

Name _____

Period _____ Date _____

Evidence of Evolution Notes

The Theory of Evolution

Evolution is the _____ of gene _____ in a _____ over _____

- The **theory of evolution** is a _____ set of _____ that _____ and _____ a huge mass of _____ from different _____

“Theory”

In everyday use, the word “_____” means a _____ or _____

- A **scientific theory** is a _____ explanation of some _____ of the _____ world that is _____ through the _____ method and _____ tested and _____ through _____ and _____

Evidence that Proves the Theory of Evolution

1. _____
2. _____
3. _____
4. _____
5. _____

Proof #1: _____

- The _____ shows a _____ of _____ from the _____ of _____ on _____ through _____ organisms
- _____ show that _____ life forms _____ into more _____ life forms over _____
- Some _____ species had _____ that were _____ between major _____ of _____

Types of Fossils

1. _____
 2. _____
 3. _____
 4. _____
- Scientists use _____ to _____ the time period during which an organism _____
 - _____ in _____ (_____) layers of _____ are _____ than _____ found in _____ layers of _____

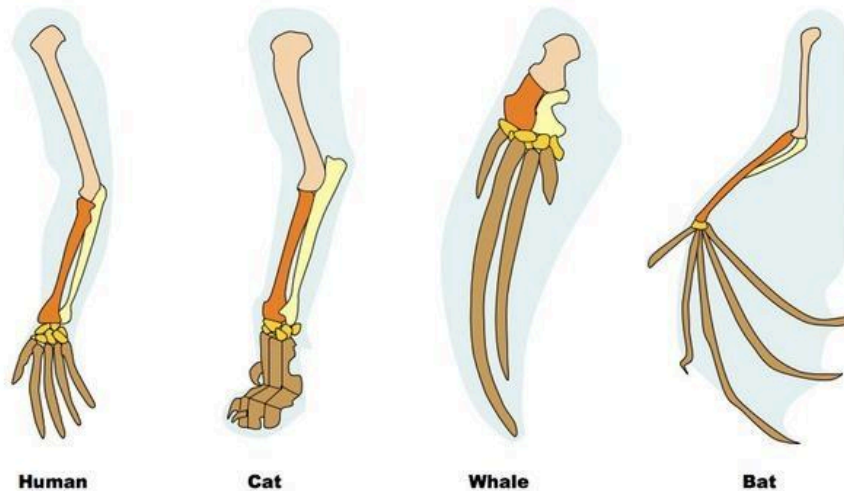
Proof #2: Homologous Structures

Homologous structures are _____ that are _____ in _____

- Many _____ share finely _____ structures
- Homologous structures _____ how all _____ are _____ to one _____

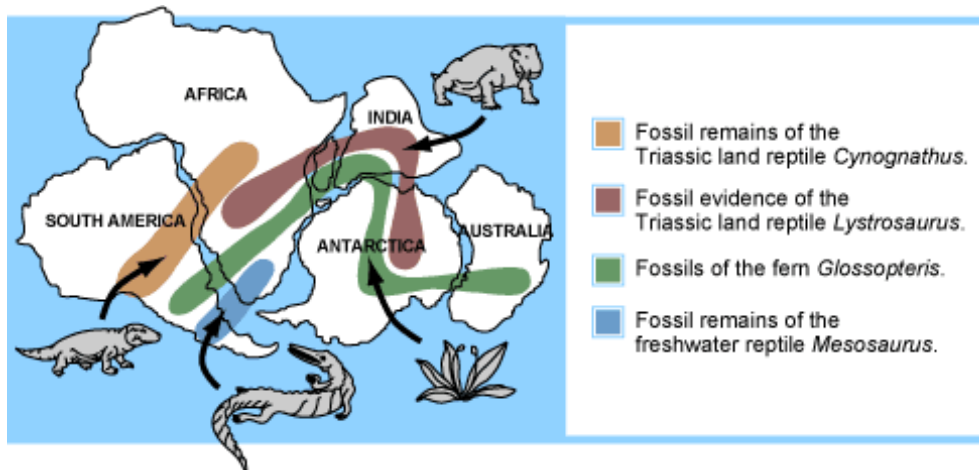
What do a human, bat, whale, and cat have in common?

Proof #2: Homologous Structures



Proof #3: Biogeography

- Animals that are _____ tend to be _____ in the _____
- _____ change is _____ in part by _____ change (_____ → _____)



Proof #4: Molecular/DNA Evidence

- Two _____ related organisms will have _____, _____, and _____ (_____) sequences

- All _____ things on _____ use _____ to code for their _____ make up

1. What do a hippopotamus and a humpback whale have in common?










2. What do humans have in common with rabbits?

Molecular Evidence

The DNA sequences of whales and ungulates are very similar, as demonstrated by the DNA fragments below.

Hippopotamus	TCC TGGCA GTCCA GTGGT
Humpback whale	CCC TGGCA GTGCA GTGCT

Amino acids reveal evolution

Cytochrome c Evolution	
Organism	Number of amino acid differences from humans
 Chimpanzee	0
 Rhesus monkey	1
 Rabbit	9
 Cow	10
 Pigeon	12
 Bullfrog	20
 Fruit fly	24
 Wheat germ	37
 Yeast	42

Proof #5: Direct Observation

- We have _____ evolution occurring in _____
_____ periods of _____

○ Examples:

- _____
- _____
- _____