

Evolution and Natural Selection Study Guide

Spend some time reviewing these concepts in your notebook. Write what you can about them.

Use the sentence starters if you want or need them.

VOCABULARY

Make sure you know the meaning of these words.

Species Adaptation Selective Force Prokaryote Eukaryote	<u>Word Bank</u> Organism Evolution Extinct mass	DNA Predator Prey Camouflage Period / Era
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CLASSIFICATION

Try to fill in as much as you can from memory

Check your answers with your notes

D _____
K _____
P _____
C _____
O _____
F _____
G _____
S _____

CLASS AVES

Use the *Class Aves* reading to answer the following questions.

Read through the orders. Answer these questions in your notebook or on a piece of lined paper

Group A

1. What is mostly common about all of the group A orders?
2. Describe 3 adaptations that birds in these orders have developed

Group B

1. What is mostly common about all of the group B orders?
2. What is the main adaptation that has allowed these birds to survive in their environment?

Group C

1. What is mostly common about all of the group C orders?
2. What is the anatomical characteristic (body structure) that separates these three orders from each other? Please explain.

Bills tell how a bird feeds

1. List the order of each of the birds.
2. How different or similar are the orders and the bills?
3. Explain why these birds have developed different bills?

Explain how classification connects to evolution and the relationship between species.

Classification is a way of _____

Classification allows us to _____

EVOLUTION AND ADAPTATION

Choose 2 major adaptations from the timeline of Earth's history. Explain why they are important to the development of life on Earth. Be detailed with your evidence. You can use your timeline information or the information from *Walking With Monsters*.

I think _____ is important to the evolution of life.

This is important because _____

It happened around the _____ period in the _____ era.

Some organisms around at that time were _____

ORDER OF LIFE

Put the organisms in the order that they evolved. mammals, amphibians, fish, bacteria, reptiles.

- a. Explain how fossil and DNA evidence has helped us to understand this.

ADAPTATION

Choose 2-3 adaptations of a plant or animal. Use different examples than from above. Explain why it is an advantage for that organism and describe the selective force.

_____ is an important adaptation for _____

It helps the animal _____.

NATURAL SELECTION

Choose one of your examples from above. Use it to explain the four stages of natural selection.

1. Over-reproduction
2. Genetic variation
3. Favorable traits
4. Successful Reproduction

EVIDENCE OF EVOLUTION

Review in your notebooks or on a piece of paper

For each type of evidence:

- •give a definition
- •explain how it is evidence for evolution
- •draw or explain an example

Use a sentence starter if you need help. If you do not know a part, just copy the sentence starters into your notebook.

The fossil record

- The fossil record is...
- The fossil record shows...
- The fossil record is evidence of evolution because...
- We can look at the fossil record as evidence of evolution because...

Embryology

- •Embryology is...
- •Embryology allows us to see...

- •These similarities show us...
- •Embryology supports the theory of evolution by showing...

Vestigial Structures

- •Vestigial structures are...
- •Vestigial structures show...

- •Vestigial structures are evidence for evolution because...
- •Vestigial Structures prove that species have changed because...

Analogous Structures

- •Analogous structures are physical characteristics that...
- •Different animals have similar structures ...

Homologous Structures

- •Homologous structures are physical characteristics that...
- •Certain species share homologous structures, which are...

- •Homologous structures are clear evidence for evolution because...
- •Homologous structures show that...

DNA

- •DNA is the genetic code that...
- •DNA determines...
- •DNA helps to prove evolution by...
- •DNA shows us that all living things...
- •Certain sequences of DNA are...