how to be an ECO EXPLORER





HOW TO BE AN ECO EXPLORER Yussef Rafik Illustrated by Holly Astle

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BBC presenter of Earth Kids Illustrated by Holly Astle



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TOP TIP

Some of the activities in this book use plastic such as rubber bands and plastic bottles. To be an extra special eco explorer, you could look for more eco-friendly versions of these, such as biodegrabale tape. If you can't find any alternatives that are better for the environment, try reusing things you already own!

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INTRODUCTION

Planet Earth is a wonderful place to live. It's full of all different kinds of environments that support lots of amazing wildlife, all interacting with each other and depending on one another for survival.

We currently know of about 1.7 million different species of organism living on Earth, but scientists are discovering new living things all the time. The actual number of different species alive right now could be in the tens of millions. The fact that we have such rich variety, known in science as **biodiversity**, on our planet makes us incredibly lucky.

Sadly though, many of our plants, animals and other wildlife are being put at risk by humankind. While most of us would not wish to harm nature, lots of things we do every day may be having an impact on the planet without us even realising. The way that we consume products and live our lives can contribute to wildlife threats such as deforestation, climate change, pollution and habitat loss.

It's now more important than ever to be aware of these problems and help to fight against them. However, massive global issues like these can feel rather scary and can often leave us with feelings of worry and helplessness. This is something called eco anxiety, and if you feel this way you are most definitely not alone.

Rather than focusing on these huge issues, it can be more helpful to think about smaller ways you and your family could help the environment around you. And that's where this book comes in - it's full of activities we can do to make a positive change. It doesn't matter how small, these changes will have a positive impact on the planet. By learning about our natural world and doing as many of the activities as you can, you'll be a topnotch eco explorer in no time!

Being an eco explorer isn't about having expensive equipment and special clothes. We can be just as great an eco explorer dressed in trainers and a hoodie as we can in a fancy coat and wellies. Being an eco explorer is more about our mindset; it's about being aware of our behaviours, trying to promote sustainability and educating others by raising awareness.

From rainforests to deserts and grasslands to oceans, this book looks at some of the many magnificent ecosystems that make up planet Earth, each one supporting a whole host of special wildlife with its own food chain, and each one facing threats of its own.

Humans live all over the world, so some of us will come across certain ecosystems more than others. It doesn't matter where you live though, because the actions we take in our local area can affect other habitats all over the world. Let's find out what we can do to help!

Here are some key terms you need to know before you get started on your eco explorer adventures. You'll find more terms in the glossary on pages 90-93.

ECO EXPLORER

Someone who gets stuck into nature and helps protect the planet.

BIODIVERSITY The variety of different organisms living in a particular habitat.

ORGANISM

The name we give to any form of life. It could be a plant, an animal, a fungus or even bacteria.

HABITAT

The area where

an organism lives.

FOOD CHAIN The order that organisms eat each

other in an ecosystem, showing how living things depend on each other for food.

ECOSYSTEM

A community of lots of different organisms that live and interact with each other in a certain area.

SUSTAINABILITY

Using resources in a way that keeps them around for the future and doesn't harm the planet.

3 3 GARDENS

Gardens are important wildlife habitats because we can have the biggest impact in them. By using just a few simple eco explorer tricks we can turn them into gorgeous ecosystems filled with all kinds of fantastic creatures.

DID YOU KNOW? Gardens provide a fantastic place to rest for birds who fly long distances to other parts of the world for different seasons (known as migrating).

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ADVENTURE CHALLENGE

With an adult, see how many different creepycrawlies you can find in your garden or local park.

DID YOU KNOW? Being outside in nature helps to calm our minds and is great for our mental wellbeing.

Gardens come in so many different shapes and sizes. You might have a massive one or a tiny one, or maybe you have a shared one or no garden at all but a small window box instead.

The truth is, it really doesn't matter what kind of garden you have. Big or small, all gardens are valuable to wildlife and there are still plenty of things you can do with them.

Gardens are an important habitat for wildlife and if you plan yours well, it can provide food, water and shelter for the animals that live there. The more species in your garden, the more biodiverse it will be.

DID YOU KNOW?

In towns and cities, gardens are even more important because they are often some of the most biodiverse places found there.

Look Out For: Can you spot these creatures in your garden?



lots of different kinds of birds in your garden, especially if you put out bird feeders. Look out for sparrows, finches and starlings carrying materials to build a nest, like sticks and fluff.



be thousands of insect and creepycrawly species in your garden, but you might need to get close to the ground to find some of them. Look under rocks, behind leaves and in narrow cracks.



These are animals that only come out at night, such as bats, owls, hedgehogs and foxes. Go out after dark with an adult to see them, but be super quiet!



Dig around in any soil and you'll find earthworms. They're a great food source for other animals, but they also do important work fertilising the soil (see pages 56-63).

We've learnt that gardens are an important wildlife habitat, but they're also a great place for us to hang out, too. In an ideal world, all living creatures would enjoy gardens together, but unfortunately, sharing this space often brings conflict instead.

★ ARTIFICIAL LAWNS (otherwise known as fake grass) might look good, but they harm habitats. They form a barrier that prevents underground wildlife (like earthworms) from reaching the surface, and above ground animals (like birds) from reaching the soil.

★ CHEMICAL PESTICIDES are substances that are often used to get rid of species that we consider pests (any organism that is harmful or annoying to humans or crops). The problem is that those pests are part of a food chain and by poisoning them, we also poison the animals that eat them.

★ INVASIVE SPECIES are organisms that come from elsewhere and are not local or native. Invasive species of plants may look pretty, but they compete with native plants that local wildlife relies on. Some, like Himalayan balsam, are so fast-growing that they stop native species from growing, too.





HABITAT HERO: WASPS

Wasps are known for being a bit of a nuisance, especially when you're trying to enjoy a cool ice lolly, but they are actually the unsung heroes of our gardens. They hunt and eat many species of pests that munch on your valuable garden plants, such as flies, aphids and caterpillars. A single wasp nest can consume many thousands of little pests every summer!





Our biggest mission as eco explorers is to coexist peacefully with wildlife, sharing our space and enjoying the company of nature. It's not always easy, but here are a few ways to attract wildlife to your garden:

feeders with seeds and other birdfriendly food

Fill bird

to give birds a place to raise their young.

Put up a nest box

Plant flowers to attract bugs – bees love lavender and butterflies like buddleia.

Make a logpile for small mammals and reptiles to rest in.

Build a pond to encourage animals that eat pests - frogs will eat all your slugs!

> Scatter coffee grounds around as a natural pesticide - snails hate them.

Build a bug hotel to provide shelter for your creepy-crawly friends.