

# YEAR 7 GEOGRAPHY – CYCLE 1 AND 2 – HOT DESERTS

## BOX 1: HYDROLOGICAL CYCLE KEYWORDS

evaporation	liquid water heated → turns into water vapour → rises to atmosphere
condensation	water vapour cools → turns into liquid water → forms clouds
precipitation	moisture that falls from sky → e.g. rain, snow, sleet, hail

## BOX 2: ECOSYSTEM KEYWORDS

climate	average precipitation and temperature in an area over many years
weather	hour to hour changes in precipitation and temperatures
concentrated	focused in an area → strong and intense
insolation	sunlight (solar radiation) that reaches surface of Earth
distribution	how something is spread out (or where it is located)
biodiversity	variety of plant and animal life in a particular habitat
ecosystem	biotic and abiotic things, interacting with each other and environment
global ecosystem	very large ecosystems → also called biomes e.g. deserts, rainforests

## BOX 3: DISTRIBUTION OF GLOBAL ECOSYSTEMS

	tropical rainforests	hot deserts
distribution	along the Equator	along the Tropic of Cancer along the Tropic of Capricorn
climate	high temperatures (hot) high precipitation (wet)	high temperatures (hot) low precipitation (dry)

## BOX 4: HOT DESERT CLIMATE

during the day	temperature → no clouds (dry climate) → very hot → higher than 40°C in summer → 20-30°C even in winter
during the night	temperature → no clouds to trap heat at night → very cold → below freezing → large diurnal (daily) temperature range
precipitation	very little rain → many months no rain → 250 mm annually (each year)

## BOX 5: HOT DESERT NUTRIENT CYCLE

abiotic	non-living things → e.g. soil and climate
biotic	living things → e.g. plants and animals
producer	plant → absorb energy from sun → photosynthesis
consumer	organism → energy from eating producers or other consumers
decomposer	bacteria or fungus → energy by breaking down dead tissue
nutrient cycle	organisms extract minerals for growth from soil or water → pass them through the food chain → then back to the soil and water
adaptation	physical / behavioural characteristics → help plants and animals survive
xerophytic	plants that have adaptations to survive in hot and dry conditions

## BOX 6: HOT DESERT ADAPTATIONS

cactus roots	long taproots → 7-10 m long → reach far to find water
cactus spines	spines (spikes) → lose less water than leaves, protection from animals
cactus water	water stored inside stems → called succulents → less transpiration
camel feet	large feet → stops camel sinking into sand
camel hump	hump on back → stores fat (not water) → energy source for long journeys
camel eyelashes	double eyelashes → keeps sand out eyes → especially during sandstorms

## BOX 7: CAUSES OF DESERTIFICATION ☹️

desertification	healthy land on desert fringes (edges) turns to desert → loses nutrients
1. climate change	climate warming → makes desert fringe drier → causes desertification
2. wood for fuel	trees cut down → tree roots cannot hold soil together → soil erosion → infertile soil → desertification
3. overgrazing	too many farm animals → soil erosion → infertile soil → desertification

## BOX 8: SUSTAINABLE MANAGEMENT → REDUCING DESERTIFICATION 😊

sustainable	using resources in a way that will not harm planet for future people
1. tree planting	plant trees → roots reduce erosion → sustainable → less desertification
2. technology	using simple technology e.g. 'solar stoves' → need no fuel wood → less trees cut down → less erosion → sustainable → less desertification