

ADAPTATION & NATURAL SELECTION

All around us are organisms that seem almost perfect for their respective environments. From the woodpecker's beak to the specialized echolocation systems used by bats, many life forms have a wide variety of characteristics that allow them to effectively survive in their particular surroundings.

** An adult frog lays hundreds of eggs at one time.

- * Many of these eggs will hatch, but few actually survive into adulthood.
- * Many are eaten by larger animals while they are still tadpoles.
- * The tadpoles who are the 'fittest' will survive.
- * These tadpoles might be faster swimmers, or they are colored so to blend in with the pond more.
- * These tadpoles will survive longer than others who are not fast swimmers or not colored as well.
- * The ones that do survive have more chance of reproducing and therefore passing on the characteristics of being a faster swimmer and camouflaged coloring.
- * Eventually, the pond will be full of faster swimmers and tadpoles that blend!

This is the process of **natural selection** and **adaptation**.

ADAPTATION: a behavior or characteristic that has developed over time that allows a species to live successfully in its environment.

DIRECTIONS: For the animals pictured in the boxes below, Think of (and write) at least 3 adaptations they have and **HOW** this adaptation helps them survive in their environment.

White-tailed Deer

Adaptations:



Skunk

Adaptations:



Box Turtle

Adaptations:



Porcupine

Adaptations:



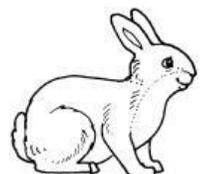
Woodpecker

Adaptations:



Rabbit

Adaptations:



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White-tailed Deer



Adaptations:

- tannish colored to camouflage with the surroundings
- eyes located on the side of their heads allow them to have a large field of vision so that approaching predators can be more easily spotted
- large ears that can be directed to focus on sounds in 1 direction

Skunk



Adaptations:

- their black and white stripes stand out serve as a warning to would-be predators to keep their distance
- they spray a very offensive smell as a defensive weapon against its potential predators
- mostly nocturnal to hide from day predators and conserve energy that could be lost as heat during the day

Box Turtle



Adaptations:

- burrow into the ground during the day to avoid heat
- hard shell for protection that hinges so it can be almost completely closed
- sharp beak is developed to bite plants and crush prey

Porcupine



Adaptations:

- uses its quills for defense: The porcupine cannot shoot its quills. When a predator approaches, the porcupine will turn its back, raise the quills and lash out at the threat with its tail.
- is a good swimmer, its hollow quills help keep it afloat.
- hair-less soles on its feet that help it climb trees.

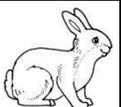
Woodpecker



Adaptations:

- wrap their very long tongue around their brain to prevent it from rattling while it pecks at wood
- bill is made of strong bone with a hard covering to prevent from cracking while the pecking
- toes have long and sharp claws on them and it helps them get a grip onto trees with smooth bark

Rabbit



Adaptations:

- has its ability to reproduce at a very rapid rate
- large ears to listen out for nearby predators shaped so that they can detect the direction of a sound very specifically and accurately
- have strong hind legs which help them hop at a fast rate when they are in danger from predators