



MOUNTAIN WORLD ACTIVITY  
THE VAE MOUNTAINS  
& THEIR ANIMALS



Jane Goodall's  
Roots & Shoots



# THE UAE MOUNTAINS & THEIR ANIMALS

In this activity your students will be looking into the animals that live in the mountain regions of the UAE, using the environment around Jebel Hefet near Al Ain as an example. There are many animals that call this mountain home, and a lot of them are endangered or at risk. Your students will find out more about these animals and what they can do to help.

## IN THIS ACTIVITY YOU AND YOUR STUDENTS WILL:

- ▶ Learn about the mountain regions of the UAE and the animals that live there.
- ▶ Find out which animals are endangered and what your students can do to help.
- ▶ Create a poster or collage to increase awareness of these animals and conservation efforts around them.
- ▶ Create a card game they can use to encourage other students to find out more about the animals they've learned about.

## OBJECTIVES

Carrying out this activity will help students learn about the unique animals that call the mountains of the UAE home. They will also learn about some of the threats facing these animals, and what conservation efforts are in progress to help save them.

You can also ask your class to create a collage of mountain regions featuring the animals they've learned about, a poster to raise awareness of conservation efforts, and a playable card game. These will allow your students to get creative and inventive, test their knowledge of the animals they've learned about, and encourage them to spread the knowledge they've learned with their peers, parents and guardians.

## WHAT DO I NEED TO MAKE IT WORK?

You do not need anything special for the first part of this activity (which can be done in the classroom), just an internet connection to carry out some background reading.

To create the collages and posters, you will need access to craft materials, coloured paper and pens. You may also need access to a printer. To create the card game, you will need thin cardboard and access to a computer and printer.

## WHAT THINGS WILL MY STUDENTS CREATE?

- ▶ A collage or poster. These would look great displayed in the school or youth group building!
- ▶ A card game. We recommend each child creating one or two cards, but you can do more if you have time.

## THE MOUNTAINS OF THE UAE

Let's begin at the top! Firstly, we need to find out what mountains are, and where in the UAE you can find them.

### WHAT IS A MOUNTAIN?

- ▶ First, ask your students if they know what a mountain is. Ask them to describe it, and ask if anyone has visited any mountains. What was it like? What could they see? What did they feel? Did they notice any animals?

There are lots of different definitions of what a mountain is but the UN Environment Programme (UNEP) defines a 'mountainous environment' as an area that includes any one of the following:

- ▶ elevation (or height) of at least 2,500m
- ▶ elevation of 1,500m with a slope greater than 2 degrees
- ▶ elevation of 1,000m with a slope greater than 5 degrees
- ▶ elevation of at least 300m with a 300m elevation range within 7km.

This can be a little tricky to get your head around! In easier to understand terms you can think of mountains as areas of rocky land that rise about the land surrounding them, often reaching to a peak. Their often craggy shapes are caused by erosion, where wind and water wears away some of the rock over thousands of years. Applying the UNEP definition, 24% of the Earth's land is defined as mountainous so there are a lot more than you think!

You can find out more information on mountains using the links below:

- ▶ Mountains on Wikipedia: [goo.gl/FGmqXx](https://goo.gl/FGmqXx)
- ▶ Mountain formation on the BBC: [goo.gl/iuO1Vl](https://goo.gl/iuO1Vl)

### WHERE ARE THE MOUNTAINS IN THE UAE?

The mountainous region we'll be studying as an example in this activity is Jebel Hafeet, near Al Ain, in the east of Abu Dhabi (chosen as our example as it is one of the most accessible mountain areas in the UAE). The emirate of Fujairah is almost entirely mountainous, being positioned on the Al Hajar mountain range which stretches down around 50-100km inland from the Gulf of Oman coast through the UAE into northeastern Oman.

**Jebel Hafeet:** Near Al Ain lies Jebel Hafeet, a stunning mountain that rises 1,240m high, and is the highest peak in Abu Dhabi, and the second highest in the United Arab Emirates. The mountain straddles the border with Oman, and there is a long road that snakes its way up most of the long slopes from Al Ain towards the peak.

- There are some great pictures of the spectacular winding road here: [goo.gl/z7JyU4](http://goo.gl/z7JyU4)



Google Maps image showing the location of Jebel Hafeet



A Dwarf Palm. Photo provided courtesy of the Environment Agency of Abu Dhabi archives.

**Environment:** Like most of the UAE, the mountainous regions are hot and dry with very little rainfall. The ground is rocky, and at first sight it might not look like much grows there. However, look closer and you'll spot plants like the Dwarf Palm, which is unique to this area.

This is a satellite image of Jebel Hafeet taken from above.



- Ask your students to think about why it might have the regular lines criss-crossing it? What might have caused them? The answer is erosion by water, which drains down the side of the mountain, gradually wearing channels into the rock, which over thousands and thousands of years form valleys and gulleys. Many of these only contain water after rainy periods – these dry valleys are called wadis.

## WHAT ANIMALS LIVE IN THE MOUNTAINS?

The mountains provide a habitat which is quite different from most of the UAE and are home to some of the rarest and most threatened animals in the UAE. Although large mammals are pretty rare, there have been several wildlife surveys of Jebel Hafeet, and researchers have found over 320 species of invertebrates (like beetles, scorpions, butterflies and spiders), over 120 species of birds (with 40 species living and breeding there) and 177 species of plant.

- *Optional:* If needed, Arkive.org has a great resource to help explain to your students what an endangered species is and how it might have become endangered that you could use before discussing these animals: [goo.gl/5ZoDfD](http://goo.gl/5ZoDfD)

Some of the birds, animals and reptiles that make the mountains of the UAE their home include:



Arabian Tahr by Xavier Eithaker. Photo provided courtesy of the Environment Agency of Abu Dhabi archives. Further images of wild Arabian tahr can be found on the Arkive.org website at [goo.gl/dps12f](http://goo.gl/dps12f)

**The Arabian Tahr** – The Arabian Tahr is a relative of the wild goat. This is one of the most endangered animals in the UAE, with the entire global population of this beautiful animal living in the northern mountains of the UAE and Oman. This is the only endemic – meaning the species naturally occurs here, rather than having travelled or moved here – mammal, and it is in danger because of hunting and habitat loss.



Egyptian vulture – photo provided courtesy of the Environment Agency of Abu Dhabi archives.

**Egyptian Vulture** – Jebel Hafeet is the only location in Abu Dhabi where a colony of these birds exists. The species is globally threatened, and listed as Endangered in the IUCN Red List for birds.



If you have a picture of a Persian horned viper that we can use in this resource we would love to hear about it, otherwise you can find some pictures here on Arkive.org [goo.gl/MPV8BS](http://goo.gl/MPV8BS)



Sand partridge By Greg Schechter from San Francisco, USA (Sand partridge) [CC BY 2.0 (<http://creativecommons.org/licenses/by/2.0/>)], via Wikimedia Commons [goo.gl/3ldvLP](http://goo.gl/3ldvLP)

**Persian horned viper** – This rare reptile lives in mountainous regions. It can only be found on Jebel Hafeet and in the mountains of Oman above 600m altitude.

**Sand partridge** – This is a gamebird that is adapted to live in dry, mountainous environments. Although it can fly small distances, if disturbed it prefers to run away!



Arabian mountain gazelle (*Gazella gazelle cora*) in the Dubai Desert Conservation Area, UAE. By Charlesjsharp (Own work, from Sharp Photography, sharpphotography) [CC BY-SA 3.0 (<http://creativecommons.org/licenses/by-sa/3.0/>)], via Wikimedia Commons [goo.gl/bH6pLe](http://goo.gl/bH6pLe)

**Arabian mountain gazelle** – Fewer than 15,000 mountain gazelles are left within their natural range (Palestine, Israel, the Golan Heights, Turkey and across the Arabian Peninsula). More than 10,000 of these are of the Arabian mountain gazelle subspecies. Mountain gazelles can reach running speeds up to 80 km/h (50 mph).



Arabian leopard in the Breeding Centre for Endangered Arabian Wildlife, Sharjah By נומכה סומט (Own work) [GFDL (<http://www.gnu.org/copyleft/fdl.html>), CC-BY-SA-3.0 (<http://creativecommons.org/licenses/by-sa/3.0/>) or FAL], via Wikimedia Commons [goo.gl/yKtDex](http://goo.gl/yKtDex)

**Arabian leopard** – Incredibly rare, incredibly hard to find, the Arabian leopard is the smallest breed of leopard in the world. Because of hunting and loss of habitat, there may be fewer than 250 adult Arabian leopards left in the wild and it may already be extinct in the wild in the UAE. The last time an Arabian leopard was spotted in the UAE was in 1976 in Jebel Hafeet ([goo.gl/UaqjR2](http://goo.gl/UaqjR2)).

- ▶ *Optional:* Ask your pupils to research one of the animals, birds or reptiles above, and record 5 facts about the animal, which could include where they live, what they eat, what hunts them, why they are at risk and any conservation efforts that are being made to save them.
- ▶ You may want to find some additional animals to talk about, and there is a great list on UAE interact ([goo.gl/jXYkaA](http://goo.gl/jXYkaA)) that links out to more information on each animal.

## WHAT IS BEING DONE TO HELP THESE ENDANGERED ANIMALS?

It's very important to know first of all how many endangered animals there are and where they live, that way you can monitor the population to see if it grows or shrinks, and protect the areas they live.

There are also captive breeding programs, where animals in zoos are bred to produce new young animals, which can be released back into the mountains to boost the wild population.

Finally, education and information is very important. By ensuring everyone knows why these animals are important, they are less likely to hunt and kill them, and more likely to help save them.

- ▶ *Optional:* Ask your class to do a questionnaire asking their parents or guardians, brothers and sisters, friends and neighbours; which of these endangered species they know about, and whether they knew they were endangered. You can compare the results in class.

## WHAT ELSE CAN WE DO?

You can also find out more about which animals are endangered by visiting IUCN Red List website ([goo.gl/ijT7MH](https://www.iucn.org/)). IUCN stands for the International Union for Conservation of Nature. This lists all the plants, animals and insects, both on land and sea, that are endangered around the world. This list is updated every year.

You can also visit the Al Ain Zoo ([goo.gl/yh65VH](https://www.alainzoo.ae/)) to find out more about the wildlife of the area and what conservation is happening. The Zoo takes part in conservation programs to help protect wild populations of important animals.

### Here are some more links you may find helpful:

- ▶ Arkive.org has lots of information on the animals discussed here, and lots of great pictures. Here is a link direct to the 'Mountains and Wadis' part of their excellent 'Jewels of the UAE' section: [goo.gl/nj29Co](https://www.arkive.org/uae/jewels-of-the-uae/mountains-and-wadis/)
- ▶ UAE Interact: Endangered species in Abu Dhabi: [goo.gl/0po4Tq](https://www.uaeinteract.com/abudhabi/endangered-species/)
- ▶ Endangered animals in Abu Dhabi, Time Out Abu Dhabi: [goo.gl/FVyw4q](https://www.timeout.com/abudhabi/animals/endangered-animals-in-abu-dhabi)
- ▶ News story in the Khaleej Times about Jebel Hafeet being monitored by the Environment Agency of Abu Dhabi: [goo.gl/mQgvT2](https://www.khaleejtimes.com/Environment/Jebel-Hafeet-being-monitored-by-the-Environment-Agency-of-Abu-Dhabi)
- ▶ News story on Gulf News about the biodiversity of Jebel Hafeet: [goo.gl/kF3Jtg](https://www.gulfnews.com/Environment/Jebel-Hafeet-biodiversity)
- ▶ News story on Gulf News about the unique insects found in the wadis of Jebel Hafeet: [goo.gl/lfpW8B](https://www.gulfnews.com/Environment/Jebel-Hafeet-unique-insects)
- ▶ The Mohamed bin Zayed Species Conservation Fund gives grants to species conservation efforts in the UAE and around the world. It also has some great case studies showing the work that people have been doing. Find out more here: [goo.gl/Mhcilv](https://www.mbzsf.com/)

# CREATE A COLLAGE AND/OR POSTER TO SHOWCASE THE MOUNTAINS, ANIMALS AND WHY WE SHOULD CONSERVE THEM.

Now we've learned about the mountains, the animals that live there and the threats that face them, we can put this into action!

## ACTIVITY 1: CREATE A COLLAGE

A collage is a fun, creative way of recreating the mountain environment and the animals that live there, which helps reinforce what your students have learned, and also lets other students know about these amazing areas.

Students can produce small individual collages, but we like the idea of one big eye-catching collage that all your students contribute to. This can be placed somewhere visible to the whole school like an entrance hall, so more people will see it and learn about the mountain animals of the UAE.

The first step is to create a mountain background, which you can do using large pieces of orange, yellow and brown paper or card. Don't forget to add lots of big and little rocks, wadis, peaks and ledges for the animals to live on.

The second step is to create the animals. You can either ask your class to pick an animal and draw it, or use images of the animals online to create outlines they can colour in.

Once your animals are ready, you can add them to the mountain background you have created. We think it's also a good idea to add a little bit of information next to each animal, so everyone knows its name, where it likes to live, and how endangered it is.

## ACTIVITY 2: AWARENESS POSTER

The endangered animals of the UAE mountain regions face many problems, and a lot of these are caused by people hunting and loss of habitat. There are also conservation programs to try and save them.

This activity will see your students producing awareness posters to help protect these animals. The posters could be a call for people to stop hunting animals, or a call to encourage people to join a conservation program.

- ▶ Ask your students what kind of information would be good to have on a poster.
- ▶ If you have time, you can find some examples to show them, and discuss what they include, whether they think it would work and why.
- ▶ Ask your students to choose one message each, and develop a poster around it. Ideally, the poster should include at least one animal from the mountain regions of the UAE.
- ▶ We suggest keeping the posters to A4 size, and also think they'd make a great display on the classroom wall.



## ACTIVITY 3: ANIMAL CARD GAME

The more people who are aware of the amazing but endangered animals of the UAE, the more likely conservation efforts to save them are likely to succeed. A fun card game is a great way to get young people involved.

This is a card game that you can make yourself, and can be used in two ways.

Firstly, you can use it to play a 'Top Trumps' style game. For this game, you'll need a picture of the animal, its name, and you'll need to give each animal a score for 4 different qualities. You can use anything measurable for this, but here are some possibilities:

- ▶ whether it's a predator, prey, or both
- ▶ how endangered it is on a scale of 1 to 5
- ▶ how many are left in the wild
- ▶ how many conservation efforts are being made to save it, on a scale of 1 to 5,
- ▶ how unique it is to the region, on a scale of 1 to 5.

There's more information on how to play Top Trumps here: [goo.gl/04S0M5](https://goo.gl/04S0M5)

Alternatively, you could make two identical decks of cards without the extra information and use them for the simpler game of Snap. In Snap, players put down one card at a time picture side up onto a central pile. If two cards with the same animal appear one after the other, the first person to shout SNAP! and put their hand on the cards wins the pile. The winner is the person who has cards left after everyone else has run out.

### How to make the cards:

- ▶ Get a list of 10 to 20 animals, plants, insects, reptiles and birds that live in the mountain regions of the UAE. Not all of them have to be endangered, but at least half should be.
- ▶ Find a picture, or ask your students to draw a picture, or each of the animals. You can then either cut out and stick this onto the cards, or scan them and add them to a digital version to print out later.
- ▶ There's a handy template you can use to make your Top Trumps cards here: <https://goo.gl/vHHFzP>
- ▶ If you are going to make Top Trumps you'll also need to discuss what 4 qualities you want to include on the cards, and what number each animal should have. If you have time, you could discuss this with your class and decide all together.
- ▶ Put all the information on the cards, cut them out, and get ready to play!
- ▶ We suggest making several decks so your students can play in groups in the classroom.
- ▶ You could also make this a bigger game, and encourage students from different classes and years to have a go in break times or lunchtimes.

## OPTIONAL: RAISE FUNDS FOR A LOCAL CONSERVATION CHARITY.

Fundraising isn't just a great way of helping to conserve the environment, it's also brilliant fun! With your students, discuss ideas for fundraising activities. There are hundreds of ideas you can choose from. Some of them include;

- ▶ A bake sale – students bring in homemade cakes, buns and sweets and sell them to teachers, other students and parents to raise money.
- ▶ Wear your own clothes to school day – everyone makes a donation to the charity in return for being able to wear their own clothes rather than their uniforms.
- ▶ If your students already wear their own clothes, how about a themed clothing day? Everyone could come in wearing blue or green colours.
- ▶ A trashion show, made up of items like plastic bags that might otherwise be thrown away. Our Roots & Shoots activity 'How to run a trashion show' ([goo.gl/KiEPKt](http://goo.gl/KiEPKt)) has all the information you need.
- ▶ A craft sale – students can create simple crafts to be sold to other students, teachers, and parents. There are some great craft sale ideas on Pinterest ([goo.gl/t0eJ21](http://goo.gl/t0eJ21)) and there are some great ideas on the Homemade Ideas ([goo.gl/DyD05E](http://goo.gl/DyD05E)) website.
- ▶ Sponsored silence, or other sponsored event – how about a sponsored turtle walk!
- ▶ A sponsored animal olympics is a great way to get the whole school involved. Set up different races, based on different animals; for example, a turtle walk, a camel race, a frog long jump. Students can enter in classes or teams. It's fun to take part in, and also fun to watch!
- ▶ Combine several ideas into a school fete, where you can have a cake sale, animal olympics, crafts and lots of other events going on. Parents and friends can come, and the more people that get involved, the more money you can raise!

If you can coordinate with the rest of the school or youth group, or join up with other groups then even better!

You'll also need to choose where you want your money to go. To help local wildlife, it's a good idea to choose a local charity where the money will go directly to local conservation efforts. There may be a group local to you, or you could consider donating to the Emirates Wildlife Society [goo.gl/BJP8M3](http://goo.gl/BJP8M3) – donations should be co-ordinated through:

**Simone Lawrence** – Development Director  
Emirates Wildlife Society – WWF  
Email: [slawrence@ewswwf.ae](mailto:slawrence@ewswwf.ae)



Students in the US holding a bake sale to raise money for charity. Image via Flickr

## TELL US HOW YOU GOT ON!

When your posters and collage are finished, we'd love to see them! If you already have an account you can upload a story with images to Roots & Shoots UAE ([www.rootsnshoots.ae](http://www.rootsnshoots.ae)) and create an online gallery on the website. You can also let us know how the card games work too! If you don't already have an account then just send us an email to [MrH@rootsnshoots.ae](mailto:MrH@rootsnshoots.ae) and we can set you up!

## KEEP UP TO DATE WITH JANE GOODALL'S ROOTS & SHOOTS UAE

As well as the website at [www.rootsnshoots.ae](http://www.rootsnshoots.ae) you can also find us on Facebook at <https://www.facebook.com/RootsnShoots.ae> or on Twitter as [@JaneGoodallUAE](https://twitter.com/JaneGoodallUAE)

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