



Most Trusted Learning Platform

Environment

Kinshuk Sir

Hibernation

~~शीतलक्षणा~~

winter / शिशु

अनुकूलन / Adaptation

Estivation

~~श्री शक्तिप्रियता~~

श्रीमान

जल

नालाब

शमी

जहराई

Mustave

शमी

शरणा

विश्रय

Estivation/ग्रीष्मनिष्क्रियता

उदाहरण ⇒ मेंढक / मछलियाँ

Ac
E
विकार
गर्म प्रदेश
जलीय जीव
गैर-उनिवार्थ

- It is adopted by organism living in Warm regions.
- Generally it is observed by Aquatic Organisms
- The Organism hide in moist shady or muddy regions during the dry season
- During estivation, they reduce their non-essential activities of the body
- Once the condition becomes favourable, they return back to normal stage

Lung fish

उसका तप

Adaptation

युजगग

(आणविकीय,
आणविकीय,
आणविकीय)

- Adaptation is any attribute of the organism (morphological, physiological, behavioural) that enables the organism to survive and reproduce in its habitat.
- Many adaptations have evolved over a long evolutionary time and are genetically fixed.

→ They are found in almost all populations of one species.

found in all organisms
of one species

Adaptation / अनुकूलन

एक प्रजाति में
किसी जीव में
पायी जाती है

→ Technique / तकनीक

→ long process which takes many
generation की
बहुत प्रक्रिया जो कई जनरेशन के बाद
आती है।

Adaptation

→ पशुपत से पानी की कमी को कम करने के लिए।
आंतरिक तैलीय
आकसीकरण
आकसीकरण



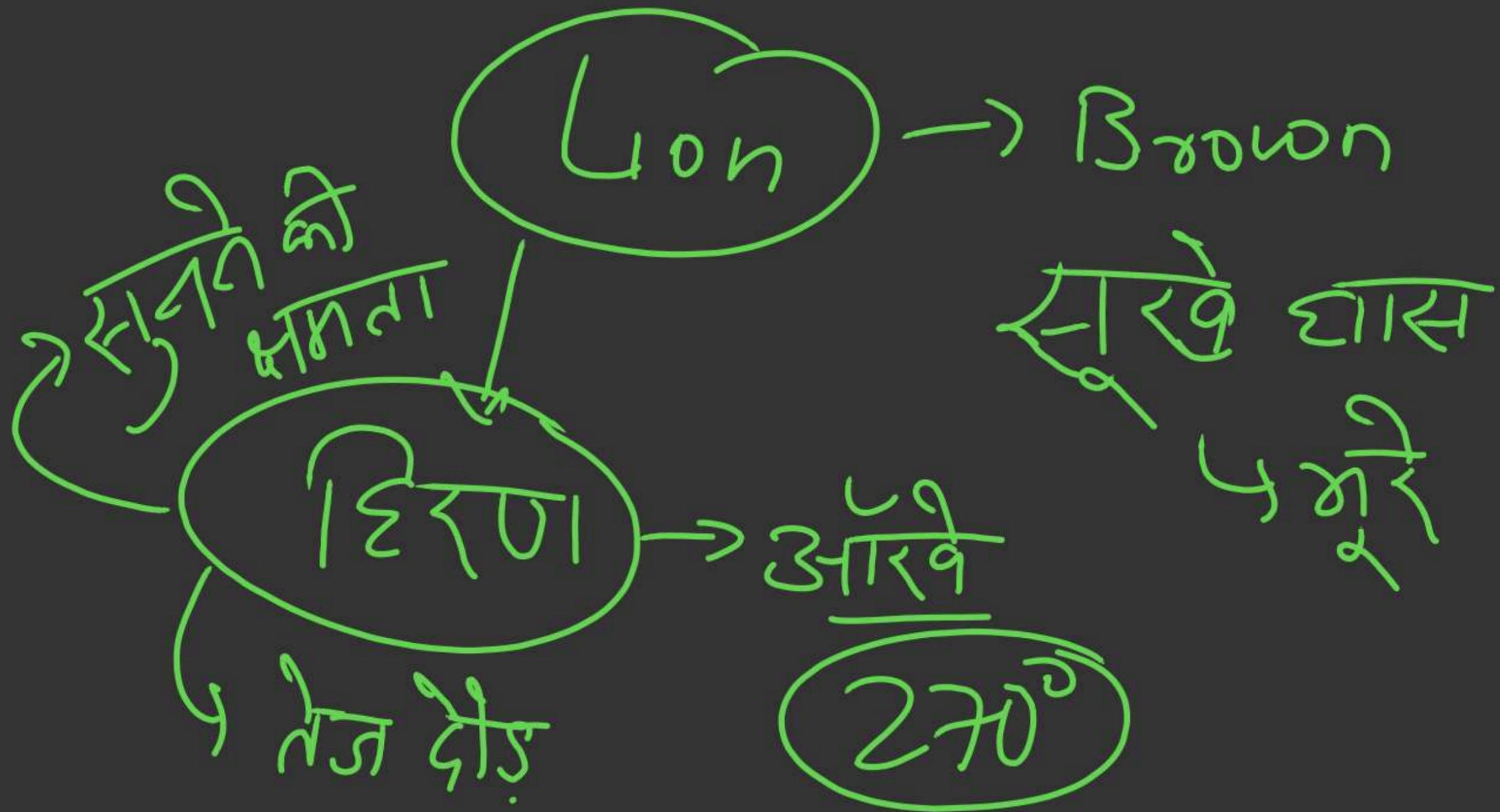
- Kangaroo rat
- Capable of meeting all its water requirements through its internal fat oxidation
- ability to concentrate its urine so that minimal volume of water is used to remove excretory products

→ पानी
रक्षण

Adaptation



- Desert Plants
- Thick cuticle on their leaf surfaces and have their stomata arranged in deep pits to minimise water loss through transpiration
- Stomata remains closed during day time
- Opuntia: Leaves reduced to spines, flattened stems



Adaptation

एक जीव सील

Global warming



सील

- Cold Regions
- Mammals have shorter ears and limbs to minimize heat loss
- Allen's law
- Polar seas aquatic mammals like seals have a thick layer of fat (blubber) below their skin that acts as an insulator and reduces loss of body heat.

Adaptation



- Physiological Adaptation
- Humans moving from Plain areas to mountain experience breathing issue
- Compensate by: increasing red blood cell production, decreasing the binding affinity of hemoglobin and by increasing breathing rate

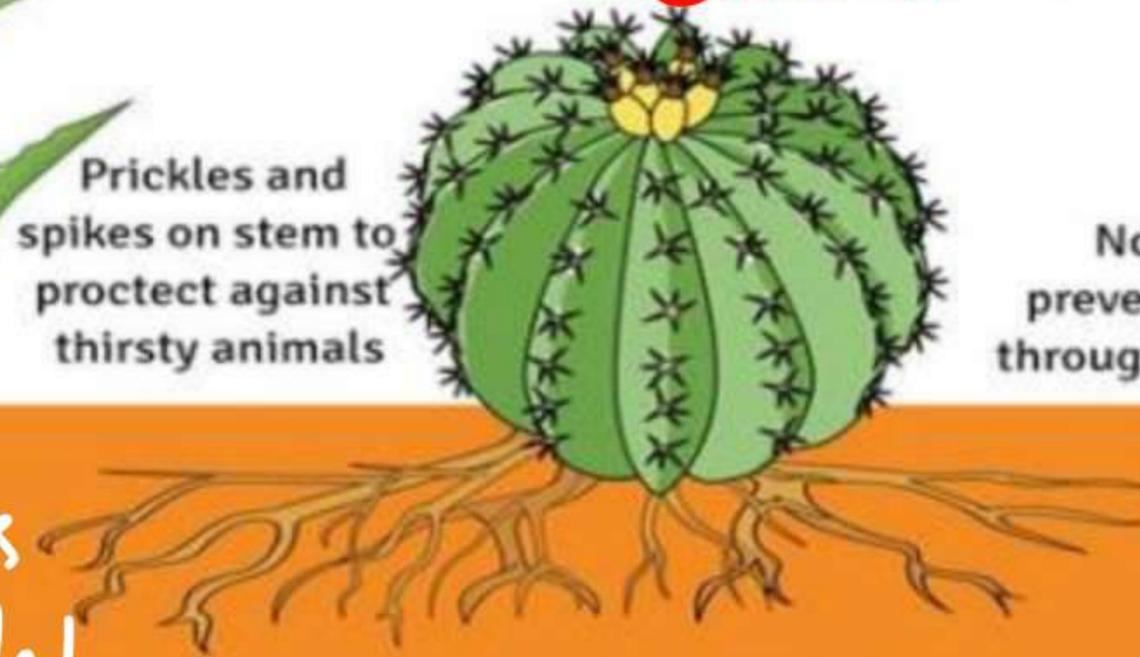
Adaptation



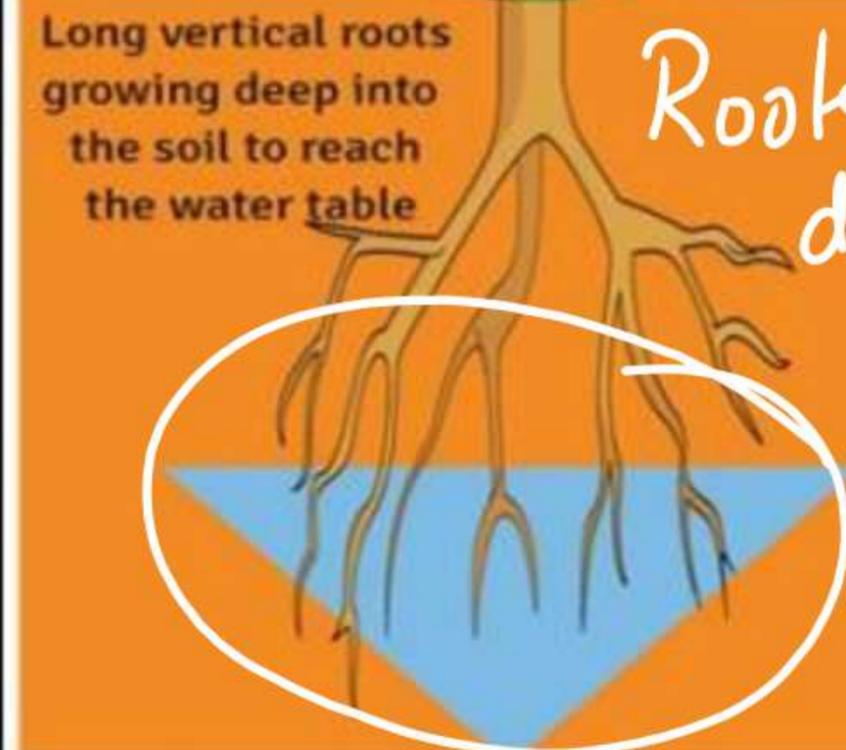
- Behavioural responses
- Desert lizards lack the physiological ability that mammals have to deal with the high temperatures of their habitat
- They bask in the sun and absorb heat when their body temperature drops below the comfort zone, but move into shade when the ambient temperature starts increasing

deep roots - To absorb water

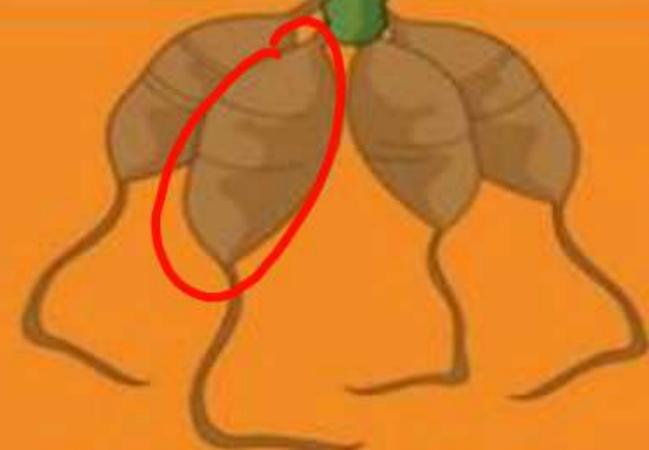
Surface water collection



Examples:
Above ground structures



Roots deep



Examples:
Below ground structures

Small or no leaves

छोटी पत्तियाँ
या पत्तियाँ
का अभाव

Water loss from leaves

Thorns / काँटे

↳ Grazing animals
- चरने वाले पशु

Desert Plant roots

पानी की
अवशेषित
करण

↳ Deep root (गहराई तक जाते)

↳ Surface root spread (पैली हुई जाते)

↳ Root modified in form of tubes (ट्यूब के आकार की जाते)

Absorb water

Storing water.

→ पानी का संचयन



~~311~~ ~~anikianu~~

~~aniru anu~~

~~anikian~~

Structural

Morphological

Physiological

Behavioural

Bird

Desert plant

Camel

Giraffe

Acclimatization

यथास्थिति

Plain

समतल
क्षेत्र

⇒ यथास्थिति
Mountain

⇒ $O_2 \downarrow$

Adap-
tation

⇒ Breathing rate = \uparrow $O_2 \uparrow$
RBC = \uparrow

↪ haemoglobin affinity = \downarrow

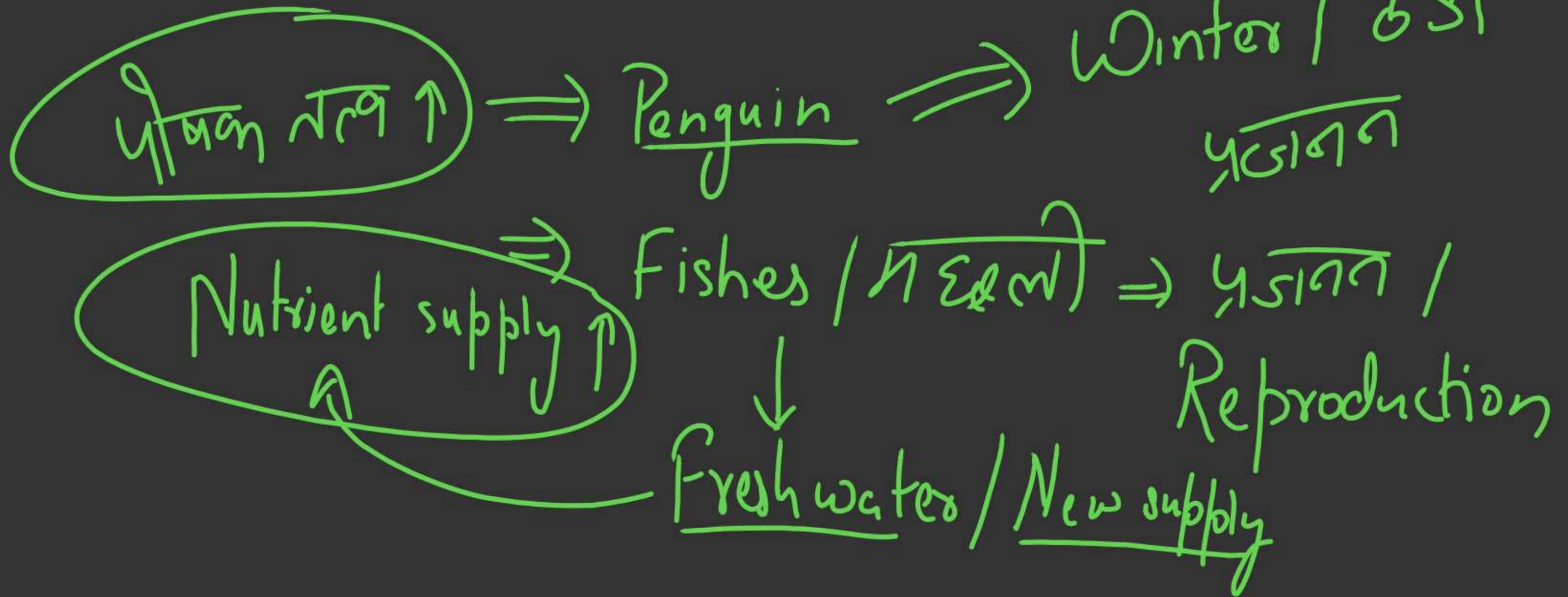
Shopkeeper

4 truck

↓
6 truck

ਯਾਤਰੀ ਪੰਛੀ - Migratory birds

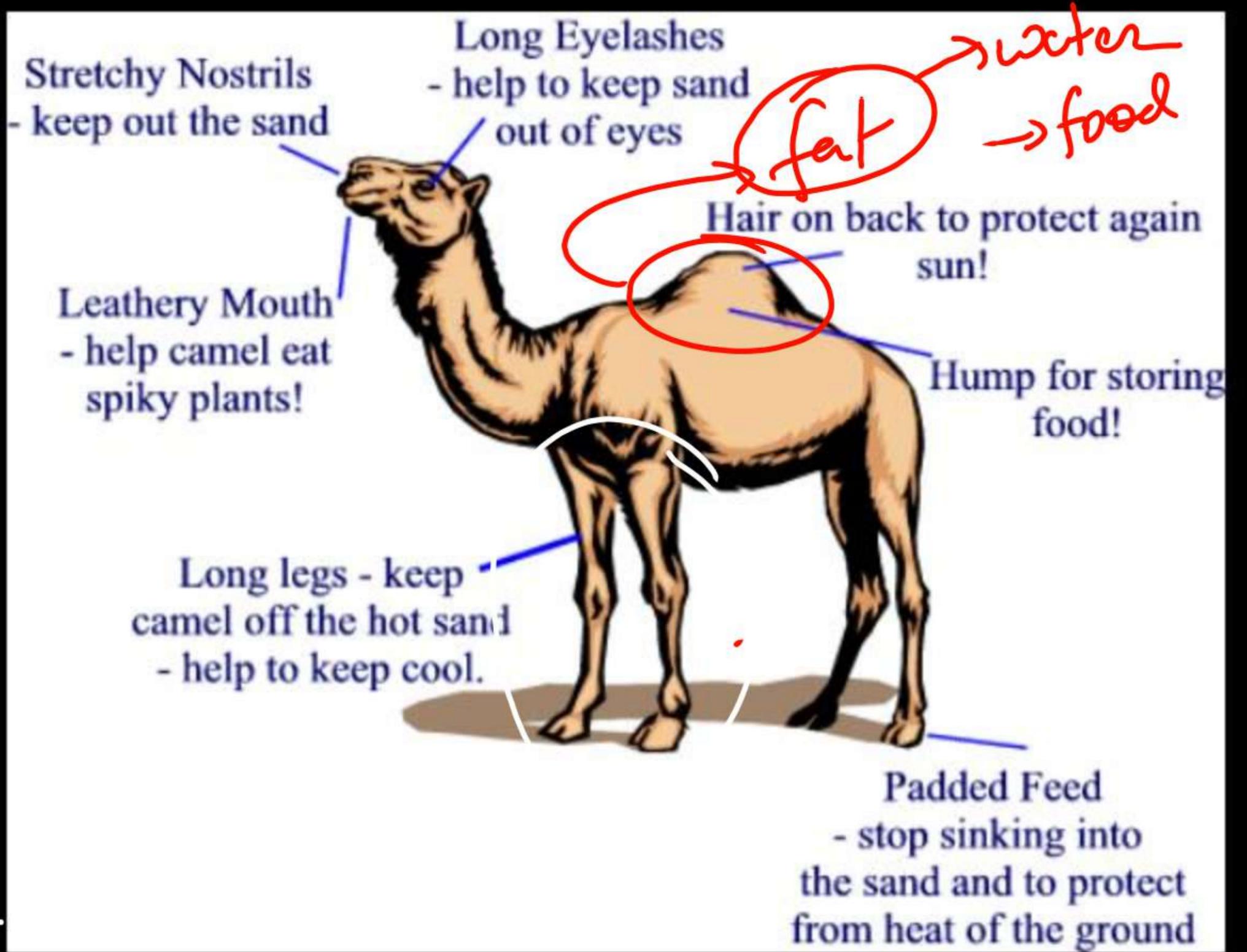
ਦੁਰ ਏਰਿਥ



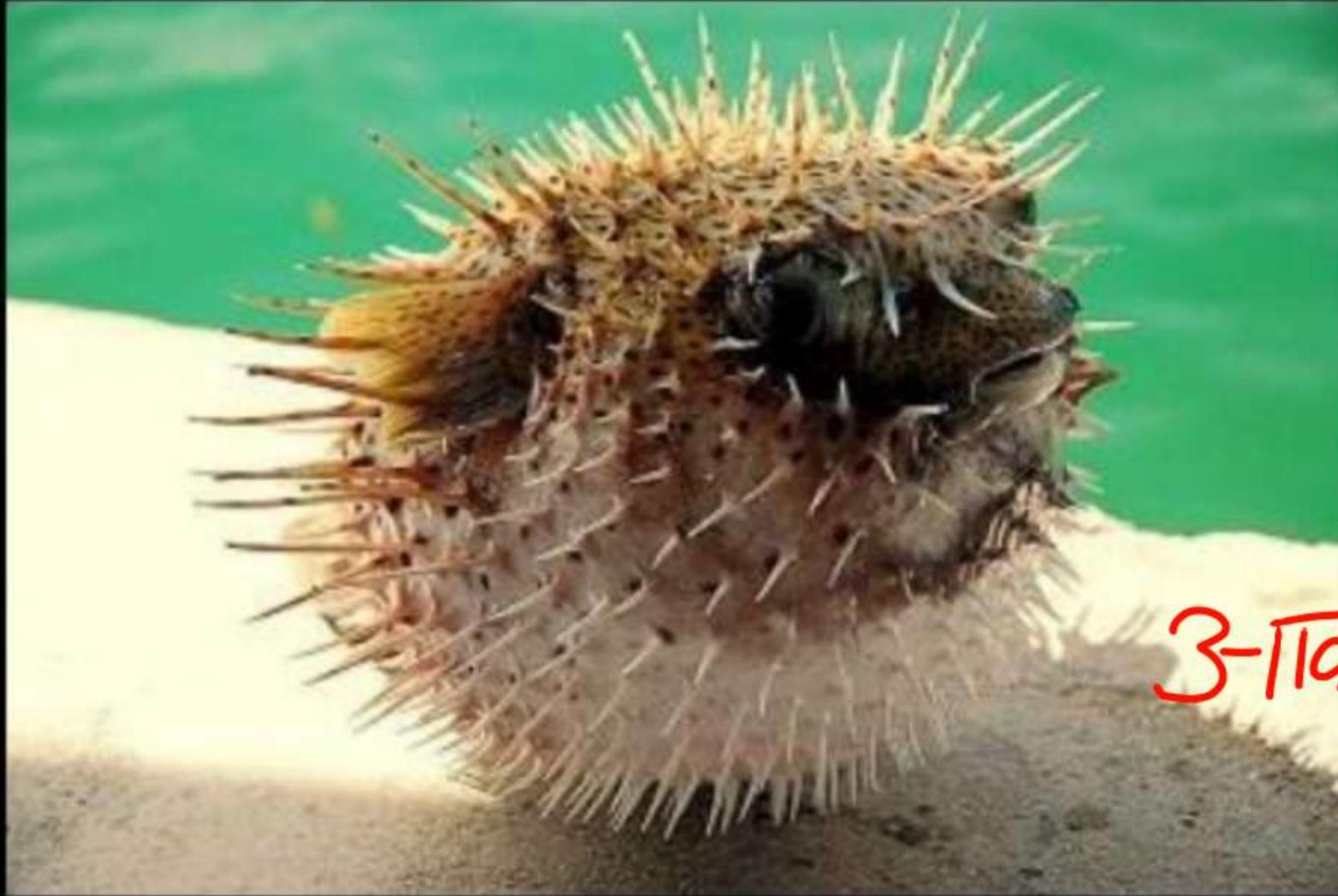
long legs

↳ to keep away
from heat of
Sand

⇒ खुद की बालों
की जागी से
दूर रखने के लिए



उत्तम/उत्तम



उत्तम - परिवर्तन

Ballon fish / Puffer fish

उत्तम = ↑
कॉटे = मीट्रिक

सारणी 13.1 समष्टियों की पारस्परिक क्रिया

जाति अ	जाति ब	पारस्परिक क्रिया का नाम
+	+	सहोपकारिता
-	-	स्पर्धा
+	-	परभक्षण
+	-	परजीविता
+	0	सहभोजिता (कमन्सेलिज्म)
-	0	अंतरजातीय परजीविता (एमेन्सेलिज्म)

Predation



- Predators acts as 'conduits' for energy transfer across trophic levels
- They keep prey populations under control
- Biological control methods adopted in agricultural pest control are based on the ability of the predator to regulate prey population
- If a predator is too efficient and overexploits its prey, then the prey might become extinct and following it, the predator will also become extinct for lack of food.

UPSC



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THANKS FOR WATCHING

