

**Gilbert White's House  
Nature Explorers  
Post-Visit Lesson Plans  
and  
Teacher's Notes**



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## Nature Explorers Lesson Plans

### Introduction

These follow up lesson plans are intended to consolidate and develop pupils learning following their visit to Gilbert White's Museum and their participation in the Nature Explorers Day.

### Themes

The activities provide the opportunity to introduce or consolidate the following themes:

- Habitats and microhabitats
- Biodiversity and the threats posed to biodiversity
- Native endangered species
- Nature and well being
- Gilbert White, globally significant natural scientist and widely regarded as the father of ecology

### Activities

Activities are discussion and enquiry based to provide opportunities for pupils to:

- develop a deeper understanding through exploring and talking about their ideas
- work in groups of different sizes (pairs, small groups and as a whole class)

Activities are structured to support pupils develop the ability to:

- maintain attention and participate actively in collaborative conversations
- listen and respond appropriately to adults and their peers
- elaborate and explain clearly their understanding and ideas

### Timings and Lesson Structure

- The timings and structure of the lessons are flexible to enable you to adapt and select activities as required.
- The lesson plans are sequenced and structured to work within two 60-minute lessons.
- A variety of options for pupil groupings are suggested so that activities can be delivered in a format that suits your particular class dynamics.
- The timings provided are approximate. Activities can be extended to allow for more in-depth discussion or for pupils to record their thoughts and ideas in writing.
- Some activities can be shortened if conducted as class discussion rather than pair or group work followed by class feed-back.

### Resource Pack

Contains photocopiable resources and activity sheets.

### PowerPoint Presentation (optional)

Contains slides relating to a number of activities outlined in the lesson plans.

## National Curriculum Links

### Citizenship

The Nature Explorers Day follow up activities and resources provide pupils with the opportunity to:

- ✓ talk and write about their opinions, and explain their views, on issues that affect themselves and society
- ✓ research, discuss and debate topical issues, problems and events

### English

The Nature Explorers Day follow up activities and resources provide pupils with the opportunity to:

- ✓ participate actively in collaborative conversations, discussions and debates
- ✓ elaborate and explain clearly their understanding and ideas
- ✓ listen and respond appropriately to adults and their peers
- ✓ consider and evaluate different viewpoints, attending to and building on the contributions of others
- ✓ ask relevant questions to extend their understanding and knowledge

### Science

The Nature Explorers Day and follow up activities and resources are designed to support pupils to:

- ✓ recognise that living things can be grouped in a variety of ways
- ✓ use classification keys to help group, identify and name a variety of living things in their local and wider environment
- ✓ recognise that environments can change and that this can sometimes pose dangers to living things
- ✓ explore examples of human impact (both positive and negative) on environments
- ✓ explore examples of the negative effects of population and development, litter or deforestation

Pupils might work scientifically by:

- ✓ using and making simple guides or keys to explore and identify local plants and animals
- ✓ making a guide to local living things
- ✓ raising and answering questions based on their observations of animals and what they have found out about other animals that they have researched
- ✓ using classification systems and keys to identify some animals and plants in the immediate environment

Pupils might find out about:

- ✓ the significance of the work of scientists such as Carl Linnaeus, a pioneer of classification and in this case the importance of Gilbert White, a globally significant natural scientist and widely regarded as the father of ecology

## Lesson 1

Lesson 1 / Activity 1	Suggested Timings: 10 minutes	Resources
<p><b>Key Question:</b> What can a picture tell us?</p> <p><b>Suitable for:</b> Individual / Pair Work / Group Work / Whole Class Activity</p> <p>This activity could be completed as a class Q+A activity or in small groups with pupils feeding back to the class following their group discussions.</p> <p><b>Activity:</b> Without being told who he is, pupils study the 3 pictures of Gilbert White and answer the questions listed below. It is not necessary to include all 3 pictures within the activity and Picture 3 in particular could be omitted if needed.</p> <p>See the Teachers Notes below (pages 14 – 19) for further information about Gilbert White.</p> <p><b>Picture 1: Eric Ravilious</b></p> <ul style="list-style-type: none"> <li>○ What's he doing?</li> <li>○ What's he thinking or feeling?</li> <li>○ What's he wearing?</li> <li>○ What else can you see in the picture?</li> </ul> <p><b>Picture 2: Amy Wiseman</b></p> <ul style="list-style-type: none"> <li>○ What can you see in this picture?</li> </ul> <p>Suggested Activity: Observation of this picture could be a game or competition with pupils having limited time to observe and remember the following.</p> <ol style="list-style-type: none"> <li>1. The number of birds</li> <li>2. The number of animals</li> <li>3. The number of fruits</li> <li>4. The number of butterflies</li> <li>5. The number of different types of flowers and their colours</li> </ol> <p><b>Continued on next page</b></p>		<p><b>PowerPoint Presentation:</b></p> <ul style="list-style-type: none"> <li>➤ Slides 2-5 if required</li> </ul> <p><b>Resource Pack:</b></p> <ul style="list-style-type: none"> <li>➤ Gilbert White Portraits, Pictures and Paintings Prompt Sheet</li> <li>➤ Gilbert White Picture 1</li> <li>➤ Gilbert White Picture 2</li> <li>➤ Gilbert White Picture 3</li> </ul> <p><b>Teachers Notes:</b></p> <ul style="list-style-type: none"> <li>➤ Gilbert White Background Notes pages 14 -19</li> </ul> <p>or visit:</p> <p><a href="https://gilbertwhiteshouse.org.uk/gilbert-white/">https://gilbertwhiteshouse.org.uk/gilbert-white/</a></p>

<b>Lesson 1 / Activity 1 continued</b>	<b>Approximate Timings:</b> 10 minutes	<b>Resources</b>
<p><b>Picture 3: artist unknown (based on a sketch by Thomas Chapman)</b></p> <ul style="list-style-type: none"> <li>○ What's he wearing?</li> <li>○ Is he sitting or standing? Why?</li> </ul> <p><b>Final Question:</b> Do you know the name of this person?</p>		
<b>Lesson 1 / Activity 2</b>	<b>Approximate Timings:</b> 10 minutes	<b>Resources</b>
<p><b>Key Question:</b> Who was Gilbert White?</p> <p><b>Key Words:</b> Ecology / Ecologist</p> <p><b>Suitable for:</b> Individual / Pair Work / Group Work / Whole class Activity</p> <p><b>Activity:</b> True or False Quiz</p> <p>Options:</p> <ol style="list-style-type: none"> <li>a. Read aloud the statements. Pupils could either raise their hands if they believe the statements is true or write their answers (tick or a cross) on a mini white-board. Statements are also included in the PowerPoint Presentation (slide 7) if required.</li> <li>b. Provide each pupil with the 'True or False Quiz Sheet' which pupils can complete individually or in groups or teams.</li> </ol> <p><b>Follow Up - Pupil Feedback / Class Discussion</b></p> <p>Key points to highlight with pupils are:</p> <ul style="list-style-type: none"> <li>○ Gilbert White is considered to be the father of ecology not simply because of his discoveries but because of his technique of observing nature and carefully recording what he saw and heard.</li> <li>○ Gilbert White was a keen gardener, growing fruit and vegetables.</li> <li>○ Gilbert White was also very interested in garden design. He wasn't only interested in creating a garden that provided fruit and vegetables, he also wanted to create a beautiful garden.</li> </ul>		<p><b>PowerPoint Presentation:</b></p> <ul style="list-style-type: none"> <li>➤ Slides 6-7</li> </ul> <p><b>Resource Sheet:</b></p> <ul style="list-style-type: none"> <li>➤ True or False Quiz Sheet</li> </ul> <p><b>Teachers Notes:</b></p> <ul style="list-style-type: none"> <li>➤ True or False Answer Sheet page 20</li> <li>➤ Gilbert White Background Information pages 14 - 19</li> </ul> <p><b>Optional:</b></p> <p>Mini white boards + pens</p>

Lesson 1 / Activity 3:	Approximate Timings: 15 minutes	Resources
<p><b>Key Question:</b> Why should we remember Gilbert White today?</p> <p><b>Activity:</b> Diamond Nine</p> <p><b>Suitable for:</b> Pair or Group Work</p> <p><b>Instructions:</b></p> <ul style="list-style-type: none"> <li>○ One set of cards per pair or group of pupils</li> <li>○ There are 10 diamond cards in total so pupils will need to reject one (the least important).</li> <li>○ In their groups pupils need to prioritise the remaining 9 statements by placing the cards in the formation of a diamond with the most important statement at the top.</li> <li>○ If required, the Power Point Presentation (slide 9) includes an image of the formation of the Diamond Nine when completed,</li> <li>○ Since pupils need to agree as a team, a time limit may be appropriate to ensure they arrive at a decision.</li> </ul> <p><b>Please note:</b> The cards will need to be cut in advance of the activity.</p> <p><b>Pupil Feedback and Class Discussion:</b> If not identified by the pupils during their group discussion, emphasis should be placed on Gilbert White's scientific methods i.e. recording in detail and his methods of observation. See Teachers Notes for further details.</p>		<p><b>PowerPoint Presentation:</b></p> <ul style="list-style-type: none"> <li>➤ Slides 8 - 9</li> </ul> <p><b>Resource Sheets:</b></p> <ul style="list-style-type: none"> <li>➤ Diamond Nine Cards</li> </ul> <p>Please note that the cards will need to be cut out in advance of the activity</p> <p><b>Teachers Notes:</b></p> <ul style="list-style-type: none"> <li>➤ Gilbert White Background Information pages 14 - 19</li> </ul>
Lesson 1 / Activity 4:	Approximate Timings: 10 minutes	Resources
<p><b>Focus:</b> Gilbert White: Garden Designer</p> <p><b>Introduction:</b> Gilbert White loved nature and loved his garden. He spent much of his time making his garden the best it could be not just for the plants and wildlife. He also designed a garden that he, his friends and family could enjoy.</p> <p><b>Suitable for:</b> Individual / Pair Work / Group Work</p> <p><b>Activity:</b> Pupils match the statements on the resource sheet with the numbers on the plan of Gilbert White's Garden.</p>		<p><b>Resource Sheets:</b></p> <ul style="list-style-type: none"> <li>➤ Garden Plan</li> <li>➤ Garden Plan Question Sheet</li> </ul> <p><b>Teachers Notes:</b></p> <ul style="list-style-type: none"> <li>➤ Garden Plan Answer Sheet pages 21 – 22</li> </ul>

<b>Lesson 1 / Activity 4 continued</b>	<b>Approximate Timings:</b> 10 minutes	<b>Resources</b>
<p><b>Pupil Feedback and Class Discussion:</b> Key points to highlight with pupils are that Gilbert White had 2 key interests:</p> <ol style="list-style-type: none"> <li>1. The study of nature and gardening</li> <li>2. Whilst he did grow lots of fruit and vegetables in his garden, he was also a keen garden designer following the current trends (e.g., inclusion of the Ha-Ha, the trompe l'oeil statue of Hercules)</li> </ol>		
<b>Lesson 1 / Activity 5</b>	<b>Approximate Timings:</b> 10 minutes	<b>Resources</b>
<p><b>Focus:</b> Animals, Habitats and Threats</p> <p><b>Context:</b> The animals featured in this activity include some of those discovered or identified by Gilbert White (see teachers notes) and some that can be observed in Gilbert White's Garden or the surrounding area today.</p> <p>This activity offers the opportunity to introduce or consolidate the following themes as appropriate for your class:</p> <ul style="list-style-type: none"> <li>○ Habitats including microhabitats</li> <li>○ Biodiversity, including the threat to biodiversity due to development and change of land use</li> <li>○ Ecosystems</li> <li>○ Food chains and food webs</li> </ul> <p><b>Suitable for:</b> Pair Work / Group Work / Whole Class Activity</p> <p><b>Information:</b> There are 10 sets of 3 cards (a set for Species, Habitat(s) and a set of Fact Files)</p> <p><b>Option A: Whole class activity</b></p> <p>Give each pupil a card. They then have to circulate to find the pupils with the other two cards to complete 'their' set. The information on the 'fact file' will help them identify if they have found the pupils with the correct cards to complete their 'set'. This activity could be completed in silence to avoid pupils calling or shouting out.</p>		<p><b>Resource Sheets:</b></p> <ul style="list-style-type: none"> <li>➤ Animals, Habitats and Threats Playing Cards</li> </ul> <p>Please note that the cards will need to be cut out in advance of the activity.</p> <p><b>Teachers Notes</b></p> <ul style="list-style-type: none"> <li>➤ 'Animals, Habitats and Threat's Answer Grid pages 23 - 26</li> <li>➤ List of websites for further research pages 27 - 28</li> </ul>



Lesson 1 / Activity 5 continued	Approximate Timings: 10 minutes	Resources
<p><b>Option B: Group Activity</b></p> <p><b>Activity:</b> Card Matching also known as Memory, Concentration or Pelmanism</p> <p><b>Instructions:</b></p> <p>Depending on the time available decide how many cards to use for this game. If limited time available do not use all 10 sets.</p> <p>Pupils place the cards, individually, face down and then in turns, they select and turn over 3 cards.</p> <p>If they turn over a matching set of 3 cards, they keep the set, if not they turn the cards back over ready for the next pupil.</p> <p>The pupil who collects the most cards wins the game.</p>		

Lesson 2 / Activity 1:	Approximate Timings: 5 minutes	Resources
<p><b>Focus:</b> Why do gardens matter? (Part 1)</p> <p><b>Suitable for:</b> Whole Class Activity</p> <p><b>Activity:</b> Class Discussion</p> <p>Gilbert White Quote:</p> <p><i>'If the writer should at all appear to have induced any of his readers to pay a more ready attention to the wonders of Creation, too frequently overlooked as common occurrences...his purpose will be fully answered. ...these his pursuits, by keeping the body and mind employed have...contributed to much health and cheerfulness of spirits...'</i></p> <p>Edited version (included in the Power Point presentation, slide 11):</p> <p>Gilbert White said people often didn't notice the beauty of the natural world around them and his love of nature and gardening '... by keeping the body and mind employed have ... contributed to much health and cheerfulness of spirits ...'</p> <p><b>Key question(s)</b> which lead onto the second activity below:</p> <ul style="list-style-type: none"> <li>○ What does Gilbert White mean?</li> <li>○ Do you agree?</li> <li>○ Is what Gilbert White said over 200 years ago still relevant and important today?</li> </ul>		<p><b>PowerPoint Presentation:</b></p> <ul style="list-style-type: none"> <li>➤ Slides 10 - 11</li> </ul>
Lesson 2 / Activity 2	Approximate Timings: 10 minutes	Resources
<p><b>Focus:</b> Why do gardens matter? (Part 2)</p> <p><b>Suitable for:</b> Group or Pair Discussion</p>		<p><b>Optional:</b></p> <p>Paper, sugar paper or post-its Pens</p>

<b>Lesson 2 / Activity 2 continued</b>	<b>Approximate Timings:</b> 10 minutes	<b>Resources</b>
<p><b>Activity:</b> In groups or pairs, pupils consider Gilbert White's views and opinions on gardens and nature. They then discuss the reasons why they think gardens are important. Pupils can record their answers and ideas either on paper or on post-its. The activity can be presented as a challenge: who can think of the most reasons why gardens are important.</p> <p><b>Pupil Feedback:</b> follow up discussions should be guided (if required) to consider the following key themes.</p> <ul style="list-style-type: none"> <li>○ To encourage wildlife and promote bio-diversity</li> <li>○ Potential to 'grow your own' fruit and vegetables and associated issues regarding positive environmental impact and healthy diets</li> <li>○ Well-being – gardens provide an opportunity to spend time outdoors, the benefits of spending time in a natural environment, space to 'play out', physical benefits of gardening</li> </ul> <p><b>Extension:</b> Time permitting pupils could also discuss and agree what features should be included in their 'ideal' garden.</p>		
<b>Lesson 2 / Activity 3:</b>	<b>Approximate Timings:</b> 10 minutes	<b>Resources</b>
<p><b>Key Question:</b> What would Gilbert White think today?</p> <p><b>Suitable for:</b> Whole Class</p> <p><b>Activity:</b> Show pupils the PowerPoint slides. After each slide pupils decide whether Gilbert White would approve or disapprove of the design of the gardens and outside space in each picture.</p> <p><b>Pupils can respond in a number of different ways including:</b></p> <ol style="list-style-type: none"> <li>1. Thumbs Up / Thumbs Down</li> <li>2. Place 3 flashcards representing the opinions: agree, disagree and undecided along the classroom wall. After seeing each photograph, pupils decide whether Gilbert White would approve, disapprove or approve of elements of the design but not all. Pupils stand by the flashcard that they think would best represent Gilbert White's opinion.</li> </ol>		<p><b>PowerPoint Presentation:</b></p> <ul style="list-style-type: none"> <li>➤ Slides 12 -18</li> </ul>

<b>Lesson 2 / Activity 3 continued</b>	<b>Approximate Timings:</b> 10 minutes	<b>Resources</b>
<p><b>Pupil Feedback:</b> can take place either after they have made each decision or as a general class discussion, at the end of the activity. This could be an opportunity for pupils to:</p> <ol style="list-style-type: none"> <li>1. Justify their opinions and explain whether they would agree or disagree with Gilbert White</li> <li>2. Explain what they would do to improve the garden or location</li> </ol>		
<b>Lesson 2 / Activity 4:</b>	<b>Approximate Timings:</b> Various	<b>Resources</b>
<p><b>Key Question:</b> What changes would you make to improve your school grounds?</p> <p><b>Activity: The Gilbert White Challenge</b></p> <p>There are a variety of ways this activity could be completed depending on the time available. If time is limited this activity could be conducted as a class discussion, consolidating pupils' knowledge and understanding from their visit to Gilbert White's House and the previous activities.</p> <p><b>Option A:</b> Discussion:</p> <p><b>Suitable for:</b> Pair Work / Group Work / Whole Class Discussion</p> <ol style="list-style-type: none"> <li>1. How did Gilbert White develop the grounds around his house?</li> <li>2. Could any changes be made to the school grounds to encourage wildlife, improve the well-being of the pupils and staff?</li> <li>3. (If not covered already in the discussion) Gilbert White also wanted his garden to look beautiful. Is there anything you would do to your school grounds to make them more attractive?</li> </ol> <p><b>Option B:</b> Survey of the School Grounds</p> <p><b>Suitable for:</b> Individual / Pair Work / Group Work</p> <p>Activity 1: Pupils conduct a survey of their school grounds. Possible focus could be:</p> <ol style="list-style-type: none"> <li>1. Microhabitats on site</li> <li>2. Plants, Trees, Fruit and Vegetables</li> <li>3. Mini-beast survey</li> <li>4. Areas used for practical activities (e.g., playground, football pitch etc)</li> <li>5. Areas created or could be created to help staff and pupil well-being</li> </ol>		

Lesson 2 / Activity 4 continued	Approximate Timings: Various	Resources
<p>Activity 2: Pupils either draw (or are provided with a plan) of the school grounds that they label with all the improvements they would like to make. They should consider all of the following:</p> <ul style="list-style-type: none"> <li>○ How they could encourage more wildlife.</li> <li>○ Could any areas of the school grounds improve both pupils '<i>health and cheerfulness of spirits.</i>'?</li> <li>○ If the school does not already grow any fruit or vegetables on site, are there areas where this could be possible?</li> </ul> <p><b>Extension Activities:</b></p> <p>Literacy, for example, writing or speaking to persuade:</p> <ul style="list-style-type: none"> <li>○ Pupils write a letter to the headteacher or governors to persuade them to make the changes they are suggesting.</li> <li>○ In pairs or groups, pupils prepare a presentation explaining and justifying the changes they would make.</li> </ul>		<p><b>Optional:</b></p> <p>Plans of the school site</p>

## **Gilbert White**

### **Background Information**

- Gilbert was born in Selborne in 1720 in the vicarage, where his grandfather was the parish priest.
- The Wakes was bought by his grandfather White as a home for his wife, Rebecca. Gilbert, his parents, his grandmother and his 9 brothers and sisters all lived at The Wakes in what was then quite a small house.
- Gilbert White started his education in Basingstoke before going to Oriel College, Oxford.
- Gilbert White was not a wealthy man by the standards of the day (although obviously not poor either). He followed his grandfather and uncle into the Church and had a distinguished career as a Fellow of Oriel.
- In 1746 he was ordained a deacon and became curate for his Uncle Charles who was vicar in the neighbouring Hampshire village of Farringdon.
- He was fully ordained on 1749 and later he became curate of the Selborne parish, as well as taking up other similar posts, some local, some not.
- Gilbert White lived at The Wakes from 1727 until his death in 1793.
- Gilbert built on a large extra room for entertaining in the 1760s, now known as the Great Parlour. The house was further extended during the Victorian period with additions to the ground and first floors.
- White never married. He was very popular in the village and disliked pomp and circumstance.
- He wanted no grave in the church itself and was humbly carried to his grave in the churchyard by 'seven labouring men'.

## **Gilbert White Father of Ecology**

<https://gilbertwhiteshouse.org.uk/gilbert-white/>

### **White's Fame and Reputation**

The Reverend Gilbert White is famous in three ways:

- as author of one of the most published and popular books in the English language
- as a pioneering naturalist who influenced the development of the study of natural history
- as a gardener

### **White's developing interest in the natural world**

Gilbert White was first a gardener, and it was the love of the outdoors and of growing things that stimulated his interest in nature.

A keen gardener from his youth, White increasingly took a close interest in the natural world around him, and grew a wide range of traditional and experimental fruit and vegetables (for example he was the first person in the area to grow potatoes). It was this keen, enquiring interest in gardening that led him to begin his first written work, of recording methodically what he sowed and reaped, the weather, temperature and other details. This he went on to call his 'Garden Kalendar'.

### **White's discoveries**

White believed in studying living birds and animals in their natural habitat which was an unusual approach at that time as most naturalists preferred to carry out detailed examinations of dead specimens in the comfort of their studies.

White was responsible for a number of major discoveries in the world of natural history:

- he was the first to identify the harvest mouse in this country
- he correctly realised that the species of bird known as a willow wren was in fact three separate species – the wood warbler, the chiff chaff and the wood warbler - largely on the basis of their different songs
- he discovered the noctule bat

### **Gilbert White Forerunner of Modern Natural Historians**

White's fame is due not to his discoveries but rather his method of observation (or what he called 'watching narrowly') and then carefully recording in detail what he saw and heard in an age without cameras and tape recorders.

White closely observed nature in one specific area of the country, as modern natural historians do. He would receive specimens from local boys, or from his brother John, which he would examine. Other natural historians of the 18th century received information from all

over the country whilst Gilbert White's scientific fame rests on his minute observation of all nature in his garden, on his walks and his rides in the countryside, receiving information from other areas of the country for the purposes of comparison. Nothing escaped his notice or his notebook. He noticed, for example, that owls hooted in B flat and he correctly identified the willow wrens as separate species by their songs and by minute differences in their plumage.

### **The Natural History and Antiquities of Selborne**

Gilbert White's book is compiled of letters written to fellow naturalists Thomas Pennant and Daines Barrington. It is not a scientific record but rather a portrait of a place. It reflects the natural history of White's native country, and the things he saw as he rode or walked around the south of England. It includes both White's personal and emotional reflections as well as his dispassionate observations and passages of insight and vividness.

Gilbert White's world-famous book:

- has been translated into numerous other languages
- is reported to be one of the most published books in the English language
- was published in 1789 and since then has never been out of print
- is a culmination of Gilbert White's life-long investigation of the natural world

*"Gilbert White's book, more than any other, has shaped our everyday view of the relations between humans and nature."*

**Richard Mabey, Naturalist & biographer of Gilbert White**



## Gilbert White the Gardener

<https://gilbertwhiteshouse.org.uk/gilbert-white/>

### Fruit, Vegetables and Plants

- When he returned after university to live in Selborne Gilbert White started to cultivate the garden of The Wakes, his grandmother's house which eventually became his.
- He gradually acquired land and extended the garden until he had taken over the whole 25 acres that the Wakes now owns.
- He grew cabbages and other vegetables in huge quantities (500 savoy cabbage plants in a single planting).
- He also grew more exotic things much fancied by 18th century gardeners, such as melons and cucumbers, which had to be grown under glass.

This is how he did it:

*April 1755 Borrowed seven Cart-loads of Hot-dung of Farmer Parsons. 13 April Worked up a nine-light melon-bed with 18 good dung-carts of fresh, hot dung, & 18 bushels of fresh tan. I had made this bed just a week before, only 2 days after the materials were brought in; but finding it to heat violently I ordered it to be pulled to pieces, and cast back again, that it might spread its violent Heat.*

In the autumn when the melons had been harvested, he returned the dung to its owner.

- White also made his own wine and beer.
- Details of White's plantings at The Wakes (White's House) still exist, and they aim only to grow either genuine varieties grown by Gilbert White or varieties that represent those grown in the garden during the eighteenth century.

### Garden Design

- White wanted the design of his garden to be as close as possible to the great gardens being created at the time.
- It was after White's visits to some of these gardens that he decided he must have stone walls and vistas in his own garden and he recorded the process in his diaries. He built a Ha-Ha and a fruit wall, he installed a sundial, and two oil jars to act as focal points for the vista, and he erected a statue of Hercules.
- White was not a wealthy man and because he couldn't afford a real stone statue of Hercules, he had one built in two dimensions of wood by the village carpenter – John Carpenter.

## Gilbert White's Influence

As previously described Gilbert White is considered to be the father of ecology and a globally significant natural scientist.

Numerous great English writers and naturalists have been influenced by Gilbert White.

### Gilbert White, Charles Darwin and Earthworms

Charles Darwin, a fervent admirer who said after reading White's 'The Natural History and Antiquities of Selborne':

*'...I remember wondering why every gentleman did not become an ornithologist.'*

Charles Darwin claimed that he: 'stood on the shoulders' of White, and went on 'a pilgrimage to Selborne' as a young man in June 1857.

The chief link between the two men is their view of earthworms, which both White and Darwin believed to be one of the keys to the interlinking of all nature – the science of ecology.

White said of earthworms: *'... though in appearance a small and despicable link in the chain of nature, yet, if lost, would make a lamentable chasm. For, to say nothing of half the birds, and some quadrupeds, which are almost entirely supported by them, worms seem to be the great promoters of vegetation, which would proceed but lamely without them.'*

Darwin wrote: *'It has often been said that under ordinary circumstances healthy worms never, or very rarely, completely leave their burrows at night; but this is an error, as White of Selborne long ago knew.'*

### Other admirers include:

**Samuel Taylor Coleridge**

*'This sweet delightful book.'*

**Virginia Woolf**

*'By some apparently unconscious device of the author has a door left open, through which we hear distant sounds.'*

**Edward Thomas**

*'In this present year, 1915, at least, it is hard to find a flaw in the life he led.'*

**W H Auden**

*'Selfishly, I, too, would have plumbed to know you: I could have learned so much.'*

**David Attenborough**

*'A man in total harmony with his world.'*

Introduction to Selborne, 1977

**Gerald Durrell**

*'Gilbert White ... simply observed nature with a sharp eye and wrote about it lovingly.'*

The Amateur Naturalist, 1982.

Although the chief significance of the book is its subjects and its author, it has been published in a number of important editions and illustrated by leading illustrators such as John Nash and Eric Ravilious.

## Who Was Gilbert White? True or False Quiz Answers

For further background information please refer to pages 14 to 19 or visit:  
<https://gilbertwhiteshouse.org.uk/gilbert-white/> .

1. Gilbert White was born in 1720.

**True**

2. Gilbert White was the first person to discover the noctule bat, the UK's largest bat.

**True**

3. Gilbert White believed you should only grow vegetables in your garden.

**False**

4. Gilbert White believed you should look and listen very carefully when studying birds and animals.

**True**

5. Gilbert White never wrote anything down.

**False**

6. Gilbert White was very rich.

**False**

**Notes:** Whilst pupils may have the impression that Gilbert White was rich due to the size of the house and garden, he was not a wealthy man.

7. Gilbert White wanted to create a beautiful garden.

**True**

8. Studying nature was Gilbert White's job.

**False**

**Notes:** Gilbert White was a clergyman. He studied nature as a hobby and, whilst he did complete some science training during his studies, he was not a professional scientist.

## Gilbert White's Garden

### Answer Sheet

Using the plan of Gilbert White's Garden, pupils match the numbers on the plan of the gardens with the correct description.

Description	Number on Plan
<b>The Herb Garden</b> Close to the house and closest to the garden wall. Next to the Six Quarters.	2
<b>The Sun Dial</b> Close to the Ha-Ha, at the end of the lawn.	9 (or 8)
<b>The Pond</b> Next to the Six Quarters and the Herb Garden. Newts live in the pond.	3
<b>The Kitchen Garden</b> This is where you will find several vegetable plots next to the meadow.	5
<b>The Fruit Wall</b> Built at the side of the lawn to trap the heat of the sun to help to grow fruit trees.	10
<b>Bakers Hill</b> Gilbert White grew lots of fruit in his garden including here at Bakers Hill which is close to the house.	6

<p><b>Ha-Ha</b></p> <p>A ditch between the lawn and the meadow. Why the funny name? Because you can't see it from a distance so it's a surprise when you find it.</p>	8 (or 9)
<p><b>Trompe L'oeil Statue of Hercules</b></p> <p>Trompe l'oeil is a French word meaning an illusion. The statue was designed to look like it was carved out of stone but was actually made out of wooden board and painted.</p>	13
<p><b>The Meadow</b></p> <p>Wildflowers grow here and sheep graze here over the winter. The grass is only cut once a year for hay.</p>	4
<p><b>The Great Oak</b></p> <p>This tree was planted in 1730.</p>	11
<p><b>The Hot Beds</b></p> <p>Made of walls of straw with glass panels on top. Horse manure was put inside. They were used for growing melons and cucumbers.</p>	7
<p><b>The Six Quarters</b></p> <p>An area surrounded by walls and hedges. It contains six large flower beds.</p>	1
<p><b>Revolving Wine Pipe Seat</b></p> <p>Made out of a barrel and used by Gilbert as a place to sit and observe nature. The seat could turn 360-degrees so Gilbert could watch the nature all around him.</p>	12

**Lesson 1 Activity 5**  
**Animals, Habitats and Threats Answer Grid**

ANIMAL	FACT FILE	HABITAT(S)
<b>HEDGEHOG</b>	<p><b>Name:</b> Hedgehog  <b>Scientific Name:</b> Erinaceus europaeus  <b>Classification:</b> vertebrate / mammal  <b>Habitats:</b> hedgerows, parks, gardens  <b>Shelter:</b> Hedgehogs hibernate through the winter months in a nest made from leaves.  <b>Diet:</b> beetles, worms, slugs, earwigs, caterpillars and millipedes  <b>Predators:</b> badgers and occasionally foxes  <b>Threats:</b> Loss and damage to their habitats, pesticides may have reduced their food supply. Loss of greenery in gardens. Roads since thousands of hedgehogs are killed by cars each year.</p>	<b>Habitats:</b> hedgerows, parks, gardens
<b>SWIFT</b>	<p><b>Name:</b> Swift  <b>Scientific Name:</b> Apus apus  <b>Classification:</b> vertebrate / bird  <b>Habitats:</b> grassland, heathland, towns and gardens  <b>Shelter:</b> They nest under the eaves of old buildings.  <b>Diet:</b> flying insects (not stinging insects), airborne spiders  <b>Predators:</b> falcons, kestrels and some owls  <b>Did you know?</b> Swifts fly to the UK each summer from sub-Saharan Africa. They can fly the equivalent of the earth to the moon and back seven times in a lifetime.</p>	<b>Habitats:</b> grassland, heathland, towns and gardens

<p style="text-align: center;"><b>SLOW WORM</b></p>	<p><b>Name:</b> Slow Worm  <b>Scientific Name:</b> Anguis fragilis  <b>Classification:</b> vertebrate / reptile  <b>Habitats:</b> heathland, meadows, gardens and woodland edges  <b>Shelter:</b> Slow worms burrow underground or find a crevice in a rotting tree stump to hibernate in over the winter.  <b>Diet:</b> invertebrates including slugs, worms, snails and spiders  <b>Predators:</b> adders, birds, domestic cats  <b>Threats:</b> habitat loss</p>	<p><b>Habitats:</b> heathland, meadows, gardens and woodland edges</p>
<p style="text-align: center;"><b>NEWT</b></p>	<p><b>Name:</b> Smooth or Common Newt  <b>Scientific Name:</b> Lissotriton Vulgaris  <b>Classification:</b> vertebrate / amphibian  <b>Habitats:</b> Ponds in spring then woodland, hedgerows, marshes or grassland.  <b>Shelter:</b> They are nocturnal spending the day hiding under large stones or compost heaps.  <b>Diet:</b> insects, caterpillars, worms and slugs while on land and tadpoles when in the water  <b>Predators:</b> include fish, ducks, grass snakes, herons and kingfishers  <b>Did you know?</b> If they lose a limb, newts grow new ones in a few months!</p>	<p><b>Habitats:</b> Ponds in spring then woodland, hedgerows, marshes or grassland</p>
<p style="text-align: center;"><b>FIELD CRICKET</b></p>	<p><b>Name:</b> Field Cricket  <b>Scientific Name:</b> Gryllus campestris  <b>Classification:</b> invertebrate / arthropod / insect  <b>Habitat:</b> grassy heathland  <b>Shelter:</b> burrows in dry, sunny locations with short vegetation  <b>Food:</b> vegetation, dead and dying insects when they can find them  <b>Predators:</b> birds, reptiles, rats, bats, mice  <b>Did you know?</b> The field cricket is one of the rarest insects in the UK today because its heathland habitats have been greatly reduced by forestry and changes in land use.</p>	<p><b>Habitat:</b> grassy heathland</p>



<p style="text-align: center;"><b>BARN OWL</b></p>	<p><b>Name:</b> Barn Owl  <b>Scientific Name:</b> Tyto alba  <b>Classification:</b> vertebrate / bird  <b>Habitats:</b> grasslands or farmland  <b>Shelter:</b> hollow trees  <b>Diet:</b> small mammals such as voles, mice and shrews  <b>Predators:</b> buzzards, goshawks and occasionally foxes  <b>Did you know?</b> Barn owls use their exceptional hearing to track down their prey as they fly low to the ground.</p>	<p style="text-align: center;"><b>Habitats:</b> grasslands or farmland</p>
<p style="text-align: center;"><b>NOCTULE BAT</b></p>	<p><b>Name:</b> Noctule Bat  <b>Scientific Name:</b> Nyctalus noctula  <b>Classification:</b> vertebrate / mammal  <b>Habitat:</b> woodland  <b>Shelter:</b> holes in trees and sometimes bat boxes  <b>Diet:</b> flying beetles, flying insects, midges and moths  <b>Predators:</b> hawks and owls  <b>Did you know?</b> The noctule bat is the largest UK bat but is still small enough to fit in the palm of an adult's hand.</p>	<p style="text-align: center;"><b>Habitat:</b> woodland</p>
<p style="text-align: center;"><b>DEATHS HEAD HAWK MOTH</b></p>	<p><b>Name:</b> Death's Head Hawk Moth  <b>Scientific Name:</b> Acherontia atropos  <b>Classification:</b> invertebrate / arthropod / insect  <b>Habitat:</b> vegetable patches  <b>Food:</b> The larvae feed on potato plants, buddleia and deadly nightshade. Adult moths feed on rotting fruit, tree sap and honey from bee hives  <b>Predators:</b> birds, bats, hedgehogs  <b>Did you know?</b> The largest Deaths Head Hawk Moth to appear in Britain had a wingspan of 12 – 13 cm.</p>	<p style="text-align: center;"><b>Habitat:</b> vegetable patches</p>

<p style="text-align: center;"><b>HARVEST MOUSE</b></p>	<p><b>Name:</b> Harvest Mouse  <b>Scientific Name:</b> <i>Micromys minutus</i>  <b>Classification:</b> vertebrate / mammal  <b>Habitats:</b> hedgerows, long grass  <b>Shelter:</b> They build spherical nests of tightly woven grass, high-up in tall grasses.  <b>Diet:</b> seeds, berries and insects.  <b>Threats/ Predators:</b> weasels, stoats, foxes, cats, owls, hawks, crows.  <b>Did you know?</b> It is the only British mammal to have a prehensile tail and can use it like an arm to hold onto grass stems.</p>	<p style="text-align: center;"><b>Habitats:</b> hedgerows, long grass</p>
<p style="text-align: center;"><b>EARTH WORM</b></p>	<p><b>Name:</b> Earth Worm  <b>Scientific Name:</b> <i>Lumbricus terrestris</i>  <b>Type:</b> invertebrate / worm  <b>Habitat:</b> moist soil  <b>Shelter:</b> underground tunnels  <b>Diet:</b> Omnivore, decaying plant material, mostly leaves, but also tiny roots.  <b>Predators:</b> birds, moles, foxes, shrews, frogs, toads, beetles, snails  <b>Did you know?</b> Earthworms usually live for about a year but can live up to eight years.</p>	<p style="text-align: center;"><b>Habitat:</b> moist soil</p>

## Lesson 1 Activity 5

### Animals, Habitats and Threats

Websites with further information regarding the animals included in the card matching activity:

#### Barn Owls

<https://www.barnowltrust.org.uk/owl-facts-for-kids/owl-food-chain/>  
<https://www.britishbirdofpreycentre.co.uk/our-birds/barn-owl/#:~:text=The%20barn%20owl%20is%20found,range%20inside%20which%20they%20forage.>  
<https://www.nhm.ac.uk/discover/barn-owl-tyto-alba.html>

#### Death's Head Moth

<https://www.uksafari.com/deathhead.htm>  
<https://www.ukmoths.org.uk/species/acherontia-atropos/>  
<https://butterfly-conservation.org/moths/deaths-head-hawk-moth>

#### Earthworms

<https://www.rspb.org.uk/birds-and-wildlife/wildlife-guides/other-garden-wildlife/insects-and-other-invertebrates/worms-slugs-spiders/earthworm/>  
<https://www.earthwormsoc.org.uk/earthworm-ecology>

#### Field Crickets

<https://www.rspb.org.uk/our-work/conservation/projects/field-cricket-reintroduction/#:~:text=The%20field%20cricket%2C%20Gryllus%20campestris,of%20Principal%20Importance%20in%20England.>  
<https://naturebftb.co.uk/projects/field-cricket/>  
<https://species.nbnatlas.org/species/NHMSYS0001387363#overview>  
<https://uwm.edu/field-station/crickets/#:~:text=Field%20crickets%20eat%20vegetation%2C%20mostly,when%20they%20can%20find%20them>  
[https://www.dept.psu.edu/nkbiology/naturetrail/speciespages/cricket.htm#:~:text=Most%20bird%20species%20\(including%20cardinals,also%20vigorously%20consume%20field%20crickets](https://www.dept.psu.edu/nkbiology/naturetrail/speciespages/cricket.htm#:~:text=Most%20bird%20species%20(including%20cardinals,also%20vigorously%20consume%20field%20crickets)

#### Harvest Mice

<https://www.wildlifetrusts.org/wildlife-explorer/mammals/harvest-mouse#:~:text=The%20tiny%20harvest%20mouse%20lives,but%20will%20also%20eat%20invertebrates.>  
<https://www.mammal.org.uk/species-hub/full-species-hub/discover-mammals/species-harvest-mouse/>

## **Hedgehog**

<https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/animals/mammals/hedgehog/>  
<https://www.britishhedgehogs.org.uk/wp-content/uploads/2019/03/Hedgehog-Street-HEMP-guide.pdf>

## **Noctule Bat**

<https://www.wildlifetrusts.org/wildlife-explorer/mammals/noctule>  
<https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/animals/mammals/noctule-bat/>

## **Slow Worm:**

<https://www.wildlifetrusts.org/wildlife-explorer/reptiles/slow-worm>  
<https://www.rspb.org.uk/birds-and-wildlife/wildlife-guides/other-garden-wildlife/amphibians-and-reptiles/slow-worm/>  
<https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/animals/reptiles-and-amphibians/slow-worm/>

## **Smooth Newts**

<https://www.wildlifetrusts.org/wildlife-explorer/amphibians/smooth-newt>  
<https://www.froglife.org/info-advice/amphibians-and-reptiles/smooth-newt/#:~:text=Predators%20include%20fish%2C%20Grass%20Snakes,nymphs%2C%20fish%20and%20adult%20newts.>  
<https://onekindplanet.org/animal/newt/>

## **The Swift**

<https://www.woodlandtrust.org.uk/trees-woods-and-wildlife/animals/birds/swift/>  
<https://www.rspb.org.uk/birds-and-wildlife/wildlife-guides/bird-a-z/swift/>  
<https://www.rspb.org.uk/globalassets/downloads/documents/conservation--sustainability/help-swifts/amazing-swift-facts.pdf>