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Adaptations to environments

xamples of organisms that have adapted to their environment

SAND DUNE GRASS SPECIES

Name: Sea oat (Uniola paniculata) What: Species of grass. Where: Sand dunes.



Characteristics/Adaptations:

V Drought resistant

NARROW LEAVES helps reduce transpiration (water loss). Can CLOSE STOMATA if conditions around roots are dry for very long. LARGE, SHALLOW root system. DENSE INTERWOVEN ROOTS are needed to maximize water uptake during water availability periods (short).

Prevent beach erosion

Massive INTERTWINED roots help to hold the sand in place. Growth of sand dunes.

Survive immersion in salt water for short period of time

MANGROVE TREE SPECIES

Name: Red mangrove (Rhizophora mangle). What: Tropical & subtropical tree. Where: Saltwater tidal zones.

Characteristics/Adaptations:

∨ Fruit

Unusual – germinates and begin to grow before falling from parent plant. It is called a propagule. Falls in water and floats. Absorbs water.

🗸 Prop roots

Extend **ABOVE** the water line (spider like support system). Absorb oxygen **ABOVE** water to support bit below water. **FILTER SALT** (below water), giving tree access to fresh water.

✓ Other organisms benefit

Protective habitat (fish and other marine animals).

HOT DESERT ADAPTATIONS (FENNEC AND CACTUS)

Name: Fennec fox (vulpex zerda) Where: Desert areas of the Sahara (in North Africa)

Characteristics/Adaptations:

✓ Water gathering and retention

Water is primarily from FOOD. KIDNEYS ADAPTED to reabsorb most of the water that passes through them. RARELY urinate. Nocturnal (cooler temperatures). Very long large ears

> HIGHLY VASCULAR to help dissipate heat. Help locate small animals moving underground.

Name: Saguaro cactus (Carnegiea gigantea) Where: Sonoran desert (in North America)

Characteristics/Adaptations:

VWater gathering and retention

THICK WAXY SKIN (waterproof). Covered by bristles as a defense against grazers.

SINGLE LONG TAPROOT that it sends down to retrieve deep water

Massive **SHALLOW ROOT SYSTEM** to absorb occasional rainwater.

Sponge-like STORAGE TISSUE.

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Adeptations to environments

TROPICAL RAINFORESTS [High temperature, and abundant rainfall. Organisms compete for sunlight]

Name: Kapop tree (ceiba pentandra) Where: For example, amazon. Upper canopy.

Characteristics/Adaptations:

▼ TALL - More sunlight

 BUTTRESS ROOTS - Support structure & rapid growth in shallow soil. Name: Poison dart frogs Where: Tropical rainforest

Characteristics/Adaptations:

 Highly TOXIC chemicals in their skin because of their diet of poisonous insects.

Very BRIGHT COLORS and body patterns to warn predators.
Rainforest allow SMALL POOLS of water for frogs in bromeliad plants.

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