

# KS1 Science:

# MINIBEASTS



## Introduction

In this series of three short videos a group of young children explore the topic 'Minibeasts'. Key aspects covered include identifying their characteristics (including some extraordinary abilities) and the variety of their habitats. Each of the films combines live action and animation to explore the topic in a clear, age-appropriate manner.

### 1. What is a minibeast?

Through hands-on exploration and expert guidance the children discover the characteristics of small invertebrates including worms, snails and spiders.

### 2. Where do minibeasts live?

The children find out about the contrasting habitats that support minibeasts around the world: from underground burrows to lush rainforests and underwater ecosystems.

### 3. Do minibeasts have superpowers?

The children discover how minibeasts use their extraordinary abilities for various purposes, including hunting for prey and defending themselves against predators.

# 1. What is a minibeast?

## Discussion points:

### 1. Introduction to minibeasts:

- Define minibeasts as small invertebrates - animals without a backbone.
- Discuss the six main groups of animals and explain where minibeasts fit in.
- Ask: 'What are minibeasts, and how are they different from other animals?'

### 2. Characteristics of minibeasts:

- Explore the unique features of minibeasts, such as their soft bodies and hard exoskeletons.
- Highlight examples of different minibeasts and some of the ways they are adapted to their environment.
- Ask: 'How do minibeasts protect themselves from predators?'

### 3. Minibeast diversity:

- Discuss the wide variety of minibeasts found in different habitats and environments.
- Encourage children to observe minibeasts in their surroundings and appreciate their diversity.
- Ask: 'Can you name different types of minibeasts and describe their habitats?'

## Suggested activities:

### 1. Invertebrate sorting game:

- Provide pictures of various animals and ask children to sort them into vertebrates and invertebrates.

### 2. Invertebrate Art/DT project:

- Encourage children to create artwork featuring their favourite invertebrates using recycled materials.
- Encourage discussions about the characteristics and adaptations they include in their creations.
- Introduce coding concepts by making the creations move using simple coding with the BBC Micro:bit.

### 3. Invertebrate observation:

- Invite children to explore their outdoor environment and observe minibeasts like ants or butterflies.
- Encourage the creation of bug hotels or habitat boxes in design and technology classes to provide homes for minibeasts.

## 2. Where do minibeasts live?

### Discussion points:

#### 1. Understanding minibeast habitats:

- Define habitats as the environments where animals live and explore the different types of habitats that support minibeast communities.
- Discuss the importance of habitats in providing food, water, shelter, and space for minibeasts to thrive.
- Ask: 'What are habitats, and why are they important for minibeasts?'

#### 2. UK habitats for minibeasts:

- Explore various habitats found in the UK, such as grassy fields, rivers, ponds, forests, and microhabitats like tree roots.
- Discuss the characteristics of each habitat and the minibeasts that inhabit them.
- Ask: 'Can you name different habitats where minibeasts live in the UK?'

#### 3. Global minibeast habitats:

- Introduce children to minibeast habitats in different parts of the world, such as rainforests, deserts, polar regions, and underwater ecosystems.
- Highlight examples of minibeasts adapted to survive in extreme environments.
- Ask: 'Can you name some different habitats where minibeasts live around the world?'

#### 4. Minibeast adaptations:

- Discuss some of the physical adaptations that minibeasts have developed to survive in their specific habitats.
- Encourage children to observe and identify adaptations in different minibeasts.

### Suggested activities:

#### 1. Invertebrate habitat maps:

- Provide images of different habitats and ask children to identify and mark areas where minibeasts might live.

#### 2. Minibeast habitat dioramas:

- Invite children to create dioramas showing minibeast habitats using art supplies and natural materials.

#### 3. Minibeast habitat scavenger hunt:

- Organise a scavenger hunt in outdoor spaces where children search for minibeasts and their habitats.
- Provide guidebooks or identification sheets to help children identify minibeasts and learn about their habitats.

#### 4. Cross-curricular science and geography projects:

- Encourage children to research and present information about minibeast habitats in different regions of the world.

## 3. Do minibeasts have superpowers?

### Discussion points:

#### 1. Introduction to minibeast superpowers:

- Discuss the concept of superheroes and superpowers. Ask: 'If you had a superpower what would it be and why?'
- Introduce the idea that minibeasts possess extraordinary abilities that help them survive and thrive in their habitats and we can call these 'superpowers.'
- Ask: 'Why are minibeast superpowers important for their survival in their habitats?'

#### 2. Minibeast defence mechanisms:

- Investigate the different defence mechanisms used by minibeasts to protect themselves from predators, such as camouflage, chemical defences, and venomous stingers. Ask the children to name some specific examples.
- Explore how these adaptations help minibeasts survive in their environments.

#### 3. Minibeast hunting abilities:

- Examine how certain minibeasts use their 'superpowers' for hunting prey, including venomous stingers in scorpions and formidable strength in ants and dung beetles.
- Discuss the role of these hunting abilities in the minibeast food chain, asking pupils for examples of how minibeasts with these abilities capture their prey.

#### 4. Minibeasts helping humans:

- Explore examples of minibeasts that perform valuable tasks beneficial to humans, such as pollination by bees and soil aeration by earthworms.
- Discuss the importance of these minibeast contributions to ecosystems and to the wellbeing of humans.

### Suggested activities:

#### 1. Minibeast superpower showcase:

- Encourage children to research and create presentations or posters showcasing different minibeast superpowers and their significance.
- Provide resources for children to explore various adaptations, defence mechanisms, and hunting abilities.
- You could create 'Minibeast Top Trumps' as a variation of this activity.

#### 2. Minibeast habitat enhancement:

- Guide children in designing and building bug hotels or wild garden areas to provide habitats for local minibeasts.
- Discuss the importance of creating suitable environments for minibeasts to thrive.

#### 3. Invertebrate stories:

- Invite children to write creative stories or narratives featuring minibeast characters and their adventures in their habitats.

- Encourage children to incorporate scientific facts about minibeasts and their superpowers into their stories.

**4. Minibeast observation and documentation:**

- Organise outdoor excursions for children to observe minibeasts in their natural habitats.
- Provide journals or observation sheets for children to record their findings and document minibeast behaviours and adaptations.

**5. Cross-curricular integration:**

- *Science and literacy.* Children can create informative posters or brochures about minibeast superpowers, integrating scientific knowledge with literacy skills.
- *Art and design.* Encourage children to illustrate their stories or create artwork depicting minibeasts and their habitats, fostering creativity and artistic expression.