

MANZI'S NEWS

A Newsletter for Manzi's Friends



May 2020#2



ADAPTATIONS IN ECOSYSTEMS

Hi Friends

I thought it would be nice for you to learn about adaptations of animals and the importance of taking care and conserving their ecosystems so that they are healthy.

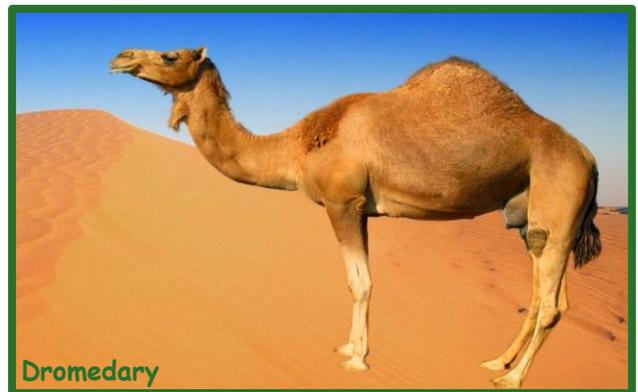
Have you ever wondered how **animals** survive in their ecosystems or habitats? An **ecosystem** is a biological system where living and non-living things interact. A **habitat** is where an animal lives. Animals are able to live and survive in their ecosystems through adaptation. **Adaptation** is when a body part, body covering or behaviour of an animal helps it to survive in its environment.

Let's take a look at the polar bear. It lives in the icy, cold and chilly **Arctic** ecosystem. The polar bear has thick, hollow fur and black skin that helps it to keep warm and hold on to the heat. It also has furry paws that help it walk on ice without getting cold and has a nose that closes every time it dives under water to swim and hunt.



Polar Bear

Credit: www.worldwildlife.org



Dromedary

Credit: www.strange-animal.blogspot.com

How do animals in extreme heat adapt? Well let us look at how the dromedary survives? Water is very scarce in the **desert** and the dromedary can go for a long time without water. A dromedary has a hump that stores fat and is a source of food and energy. It has wide feet to help it walk on hot sand. It also has thick lips to eat the thorny succulent plants of the desert and big eyelashes to protect it from sandy desert storms. Check out this cool You Tube video:

<https://www.youtube.com/watch?v=YX8VQIJVpTg>



Most **aquatic** animals have webbed feet to be able to swim faster and further in water, e.g. King Penguin. It also helps it to escape predators and catch prey.



King Penguin

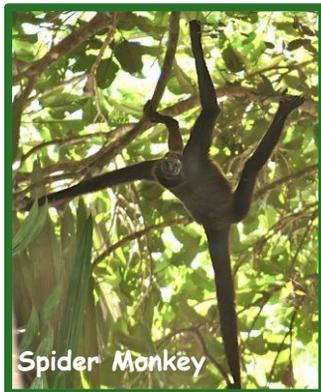
Credit: Michael Bulhozer



Mountain Goat

Credit: Casandra Maier

Animals in mountainous areas, like the mountain goat, have hooves to be able to walk on the rocky mountains. Animals in the rainforest, such as the spider monkey, use their tail as a fifth limb to swing from tree to tree in a place full of tall trees.



Spider Monkey

Credit: www.livescience.com



Chameleon

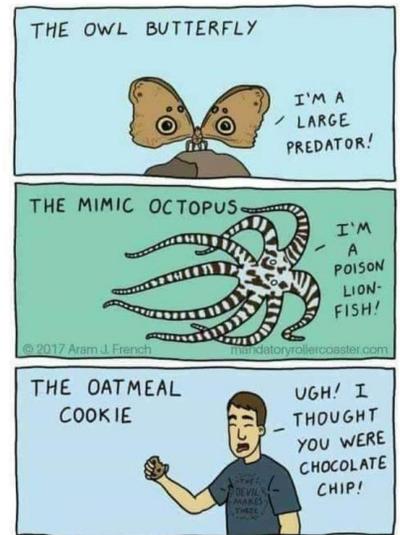
Credit: www.worldwildlife.org

Reptiles that live in hot areas, such as Namibia, like the chameleon have scales to regulate their temperature and water loss. Sometimes they change colour so that they don't absorb too much sun rays.

Animals need to be strong, fit and clever to survive and continue to live in their ecosystems. Some animals need to be good **predators** to survive and contribute towards the food chain whilst others will have to hide from their predators through adaptations. Some features that help animals survive are sharp claws to dig for food, for make a shelter, to kill prey and to protect themselves. Some use their whiskers to find their way and to sense their **prey**. Check out this video on Adaptations:

<https://www.youtube.com/watch?v=vnmPdHmRv9o>

Birds and insects have special behavioural adaptations such as building nests, cocoons and other shelters to help them adapt to harsh environments like cold environments. Some animals have different pigments that allow them to **camouflage** (blend with the environment or surroundings) and protect them from prey or to confuse their prey so they can hunt easily. Other animals have bright colours to attract mates. While others **mimic**, or imitate, other animals or their surroundings and defend themselves from their predators. Adaptations of animals take a long time and it takes generation upon generation to adapt to their environments. They **evolve** over time. If the adaptations happen quickly it is usually not good and it is a result of mutations.



CAMOUFLAGE IN NATURE

Animals are part of the biodiversity in an area. **Biodiversity** is all the variety of life in a particular area. Each animal or organism performs a niche. A **niche** is a role or a part that an organism plays in the environment. These roles provide a variety of ecosystem services and goods for humans. Some organisms clean our environment and some regulate our geochemical cycles and climate. Without them our world would not function properly. However we are altering their ecosystems and habitats at an alarming rate that it is difficult for them to adapt to these changes and they might become **extinct** (when animals are not found anywhere and they die and disappear).

Our actions such as **deforestation, habitat destruction, climate change** and **pollution** make it difficult for animals to survive. We must change our actions towards the environment. We need to plant more trees and fix habitats that were destroyed so animals can have homes once again. We need to consume less energy to slow down climate change and global warming by using our electricity wisely, e.g. switching appliances and lights off when not in use. We need to travel less and use public transport and lift clubs. This will also help to reduce the melting of ice in the Arctic and reduce the sea levels from rising. We must reduce all forms of pollution such as air pollution, water pollution and land pollution. We can do this by consuming less products, planting our own vegetable gardens and recycling. In this way we will be taking **environmental action**, and respecting and conserving our environment.

All life on Earth is interconnected and we as humans need to conserve our water and conserve our environment. Many people are taking action for a brighter future. Many people are becoming Water Wise. Remember to love, conserve and respect your environment.

Love Manzi



References for Newsletter:
<https://www.naschools.net>
<https://www.zoosociety.org>
<https://www.yisi-ca.org>

For more information on being Water Wise please contact 0860 10 10 60 or log onto www.randwater.co.za and click on the Water Wise logo



Adaptations in Ecosystems

Please unscramble the words below that you have learnt today.
(Hint: The highlighted words may help you)

SCRAMBLED WORD	CORRECT WORD
LSAMINA	
DAATPATION	
SYSECOTEM	
BIHATAT	
TICRA	
TEDSER	
ICAUTQA	
YREP	
TORSDAERP	
FMOULAGECA	
ICMIM	
VVLOEE	
CHENI	
YTISRVEIDBIO	
XNCTETI	
STAFOREDETION	
BITHAT TIONDESTRUC	
MACLITE GEANCH	
LLPOUTION	
EVIRONETALMENT TIONAC	

