

## Teacher guidance notes page 1

### Overview of the pack

An introduction to animals and their classification with a focus on canal and waterway environments.

### National Curriculum links

- **Science** topics – what animals need to survive, classification of living things, life cycles, the diversity of organisms and life processes.
- **Science** skills – using a variety of research methods, working practically and working scientifically.
- Links with **English** and **Maths** will be indicated where they occur.

### Other resources

- Canal & River Explorers' "Canal & River Habitats" topic pack ([link to website](#)).

### Learning objectives

- Understand the important role that rivers play in our lives and for the environment.
- Develop a sense of responsibility towards the environment, along with an appreciation of living things in and around waterways
- Understand how animals can be classified

### Success criteria

- All will know how animals are classified, will increase their knowledge of waterway creatures and will work independently, in pairs and in groups.
- Most will be able to define the categories and research creatures independently.
- Some will be able to accurately describe the categories and present their findings clearly to others.

### Prior learning

- A general introduction to animals/plants and their habitats.

### Follow up

- A field trip to a local waterway.

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Additional teacher information and discussion points on each slide to help you:

### Slide 1 Key words

- Print out for a wall or table display as a reminder to learners while they work.
- Other words include:
  - Year 1 & 2 - quick, slow, tall, high, eat, crawl.
  - Year 3 & 4 - breathe, hurried, lush, protect, babies, suddenly, ugliest.
  - Year 5 & 6 - analyse, instinctive, majestic, unsuitable, squeamish, precious, protective, aquatic.

### Slide 2 Sensory words

- These words support descriptive writing and are useful for writing about joining local fishing or bird watching clubs. Pupils could discuss and write their own list thinking about smell, sight, sound, touch, and taste.

### Slide 3/4 A to Z of animals

- You may have already studied what is meant by 'living things', 'things that once lived', and 'things that have never lived' as a first start to scientific classifications.
- You may also have referred to the range of animals there are in the world so that pupils include birds, insects and others in their activities.
- Pupils could complete the worksheet as a homework activity or in pairs in class.
- Pupils could play 'Verbal Tennis'. Pupils stand in pairs facing each other and take it in turn to name as many animals as they can, as quickly as they can. Each animal can only be named once. The last person to speak 'wins'. Monitor who responds the quickest and which pair goes on for the longest. This can be done several times to get pupils used to the activity.

### Slide 5 How can animals be classified?

- Pupils should think about the various ways in which animals can be classified. At this point you may or may not wish to include insects.

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### Slide 6/7/8 How can animals be classified?

- Pupils need to understand the meaning of the word 'classification' and about the five different divisions of vertebrates.
- Pupils will need to understand what is meant by 'vertebrate' (an animal with a segmented spinal column, backbone, and a well-developed brain, e.g. a mammal, bird, reptile, amphibian, or fish):
  - Fish: a cold-blooded vertebrate animal that lives in water. It typically has jaws, fins, scales, a slender body, a two-chambered heart, and gills for providing oxygen to the blood.
  - Bird: a two-legged, warm-blooded animal with wings, a beak, and a body covered with feathers. Birds lay eggs from which their young hatch, and most species can fly.
  - Amphibian: a cold-blooded vertebrate that spends some time on land but must breed and develop into an adult in water. Frogs, salamanders, and toads are amphibians.
  - Reptile: an air-breathing cold-blooded egg-laying vertebrate with an outer covering of scales or plates and a bony skeleton, e.g. crocodile, tortoise, snake, or lizard.
  - Mammal: a class of warm-blooded vertebrate animals that have, in the female, milk-secreting organs for feeding the young. The class includes human beings, apes, many four-legged animals, whales, dolphins, and bats.

### Slide 9 Different habitats

- Habitat - the natural home or environment of an animal, plant, or other organism. Habitats fulfil two major purposes; to provide shelter and safety, for instance to rear young without fear, and to provide food and drink for survival.
- Pupils could complete a 'spidergram' to suggest the environments in which animals might live. Answers could include:
  - Deserts, jungle, in the sea, in a river, by the seaside, in a tree, underground, in my house, in hot countries, in the arctic, hedgerows, moorland, marshland etc.

### Slide 10 A local habitat

- The Canal & River Explorers' "Canal & River Habitats" topic pack shows a wide range of habitats which are linked to British canals and rivers ([link to website](#)).

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### Slide 11/12 Canal habitats

- The Canal & River Explorers' "Canal & River Habitats" topic pack shows a wide range of habitats which are linked to British canals and rivers ([link to website](#)).
- Pupils should make a list of the creatures to be found in each of these environments, shown by the arrow. Dragonflies, water birds, water voles, crayfish, otters, and nesting birds

### Slide 13 Safe passage for bats

- There is a variety of animals living in the canal and river environment which could be researched but bats are of special interest to conservationists. The way that bats move is of special scientific interest.
- Canals have become increasingly important for these animals as wildlife-rich areas such as old pasture and woodland have been fragmented by roads.
- Canals act as 'corridors' allowing animals - bats in particular - safe passage underneath busy roads and motorways.
- It is difficult for bats to negotiate busy roads. The lack of shelter both from the weather and from predators, such as sparrow hawks, means it can be both difficult and dangerous to cross the gap. The bright lighting deters most bat species. For bats, canals are like a link between the M1 and the supermarket.
- The 200-year old bridges, aqueducts and tunnels provide ideal nooks and crannies for bats to roost in, while the high water quality and plant-rich channels ensure plenty of insects, which are bats' only source of food.
- Experts look for bats using a hand-held bat detector, they are able to listen to the creatures as they hunt. Bat detectors convert the very high-pitched sounds that many bats make - which are too high for our ears to detect - into audible clicks.
- Pupils could work in groups to research information about bats. They could make 'Save Our Bats' posters, or similar, to explain why bats should remain a protected species. Terms such as 'conservation' should be introduced.

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### Slide 14 Fancy fishing?

- A guide to the species of fish found in Britain's canals can be found on the Canal & River Trust website ([link to website](#)).
- You can link living things with canals and in particular how they each influence our leisure time. Fishing is reportedly the most popular sport in Britain today.
- Pupils should use the list of sensory words to write an article for the local paper encouraging people to join a newly formed local fishing club.

### Slide 15 Brave enough for bird watching?

- You can link living things with canals and in particular how they each influence our leisure time. Bird watching is an extremely popular leisure activity in Britain today.
- Pupils should use the list of sensory words to write an article for the local paper encouraging people to join a newly formed local bird watching club.