How Species Interact with Each Other

**What’s the difference between Lions in the Zoo and Lions in the Wild?**

* In the wild, lions are part of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* In the African \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, lions hunt \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, fight \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and are fed upon by fleas and ticks

Interactions like these are part of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the lions you see in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**An Organism’s Niche:**

* ***Niche-***
* A niche includes:

**Niche Vs. Habitat:**

* A niche is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* An organism’s *habitat* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* A niche is an organism’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of its habitat
* A niche can also be thought of as the functional \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a species plays in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Examples of Niches:**

* American Bison:
* Kangaroos:

**Ways in Which Species Interact:**

* There are five major ways in which species interact:

**Competition:**

* ***Competition-***
* Each individual has less \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the resource and is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by the competition
* For most organisms, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ occurs on a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Competition can occur \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ species
* When members of different species \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, we say their niches \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which means that both species use some of the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Indirect Competition:**

* Species can \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ even if they never come into direct \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with each other
* Ex. One species \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on a plant during the day; another species feeds on the same plant at \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Because they use the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ food \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, they are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ competitors
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rarely interact with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, but we \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ with them for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_!

**Adaptations to Competition:**

* When two species with similar \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are placed together in the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, we might expect one species to be more \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Adaptations that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ competition will also be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for species whose niches \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Ex. Coyotes

**Coyotes:**

* Coyotes live in a wide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* They are willing to get \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to human \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* They eat a wider range of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Thus, they have a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ niche
* They take \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of those parts of their niche that are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to use and that present least less \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Niche Restriction:**

* Occurs when each species uses \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the niche than is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of using
* It is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ when closely related species use the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ resources within a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Predation:**

* ***Predation-***
* Ex.

**Canadian Lynx vs. Snowshoe Hare:**

* The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ feeds only on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* In this kind of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, the sizes of each \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ tend to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in linked patterns

**Parasitism:**

* ***Parasitism-***
* Ex.:

**Mutualism:**

* ***Mutualism-***
* Certain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in your intestines form a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ relationship with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* They \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ food you cannot \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and produce \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ your body cannot make
* In return, the bacteria get a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, food-rich \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Commensalism:**

* ***Commensalism-***

**Symbiosis and Coevolution:**

* ***Symbiosis-***
* Symbiosis is most often used to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in which at least one \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ benefits
* Over time, species in a close relationship may \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; they evolve \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that reduce the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or improve the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_