



Citizen science

What is citizen science?

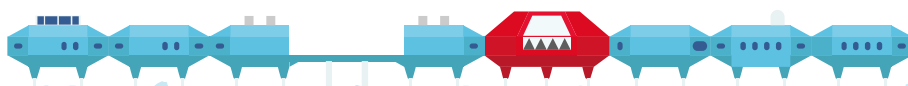
Citizen science is most simply defined as the involvement of volunteers in scientific research. It is a phrase that has now become very common and is used to describe a wide range of activities.

The principal behind citizen science is to use the power of collaborative volunteer research to explore or collect huge data sets that researchers simply wouldn't be able to do on their own.

It is now easier than ever to take part, and people from all walks of life can use smartphones, or even just a notepad, to capture and contribute information about the natural world. For example, researchers can, building on millions of ecological records, paint a picture of the UK's changing wildlife.

Why has it become so popular?

There are now many different ways to take part in citizen science projects. Scientists are not only able to generate a lot more of the data they need, but there is growing confidence in the scientific accuracy and validity of public-generated datasets. Also, there is now a wealth of technology available that makes citizen science more accessible than ever with opportunities to engage hundreds of thousands of volunteers in many different scientific pursuits.





How is citizen science used in environmental science?

The most powerful tool NERC environmental scientists use for monitoring the earth and acting to keep it in good health, is the data they gather through their research. By recruiting the help of volunteers to collect and interpret data, environmental scientists are able to achieve far more than they would on their own, helping them answer big questions about biodiversity and our environment. This includes research on the impact of climate change, pollution, urbanisation or the spread of non-native invasive species.

Why take part in citizen science?

One of the main reasons to take part as a volunteer is that your contribution will benefit the natural world. This might be on a local level, to help protect a local area of wildlife, or to help scientists understand what is happening to the environment on a national and even a global scale.

The chance to contribute to genuine scientific breakthroughs that changes our understanding of the world is very exciting, but is not the only benefit.

Citizen science projects are also a way to connect with nature and spend time outside, both of which are proven to be beneficial to your health and wellbeing. Taking part in citizen science projects is also an excellent way to learn more about environmental

topics, including how people can protect and enhance their local environments. This can be empowering, especially important at a time when we are often faced with many negative stories about the health of the environment.

Finally, citizen science is often hugely satisfying and great fun, either on your own or with friends and family, and there are many ways that people can take part, so anyone can get involved.

How can people get involved?

You don't need special skills or training to take part in citizen science, and there are various levels of involvement, from submitting a few casual wildlife records, to participating in more structured and involved projects.

There are two main types of activities people can participate in, observing the world, recording what you see and submitting the data, or helping process and analyse pre-existing data in some way.

The internet also means that you do not even have to leave your seat to volunteer in some projects, as there are many you can dip into online, for as little or as long as you fancy. The Zooniverse is an excellent place to find a project online that might interest you.

If you would rather get outside, then wildlife surveys are a great way of connecting with nature while contributing to research. There are many nature related surveys to get involved with. Some are ongoing, such

as the British Trust for Ornithology's Garden BirdWatch, others are more specific, like the Big Butterfly Count in July. There are also BioBlitzes, which are over a 24 hour period and, The Natural history Museum and OPAL surveys, that have lots of set family friendly activities you can try.

Citizen science projects

There are many different ways to be an environmental citizen scientist and numerous projects you can get involved with. Here are just a few your centre might like to try:

- **Weather Rescue** - Check forgotten weather records from the UK's highest mountain.
- **iGeology App** - Britain's rocks in your pocket.
- **mySoil App** - Build a community dataset by submitting your own soil information.
- **myVolcano** - A citizen science app that enables you to share your observations of natural hazards.
- **Mammal Tracker** - Mammals in the British Isles are surprisingly under-recorded and you can help.
- **Plant Tracker App** - Help track down invasive plant species - a threat to native wildlife in the UK.



- **Conker Tree Science** - Record damage caused by the leaf-mining moth.
- **Ladybird Challenge** - Help us find the seven-spot ladybird.
- **Bloomin' Algae** - Reduce public health risks from harmful algal blooms.
- **Asian Hornet Watch** - Asian hornet monitoring.
- **Rare Arable Flowers** - Save rare flowers.
- **iRecord-Record** - Full range of UK wildlife.
- **Lichen App** - Monitor air quality using lichens.
- **Ozone Injury Recording** - Record ozone pollution, which can damage the leaves of many plants.
- **BioBlitz** - Come and join the race to find as much wildlife as you can.
- **Cricket Tales** - Help us to understand the lives of wild insects by watching video clips.

