYES)*



7. Why do you think the eyes are NOT IMPORTANT for the **cave fish**? \_\_\_\_\_

8. Do you think the cave fish and the minnow are **related**? Why? \_\_\_\_\_

*Organs or structures that lost their function in the organism and become **reduced in size** (because of efficiency) are called **vestigial structures**. Human vestigial organs include the tail bone and appendix.*

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Name:

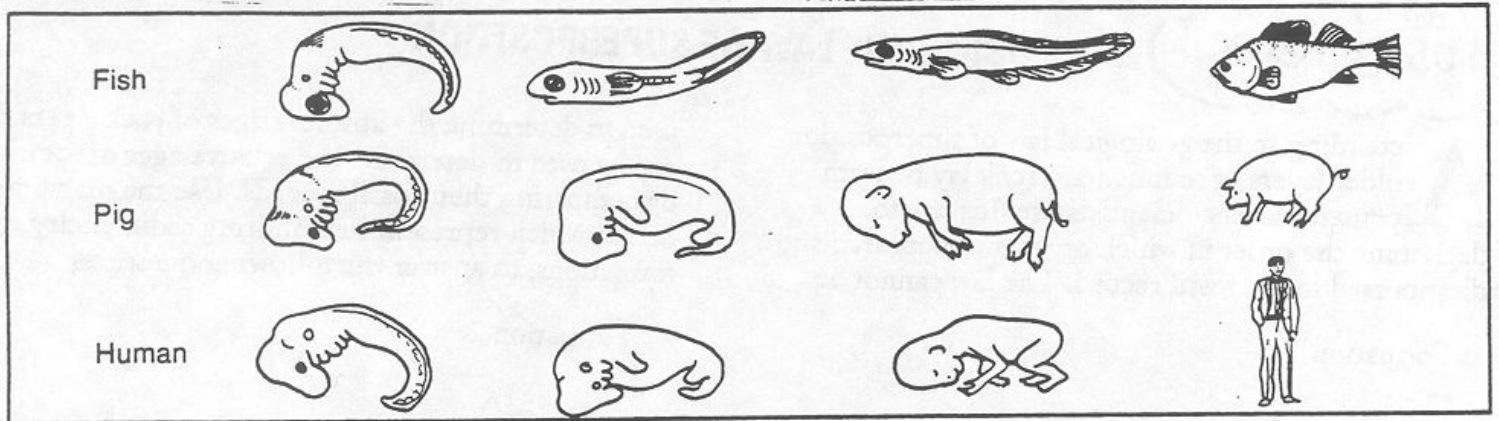
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## EVIDENCE FROM EMBRYOLOGY (DEVELOPMENT)

**Evolution is VERY slow.** Most of the time, we cannot see it happening. Scientists have looked at the development of *vertebrates* (*animals that have a backbone/spine*) and can see that **they all look the same when they first start to develop!** Vertebrates most likely **share a common ancestor** so they have **similar ways that they develop.** The diagram below shows the stages in the development of a fish, a pig, and a human.

Study the diagram below and answer the questions.



How does this diagram show the evolution has AND does happen?

What does this diagram say about the **ancestors** of these three animals?

Name:

Date:

Period: