

# Adaptions to the Sharqiya Sands

## Aim and introduction

Plants, animals (and people) adapt to the environment they are in. The Sharqiya Sands is a unique ecosystem which has been created as a result of its geography and geology. This lesson will look at how these features have adapted specifically to the Sharqiya Sands desert ecosystem.

## Curriculum links

AQA

3.1.2.3 How plants and animals adapt to the physical conditions.

Eduqas B

3.4.1 What are the physical processes operating in hot semi-arid regions that make them vulnerable to desertification?

OCR A

2.1.2 Ecosystems have distinct distributions and characteristics.

OCR B

4.1a. What are ecosystems?

## Learning goals

- Understand why plants, animals and people need to adapt to the desert environment.
- Understand how plants, animals and people adapt to the desert.
- Identify threats to living things within the desert environment.

## Learning outcomes

Greater depth: pupils will be able to use previous learning and their own knowledge to show how and why plants, animals and people can survive in desert supported with relevant examples to exemplify their points. Pupils can link threats to the desert ecosystem and how these threats can affect their adaption to this environment using both the resources as well as their own knowledge. They can reflect on their learning confidently using relevant and specific geographical terminology.

Expected level: pupils will be able to use previous learning and/or their own knowledge to show how and why plants, animals and people can survive in desert supported with examples to exemplify their points. Pupils can identify threats to the desert ecosystem and how these threats can affect their adaption to this environment mainly using the resources available. They can reflect on their learning using mostly relevant and specific geographical terminology.

Working towards: pupils will be able to use previous learning or their own knowledge to show how plants, animals and people can survive in desert, some maybe supported with examples to exemplify their points. Pupils can identify some threats to the desert ecosystem and how these threats can affect their adaption to this environment mainly using the resources available. With support, they can reflect on their learning using some relevant geographical terminology.

Support: with support, pupils will be able to draw upon some previous learning to show how plants, animals and people can survive in desert, these will most likely not be supported with examples to exemplify their points. Pupils can identify a few threats to the desert ecosystem but most likely not how these threats can affect their adaption to this environment. With support, they can reflect on their learning using some geographical terminology.

### **Key terms**

- Adaptions
- Evolve
- Threats

### **Learning resources**

- Adaptions\_Teacher Presentation
- Carousel instruction sheets (found in the 'resources' section of the teacher presentation PowerPoint)
- Adaptions Carousel Sheet
- Adaptions Carousel Resources – to be placed with the instruction sheets at each station
- Rucksack template

### **What you will need**

- Scissors
- Coloured pens / pencils for the mind map (if needed)

### **Challenge and support**

Support pupils by demonstrating examples of threats and how these could affect the adaptations of people, plants and animals of the desert.

Challenge pupils by getting them to think of examples beyond the desert being studied through questioning i.e. how would plants, animals and people adapt to the desert environment in the Atacama, Saharah, Kalahari?



## **Starter – survival challenge**

Ask students based on their knowledge of the desert environment from last lesson (and their own understanding) what they would pack in a rucksack to help them survive for a week in the Sharqiya Sands.

## **Main**

Link the starter to the main activity by asking how they think plants, animals and people have adapted to live in the Sharqiya Sands.

Introduce the examination style question that students will be answering in the plenary of the lesson. Break the question expectations down using the information from Slide 4.

Pupils complete a carousel activity to gain understanding of how certain plants, animals and people have adapted to survive in the Sharqiya Sands as well as the potential threats there are to this fragile environment (for people only). NOTE: there are three stations for this carousel activity therefore adjust the resources to meet the size of your class.

## **Plenary**

Students write an open book response to the question posed in the main task. If time, this can be peer /self-marked using the marking criteria on the PowerPoint Slide 5.