

# Chapter 15

## Section 2

Mar 17 - 12:44 PM

Scientists use differences in  
appearance and  
structure to group  
organisms.

7-Taxa

Kingdom  
Phylum  
Class  
Order  
Family  
Genus  
Species

Mar 17 - 12:44 PM

Answer this question in your notes.

How do scientists decide if organisms are the same species?

Mar 17 - 12:50 PM

In 1942 Ernst Mayr proposed the biological species concept .

It states that a biological species is a group of actual or potentiating interbreeding natural population that are reproductively isolated from other such groups.

What does this mean?

Mar 17 - 12:45 PM

Reproductive isolation occurs when a barrier separates groups.

Sometimes these barriers are not complete so we get hybrid

Can you think of a hybrid animal?

A wolf and a hybrid can mate and create a fertile dog-wolf.

Mar 17 - 12:46 PM

Asian elephants and African elephants do not interbreed. They are separate species.

The biological species concept fails when referring to organisms that reproduces asexually

Mar 17 - 12:50 PM

Modern biologists  
recognize species by  
studying their features.

Only about 1.5 millions species have  
been described, but there are an  
estimated 6 million species in the  
tropics (only 500, 000 have been  
described.)

Mar 17 - 12:52 PM

Convergent Evolution-  
organisms evolve similar  
features independantly often  
because they live in similar  
habitat  
i.e.: wings of birds and wings  
of insects.

Mar 17 - 12:59 PM

Analogous characters- similar features that evolve through Convergent evolution.

Phylogeny- the evolutionary history of a species

Mar 17 - 1:01 PM

Cladistics- a system of taxonomy that reconstructs phylogenies by inferring relationships based on similarities.

Mar 21 - 1:32 PM

Derived Traits- unique  
characteristics.

Page- 328

Page 329

Mar 21 - 1:36 PM