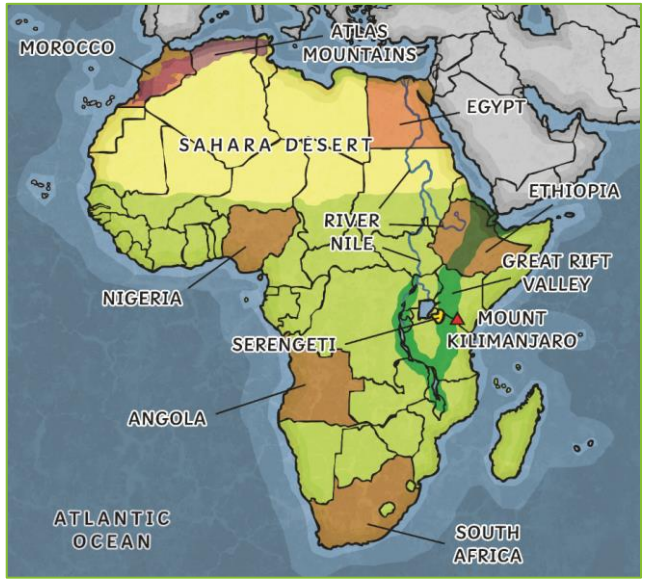
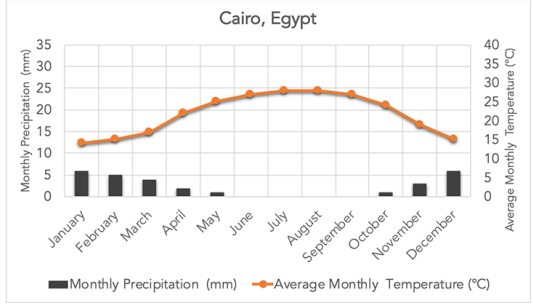
Rivers and Deserts Knowledge Organiser

river	a large natural stream of water flowing in a channel to the sea
mouth	A river mouth is where a river flows into a larger body of water, such as a bay or gulf, a sea, or an ocean.
source	source of a river or stream is the original point from which the river flows. It may be a lake, a marsh, a spring or a glacier
desert	an area of land that receives no more than 25cm of precipitation a year (hot or cold)
flora	the plants of a particular region, habitat, or geological period
fauna	the animals of a particular region, habitat, or geological period
adaptation	the process of change by which an organism or species becomes better suited to its environment.



River	Length (km)
Amazon	6,437
Congo	4,700
Mississippi	3,734
Ob	3,650
Nile	6,853



Temperature and rainfall

Nile crocodile

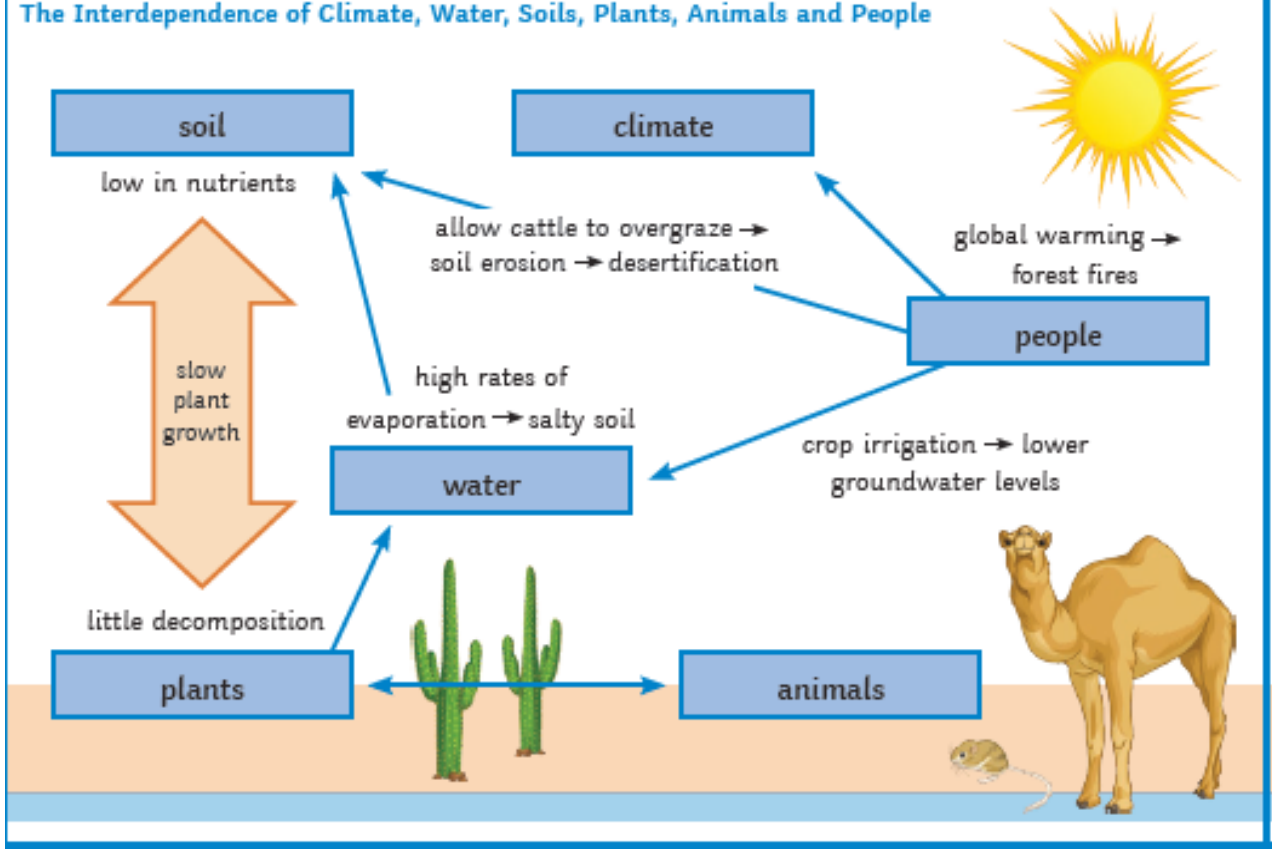
Nile lotus

Fields by the Nile

The Physical Characteristics of a Hot Desert

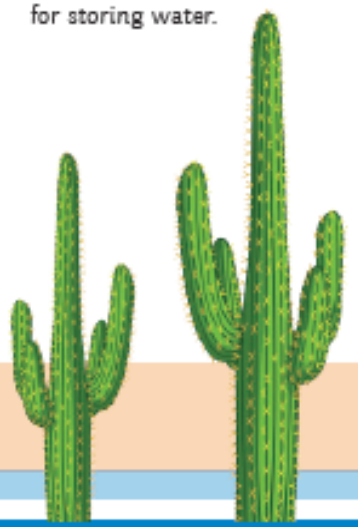
Climate	Water	Soils	Plants	Animals
• Very hot during the day (e.g. 45°C). • Cold at night (e.g. 5°C).	• Very little rainfall (less than 250mm a year). • Rain is infrequent.	• shallow • lacks nutrients (due to lack of humus) • dry	• sparse • low bushes • cacti • Many hot desert plants only appear after the rain.	• lizards, snakes, scorpions and insects • Small, nocturnal mammals, e.g. meerkat.

The Interdependence of Climate, Water, Soils, Plants, Animals and People



Plant Adaptations

- Plants have either shallow, wide roots to catch as much water as possible when it rains or long roots to tap into deep underground water.
- Small leaves reduce the amount of water lost through transpiration.
- Succulents (e.g. cacti) have large, fleshy stems for storing water.
- Many plants have thick, waxy skin to stop transpiration.
- Some plants have spines and toxins to stop animals from stealing their water.
- Some plants (e.g. the desert rose) have a bulbous trunk for storing water.



Animal Adaptations

- Some animals have large fat stores (e.g. a camel's hump allows it to go for days without food and water).
- Many desert animals are nocturnal, coming out to hunt at night when it is cooler (e.g. fennec foxes).
- Some animals (e.g. the desert tortoise in the south western United States) spend much of their time underground.
- Some animals have large ears (e.g. fennec foxes) or long limbs to allow more heat loss.
- The jerboa, a small rodent, doesn't have to drink water. It is able to extract enough water from its foods to survive.
- Most desert birds are nomadic. They can travel long distances in search of food and water.
- The horned viper is a sidewinder species of snake. Its special movement helps it to move over the sands quickly and effectively.
- Lizards and snakes can tolerate high body temperatures (e.g. desert iguanas).
- Most desert animals minimize water loss from sweat and urine.
- Some animals are camouflaged to protect against predators (e.g. kangaroo rat).