

Living Things and Their Habitats

Lesson 1: Introduction

Science KS2 Year 4



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Science

Key Stage 2 Year 4

Learning aims

- Identify how we can tell if something is living.
- Find out why being able to classify living things is important.
- Look at different ways we can classify living things.
- Find out what a habitat is.
- Classification challenge: can we identify living things in a habitat in our school?
- Can we create a classification key to classify the living things we found in our habitat?

Curriculum objective

- recognise that living things can be grouped in a variety of ways.
- explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment

Working scientifically

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions.



- identifying differences, similarities or changes related to simple scientific ideas and processes
- using straightforward scientific evidence to answer questions or to support their findings.

Reading links

A list of reading links is supplied on pages 4 and 5 of this PDF.

Keywords

Living. Classification. Habitat. Classification key.

These can also be found at the end of this PDF and can be placed on a learning wall as they are discussed during the lesson.



Equipment

You will need:

- Equipment for finding living things, e.g., spade/trowel (for soil), blankets (for shaking trees and leaves to reveal wildlife), nets (for ponds).
- Equipment for observing living things, e.g., binoculars, microscope (or lens which can be attached to iPad/phones), hand lens/magnifying glasses, plastic trays (to look at wildlife from ponds/soil), bug observation containers.
- Worksheet to record results: "Classification Challenge worksheet", "Classification Challenge Data sheet" (for both plants or animals).
- Pens, pencils, rubber, iPad (for taking photos).



Reading links: Books to illustrate the diversity of living things on Earth and habitats.

1. **“Habitats (Science in Infographics)”** written by Jon Richards – The reader is introduced to 12 different ecosystems and habitats from deserts, rainforests to the polar ice caps. It is full of bite-sized facts about these different regions and the plants and animals that live there. This is perfect for children who love scientific facts.
2. **“Living Planet: The Story of Survival on Planet Earth from Natural Disasters to Climate Change”** written by Camilla de la Bedoyere - Living Planet is a perfect addition to any home or school library - it is packed with high impact imagery and information tailored to a Key Stage 2 reader. You can watch incredible videos that play on the page with the free augmented reality app - see a volcano erupt, watch the plants and animals of the rainforest, follow in the footsteps of a storm chaser, and see right to the Earth's core. Discover what our planet is made of, and how humans have made an impact on Earth's changing climate.
3. **“Blue Planet II: For young wildlife-lovers inspired by David Attenborough's series (BBC Earth)”** written by Leisa Stewart-Sharpe with a foreword from David Attenborough.

This is our Blue Planet: a beautiful blue marble suspended in a sea of stars. Dive into these incredible stories from BBC Blue Planet II. Unlike billions of other worlds in the Milky Way, 71 per cent of our Blue Planet is covered by ocean. It's home to the greatest diversity of life on Earth but is our least explored habitat; we've better maps of Mars than of the ocean floor.

Discover all there is to love about our Blue Planet, the stories of its inhabitants, and realise how you can help protect this wilderness beneath the waves. In collaboration with BBC Earth, this illustrated non-fiction book captures the wonder, beauty, and emotion of the iconic BBC Blue Planet II TV series.
4. **“Our planet: The One Place We All Call Home”** written by Matt Whyman and WWF, with a foreword by David Attenborough - This glorious visual celebration of the natural world combines extraordinary photography from the series with stunning illustrations by acclaimed artist, Richard Jones. This book is the official children's companion to the Netflix documentary series with special foreword by David Attenborough.
5. **“The Variety of Life”** written by Nicola Davies – Our planet is full of life! Did you know there are 400,000 species of beetle - but only eight species of bear? This stunning book explores the extraordinary diversity of the natural world and profiles some of its most surprising creatures.
6. **“Welcome to the Woodland”, “Welcome to the Rockpool”** and **“Welcome to the Pond”** by Ruth Owen - These are three books in the “Living Things and Their Habitats” series. Readers will be taken



on a journey through the different habitats and discover how living things depend on each other and their environment for survival. Packed with facts, core curriculum information and fantastic photographs that support the text, each book takes readers on a mini safari through a habitat.

7. **“Habitats (Science Skills sorted!)”** by Anna Claybourne - Habitats are brilliant things to study scientifically. Within habitats, plants humans and other animals have learned to adapt to the variety of biomes on Earth. Discover the ways some animals are adapted to cold habitats; the important role trees play and all about climate change! At the end of the book, scientific guidelines explain why scientists do things a certain way and the things they look out for or try to avoid.



PowerPoint presentation

The accompanying PowerPoint presentation has 31 slides with the following learning points. At intervals throughout the lesson, we suggest asking the children what questions they might have. These can be collected throughout the unit of learning and added to the slide at the end of the lesson.

- Slides 1 and 2: introduce the lesson.
- Slides 3 and 4: We look at the seven features of living things to decide whether the things in the photos are living. Explain the mnemonic 'Mrs Gren'. When we refer to movement, remind children that plants do move. They grow and they will turn towards the sunlight.

Activity 1 (Slides 5 to 10)

- Slides 5 and 6: Can the children identify all the living things in the photo?
- Slides 7 and 8: Can the children identify all the things which used to be living and are now dead?
- Slides 9 and 10: Can the children identify all the things in the photos which are dead and have never been living?
- Slide 11: We introduce the concept that the Earth is full of lots of different living things.
- Slide 12: We introduce the idea of classification and how living things can be grouped together based on their similarities and differences and why this is important.
- Slide 13: The children look at photos of three different living things. They think about their similarities and differences, and decide which should be grouped together and why.

Activity 2 (slides 14 to 20)

- Slides 14 to 16: Classification Challenge – Children are encouraged to prepare for their challenge. The class discussion prompted by this slide will help them complete the first section of their “Classification Challenge” worksheet.
- Slide 17: Children are prompted on what results we are looking for and how to fill in the results section of their “Classification Challenge” worksheet when they get to their location.
- Slide 18: The children identify and create a list of the plants and animals (living things) they found in their challenge.
- Slide 19: We recap what a habitat is.
- Slides 20 and 21: Children are encouraged to choose three different living things and create a set of questions which could be used to tell them apart.
- Slide 22: Demonstrates a classification key. You can then pair the children and ask them to identify the living thing they have secretly chosen.
- Slide 23: The classification key demonstrates that we can see if any of the living things in our class list share the same features and would end up in the same group.
- Slide 24: Demonstrates that we can ask more questions to classify these living things into further groups.

Quiz (slides 25 to 28)

- Slides 25 to 28: The children answer questions to test their knowledge on living things, habitats and classification.
- Slide 29: This slide is kept blank for any questions.
- Slide 30: Useful links
- Slide 31: End of presentation.



Classification Challenge

Preparing for our challenge:

1. Where is the location for your challenge?

2. Why have you chosen it?

3. What living things are you looking for (tick the box/es)?

Plants ☐

Animals ☐

Both ☐

4. Make a list of where you are going to look for the living things in your location.

5. Will you need any special equipment to help you look for living things in these areas? Make a list of what you will need below.

6. How will you identify the living things you find?



7. In this challenge we want to classify the living things we find into groups based on similarities and differences in their features (what they look like). What could you use to help you observe their features?

8. What features will you look at for plants and animals? (Think about the slide in the presentation where we compared three different living things.)

9. How are you going to record your findings?

Results:

1. Can you describe your location? Give as much detail as possible

2. What living things did your group look for (tick the box/es)?

Plants ☐

Animals ☐

Both ☐

3. Use the data sheets provided (or create your own) to record results for each living thing you find. There is one for animals and one for plants.



Classification:

A. My three living things are:

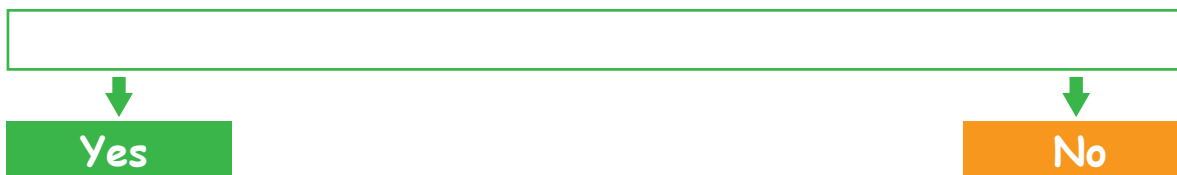
1. _____
2. _____
3. _____

B. I can use the following questions to help tell my living things apart (what makes them different? Use your data sheets to help you):

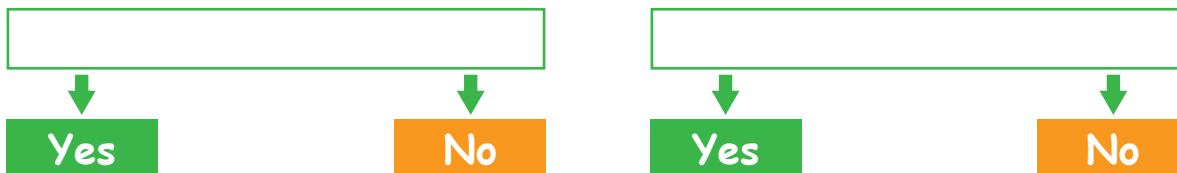
1. _____
2. _____
3. _____
4. _____
5. _____

C. Create a classification key to help identify my three living things

My first question is:



Can you add more questions to identify each of your living things?



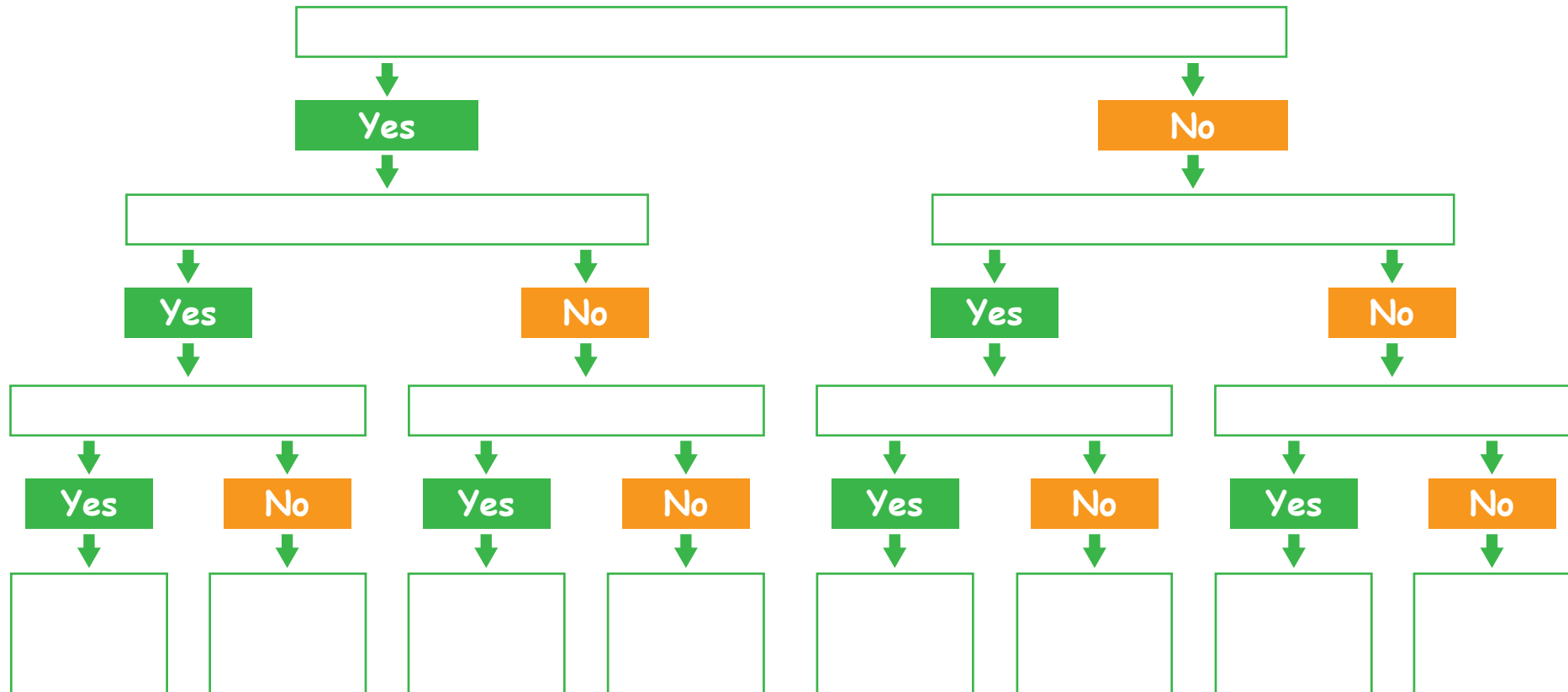
Now draw your classification key on the next page.



D. Draw your new classification key below.

Could you divide any of the groups further? What questions would you ask?

Think of one of your living things. Test your classification key works by getting your partner to work through the questions to guess what your living thing is.



Data Sheet – Animals

Record the following for each living thing you find. Give as much detail as you can.

You can add any additional features you observed into the table (where it says extra features).

Identification (What is the name of the living thing you found?)	
Where did you find it?	
How many legs does it have?	
What colour is it?	
Does it have wings?	
Does it have fur/scales/skin/feathers?	
How big is it? Can you measure it?	
Does it have antennae?	
Extra features: 	

Can you draw a diagram of your living thing? Can you label its features?



Data Sheet – Plants

Record the following for each living thing you find. Give as much detail as you can.

You can add any additional features you observed into the table (where it says extra features).

Identification (What is the name of the living thing you found?)	
Where did you find it?	
Does it have flowers?	
What colour is it?	
Is it a tree?	
How big is it? Can you measure it?	
Are there any leaves? What shape are they?	
Are there any seeds? What do they look like?	
Extra features:	

Can you draw a diagram of your living thing? Can you label its features?



Living Things and Their Habitats: Keywords Flashcards



Living

Classification

Habitat

**Classification
key**



Living



Classification



Habitat



Classification key

