

# Chapter 15

## Section 2

Scientists use differences in  
\_\_\_\_\_ and  
\_\_\_\_\_ to group  
organisms.

Answer this question in your notes.

How do scientists decide if organisms are the same species?

In 1942 Ernst Mayr proposed the  
\_\_\_\_\_ species \_\_\_\_\_ .

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

What does this mean?

Reproductive isolation occurs when a \_\_\_\_\_ separates groups.

Sometimes these barriers are not complete so we get \_\_\_\_\_ .

Can you think of a hybrid animal?



Asian elephants and  
African elephants do not  
\_\_\_\_\_. They are  
separate species.

The biological species concept  
fails when \_\_\_\_\_ to  
organisms that reproduces  
\_\_\_\_\_.

Modern biologists  
recognize species by  
\_\_\_\_\_ their features.

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

Convergent Evolution-  
organisms evolve similar  
features \_\_\_\_\_ often  
because they live in similar  
\_\_\_\_\_.  
i.e.: wings of \_\_\_\_\_ and wings  
of \_\_\_\_\_.



Analogous characters- similar  
features that evolve through  
\_\_\_\_\_ evolution.

Phylogeny- the \_\_\_\_\_  
history of a species

Cladistics- a system of  
taxonomy that

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phylogenies by inferring  

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based on  
similarities.