QUESTION

What is biodiversity?

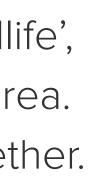
Image: Serengeti National Park, © ugurhan.





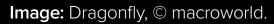
The word biodiversity, sometimes just called 'nature' or 'wildlife', normally means the number of different species in a given area. But it's also used to describe how different species live together.





QUESTION

How much biodiversity is there on Earth?







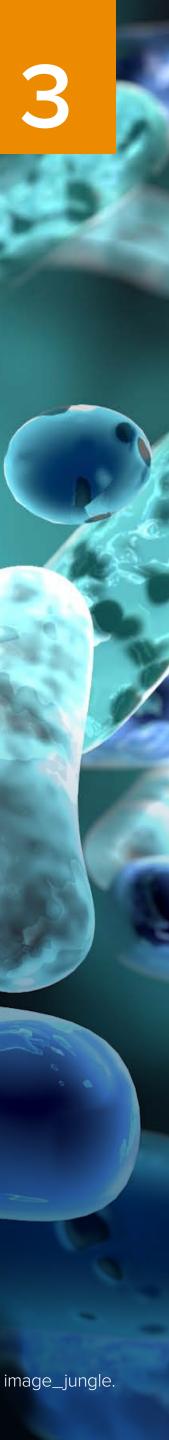
Scientists have spent hundreds of years collecting, counting and documenting the life on Earth. Each year we discover thousands of new species and have a catalogue of 1.6 million or so that have been so far described by science.



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Have we discovered all the species that exist on our planet?

Image: Illustration of bacterial strain *Bifidobacterium*, © image_jungle.





Scientists believe that there may be 7 or 8 million more that we don't know about yet. Some scientists fear that many species could be lost before we even discover them.





Why is it important that we protect the planet's biodiversity?

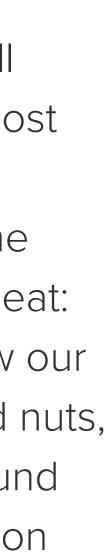






When we think of protecting wildlife, we often picture a small group of very beautiful animals, but the organisms that do most of the hard work keeping our planet healthy are the not-so beautiful ones, like cockroaches, worms, microbes, and some little grasses. This biodiversity provides us with the food we eat: from the micro-organisms that enrich the soil where we grow our crops, to the bird and insect pollinators who give us fruit and nuts, to the fish that are the main source of animal protein for around a billion people. The natural world also has a positive effect on wellbeing and physical health.





QUESTION

Why is biodiversity important to protect us against the effects of climate change?

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Image: Mangrove forest in Senegal, ©mariusz_prusaczyk.





Biodiversity keeps us safe from the more destructive forces of nature – trees and shrubs protect our homes from flooding, and coral reefs and mangroves protect our coastlines from storm surges.



QUESTION

Are we losing biodiversity?

Image: Macaw parrots, (





More than 28,000 species are now threatened with extinction. Some of the hardest hit groups are amphibians, reef-building corals, conifer trees, sharks and mammals, and there are of course many more that we don't know about.

More information can be found here: IUCN Red List of Threatened Species.





What impact does land use have on biodiversity?







Changes to habitats for grazing, mining, building homes, crop production, and the use of damaging fertilisers, have had a huge impact on land and sea. Landscape change not only destroys habitats, it also leaves plants and animals spread out, far away from each other. If they are too far apart, they cannot find suitable mates and they die out.





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QUESTION

How is climate change affecting biodiversity?







Climate change is increasing the rate of biodiversity loss. Nearly half the corals in the great barrier reef have died as a result of the warming of the seas. And as the oceans acidify as a result of greenhouse gases, some animals will no longer be able to grow the shells and exoskeletons they need to survive.





QUESTION

How can we conserve biodiversity?

Image: Panda bears, © Hung_Chung_Chih.





We must come up with ways of using land and water that cause the least damage to the environment, while leaving enough space for natural habitats to thrive. We must protect the biodiversity 'hotspots': places that have high levels of biodiversity and are threatened by human activities. We need to persuade people to recognise the value in having a forest outside their city to protect them from flooding, for example.

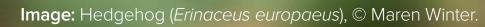


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QUESTION

How can we restore biodiversity?





Maren Winter.





We should be rebuilding biodiversity wherever and however we can. Sometimes this is as simple as giving plants and animals the space they need to thrive, and sometimes they need hands-on management from humans. In 2020, with the help of reintroduction experts in the South of England, white stork chicks hatched for the first time in 600 years.

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