

Lesson plan: Exploring nature with iNaturalist

Lesson Objective: Broaden scientific view of the world using secondary information

Duration 90 mins	Theme Nature	Subject focus Science	Age group Key Stage 2
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Resources required

- Nature Book or ID guide
- [Zoom In Video](#)
- [Biodiversity Bingo](#) film
- [Biodiversity Bingo](#) cards
- Magnifiers/magnifying lens
- ID cards if available
- Tubs, bug pots
- 'A guide for observing nature' (see resources)
- I pads loaded with the iNaturalist app (refer to notes for log in details)
- 'How to use iNaturalist' (see resources)

Adult Support

- Use probing questions to encourage the children to be more focused in their observation and description.
- Work with groups in different areas of the school ground (Activity 3)
- Hand out and collect in equipment

Follow up activities

- This activity would work well as part of scientific investigation about habitats and/or classification.
- Explore Sustainable Learning [resources](#) about habitats for KS2

Learning outcomes (differentiated)

MUST Use careful observation and descriptive language to describe a living thing and some of its characteristics

SHOULD Use detailed description to produce an informative page for a class nature guide

COULD Develop their entry for the class nature guide using additional information from iNaturalist

This lesson has been written to celebrate City Nature Challenge taking place on the 27-30th April. Over 60 cities will be competing globally to see who can make the most observations of nature, find the most species and engage the most people. For more information visit www.citynaturechallenge.org

In preparation for this lesson share with your class the app iNaturalist which they will be using for activity 2 in their school grounds. You will need to set up a class account to keep student identities anonymous ([see online guidance](#)) Explain how the app is used and how they can explore the app themselves at home (see How to use iNaturalist guide).

Keywords
Naturalist
Characteristics
Appearance
Behaviour
Observe
Cultivated
Captive

Starter

Start by showing your class a nature book or ID guide; how was the content for this book produced? Invite discussion and reinforce that predominantly it will be through scientific observation. If unfamiliar, introduce your class to the term 'Naturalist' and its definition.

"A naturalist is a person who studies plants, animals, insects and other living things" Collins Dictionary

Draw answers from the class to bring about discussion regarding how these naturalists knew about the animals/plants; their characteristics, behaviours and appearances. Help the class to understand that all of this information would have been gathered through close observations.

Challenge your class to follow in these naturalists footsteps and take part in their own observations of nature. Share the video '[Zoom In](#)' as an introduction – what is the key message?

Main activity

Activity 1

Prepare to go outside by reminding the pupils about expectations of working safely in the outdoors using 'A guide to observing nature' (see resources).

Reintroduce the concept of Biodiversity and the first activity '[Biodiversity Bingo](#)' Allow 10 minutes to play the game with winners finding five in a row.

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Activity 2

Next, tell pupils it's their turn to practice what the 'Zoom In' video showed them and that they will be creating a class nature book which the children can add to over time.

Find a place outdoors where they can sit down and spend a minute simply listening and looking. In pairs, choose something to observe closely, such as a spider web, the bark of a tree, or a squirrel. They should take notes in their notebooks or make drawings that show what they are observing, just as nature writers do. What does it look like? If it's an animal, what is it doing? How big is it? If it's a plant, where is it growing? What colour is it, and what does it feel like? Are any animals walking or crawling on it, eating parts of it, or using it in some other way?

Remind students that nature writers pay attention to the details of plants and animals, as well as their surroundings. Encourage them to use descriptive language that helps readers to form an image in their minds.

Activity 3

Remind your class about how to use the app and share 'How to use iNaturalist' (see resources). In particular, remind them of the words 'cultivated' and 'captive' as discussed on the guide.

Hand out iPads and ID guides with the iNaturalist app. Divide up your school grounds and assign a group to work in each area with an adult.

Working in groups pupils start by exploring the living thing they have focused on in their independent work – what else can they learn from the app (for example, the Latin name, size and distribution)? Add any additional information to their guide. Additionally, the pupils could add some of their observations to the app in the 'notes' section – something naturalists would strive to do as more detail is always valuable.

Next, expand the investigation. Allocate each group an area of the school grounds and take photographs of each natural thing that they see (plants and animals) as part of the app. Any animals that cannot be photographed can be identified with ID guides and name inputted into the app.

Refer to 'How to use iNaturalist' (see resources) for information on using the app for recording data.

Call everyone together and collect in all the equipment. Ask groups to feedback to the class. For example; what was the most commonly occurring living thing and the least? What challenges did they encounter? Were there any surprises or anything which was not possible to identify?

Plenary

Ask for a volunteer to explain how the findings of the lesson reflect biodiversity—the variety of living things in a given place. How much biodiversity did pupils find at your setting? How might your location affect biodiversity? Discuss ways in which additional, comparable information could be collated, for example, repeating the observations in different seasons.

Extension tasks

- 'Publish' the information the children have gathered to create a nature reference book for the classroom.
- Visit iNaturalist website <https://www.inaturalist.org/> and explore the observations made around the world, the species recorded and the people taking part.
- Find out about the work of naturalists, for example, David Attenborough or explore the significance of the work of scientists such as Carl Linnaeus, a pioneer of classification.

Curriculum links

Science Key Stage 2

- Asking relevant questions and using different types of scientific enquiries to answer them
- Explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
- Report findings from enquiries
- Recognise how and when secondary sources might help them to answer questions (non statutory)