

# Brede High Woods

## Educational Resources

### Butterflies

#### Unit in brief

##### Session aims:

To explore the variety of butterflies found within the habitats of Brede High Woods and to understand their lifecycles, survival strategies and the relationships and interactions with the environment.

##### Curriculum Links

##### English Key Stage 2 –

Reading for information – non-fiction and non-literary texts.

##### Maths Key Stage 2 –

Handling data – organising and presenting findings and represent and interpret data using graphs – specifically pictograms.

##### Science Key Stage 3 –

Classification of living things, variation and interdependence, and interactions with species and the environment. Human activity and natural processes can lead to changes in the environment.

##### ICT Key Stage 2 –

Finding things out – using the internet.

##### ICT Key Stage 3 –

Use and refine search methods.

##### Geography Key Stage 2 –

Fieldwork techniques. Geographical enquiry and skills – collect and record evidence. Increase knowledge and understanding of environmental change and sustainable development – how people can improve or damage the environment, and why and how people manage environment sustainably.

##### Art and Design Key Stage 2 –

Making art and crafts using a range of materials, patterns and colours.

##### Citizenship Key Stage 3 –

Taking informed and responsible action.

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### Butterflies

| Structure            | Activity title         | QCA Curriculum links                                                                                                                                                      | Teacher notes                                                                       | Student worksheets                                                                                                                                                      |
|----------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Introduction         | Unit in brief          |                                                                                                                                                                           |    | None                                                                                                                                                                    |
| Pre-visit activities | Butterflies            | <b>KS2:</b><br>En1.2.c<br>Sc2.1.a.c, 4.a                                                                                                                                  |    | None                                                                                                                                                                    |
|                      | Lifecycles             | <b>KS2:</b><br>Sc2.1.a.c, 4.a.b.c<br>Art1.a<br>ICT1.a.b.c                                                                                                                 |    | None                                                                                                                                                                    |
| Pre-visit activities | Which butterfly am I?  | <b>KS2:</b><br>Sc2, 4.a.b.c                                                                                                                                               |   | Which butterfly am I? Factsheet <br><br>Identification sheet (download separately) |
| On-visit activities  | Caterpillar Camouflage | <b>KS2:</b><br>PE11.a.b.c<br>Sc2.5.c                                                                                                                                      |  | None                                                                                                                                                                    |
|                      | Butterfly Hunt         | <b>KS2:</b><br>Sc2, 4.a, 5.b.c<br>Ge1.b.c, 2.b, 5.a.b<br>Ma2.2.a<br>Ma4.b.c.f<br><b>KS3:</b><br>Sc2.1.a.b.c, 2.2.a.b, 2.3, 3.3.d, 3.4.c<br>Ma2.1.d, 2.3.d, 2.4.a, 3.3.a.b |  | Butterfly Hunt record sheet <br><br>Identification sheet (download separately)     |

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### Butterflies

| Structure             | Activity title                 | QCA Curriculum links                                                                                       | Teacher notes                                                                        | Student worksheets                                                                                                                        |
|-----------------------|--------------------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
|                       | Peacock Predator               | <b>KS2:</b><br>PE1.1.a.b.c<br>Sc2.5.a                                                                      |    | None                                                                                                                                      |
| Post-visit activities | Stained glass butterflies      | <b>KS2:</b><br>Art 1.a.b, 2.a.b, 4.a.b                                                                     |                                                                                      | Stained glass butterflies – step by step instructions  |
|                       | Butterflies in the environment | <b>KS3:</b><br>En4.3.a.d.f.g.i<br>Sc2.3.a, 3.3.d.e, 3.4,<br>4.a.c.d.e.g.k, 4.e<br>ICT2.1.b<br>Cit2.3.a.b.c |  | Environment worksheet                                |

# Brede High Woods

## Educational Resources

|   |                     |
|---|---------------------|
| ► | Pre-visit activity  |
|   | On-site activity    |
|   | Post-visit activity |

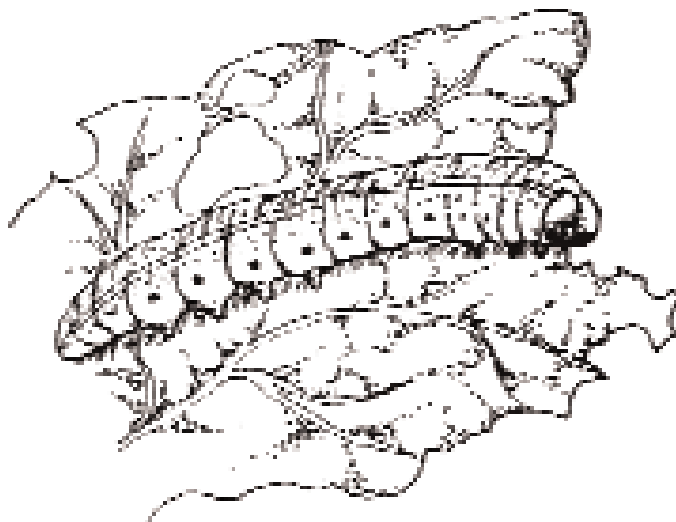
## BUTTERFLIES

### TEACHER'S NOTES

Everyone knows the childhood classic *The very hungry caterpillar* by Eric Carle, if you have a copy in school you may wish to remind the class by asking the pupils to take it in turns to read the story, a page each. Though actual caterpillars would not be found munching on chocolate cake, it isn't so far from the truth. Caterpillars are pure eating machines and, just like children, they have favourite foods and some refuse to eat anything else. One thing that is the same for all the caterpillars from the moment they hatch from an egg on their parent's chosen leaf is that they must eat and eat until such time as they are ready to hide themselves in a chrysalis and emerge a short while later as a butterfly or moth. Some caterpillars and butterflies are so specific in their food type that the populations of these are very low, the food plants are lost as changes occur in the habitat and this directly effects the insects who then do not have enough to eat.

To find out more about caterpillars, butterflies and moths go to Butterfly Conservation (BC) [www.butterfly-conservation.org/text/8/learn.html](http://www.butterfly-conservation.org/text/8/learn.html) where you can use the play and learn online activities to discover:

- The variety of butterflies and moths
- Their unique body parts using the magnifier
- What's that caterpillar?
- Butterfly/caterpillar food plants
- The feely feet or twitching antennae games ideal for playing in the classroom



# Brede High Woods

## Educational Resources

|   |                     |
|---|---------------------|
| ► | Pre-visit activity  |
|   | On-site activity    |
|   | Post-visit activity |

## LIFECYCLES

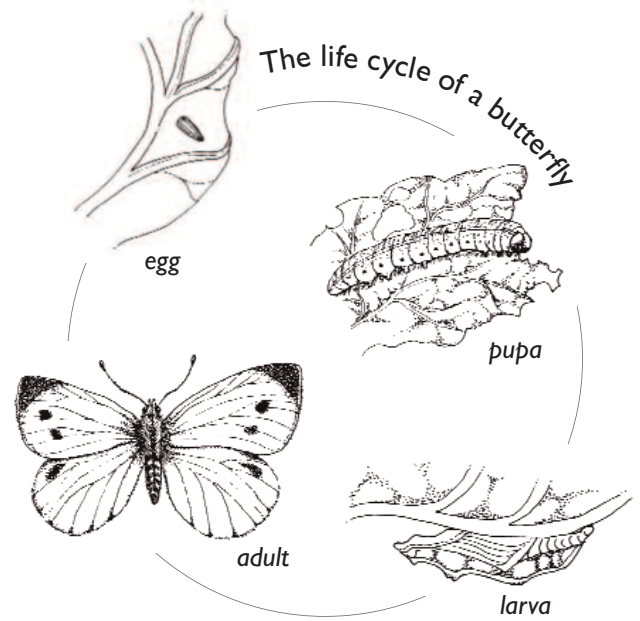
### TEACHER'S NOTES

#### Session aims:

To teach the lifecycle of butterflies and moths and learn about the variety within the species.

In addition to the BC online resources, you can make lifecycle paper chains to decorate the classroom. Use different coloured paper for each of the following: eggs, caterpillars, chrysalis', and butterflies/moths. Give each pupil 4 egg coloured strips, 3 caterpillar coloured strips, 2 chrysalis coloured strips and 1 butterfly coloured strip. Explain that the reason there are more eggs than butterflies etc, is because, during its lifecycle, a butterfly faces many hazards ie weather and predators which will cause them to die. Show them the egg laying video on the lifecycles section of the website.

Using the resources on the website to help them, the pupils can decorate their strips with the appropriate stage of the lifecycle. Perhaps they may choose one particular butterfly, ie a speckled wood, Encourage them to look at the difference between each type and colour their pictures accordingly. When they are finished you can join all the strips together starting with all the eggs, then the caterpillars, and so on.



#### What you will need:

A4 paper in 4 different pale colours,  
cut into 8 equal sized strips  
(quantities as below)  
Sticky tape

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|   |                     |
|---|---------------------|
| ► | Pre-visit activity  |
|   | On-site activity    |
|   | Post-visit activity |

### WHICH BUTTERFLY AM I?

TEACHER'S NOTES

#### Session aims:

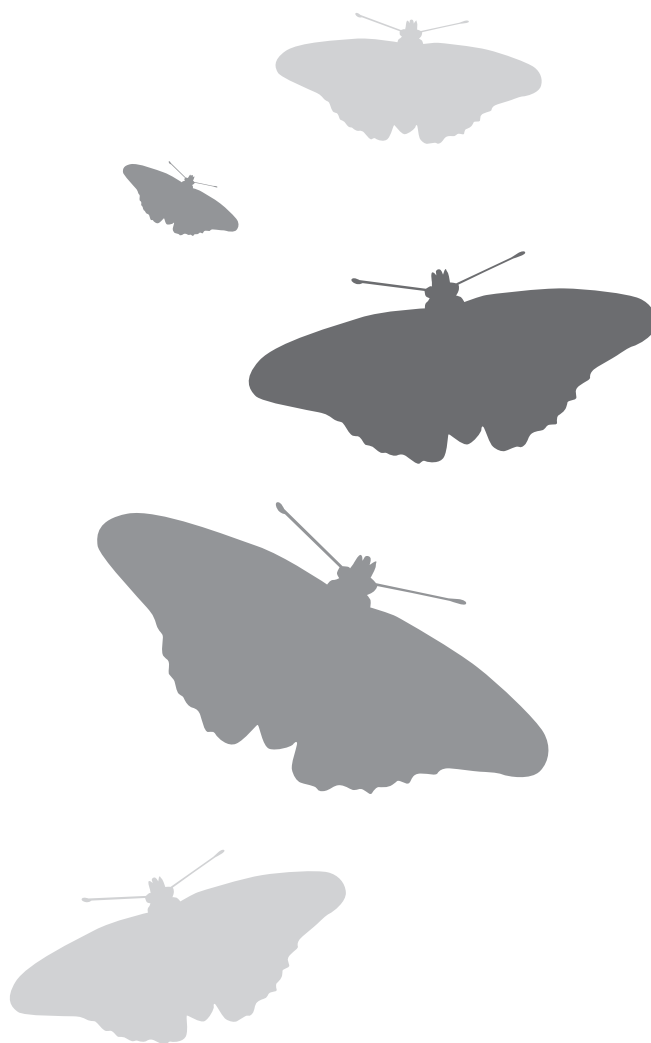
To introduce and familiarise the pupils with the types of butterflies and day flying moths that they may see during their visit to Brede High Woods. By learning the species' appearance this will help them identify the species in the field.

This activity follows on from the play and learn identification activities on the BC website. Print off the Brede High Woods Butterfly Identification sheet and cut out the different butterflies so that there is enough for each pupil. Using a piece of masking tape, attach a butterfly picture to the back of each pupil so that they do not know which one they are.

The object of the activity is for the pupils to ask each other questions that can only be answered by a yes or a no to discover which butterfly they are. For example they could ask: "Am I an orange butterfly?" Or "do I have a colour in my name?" To help, you can have an original copy of the id sheet up on the board. You must remember to tell the pupils that, once they know what they are, they cannot tell the other pupils, especially those that are the same.

#### Extension activity

Using the butterfly picture they were given, each pupil can research about their butterfly on the BC website and find out the information to complete the factsheet which can be printed off with this unit.



# Brede High Woods

## Educational Resources

Pre-visit activity

On-site activity

Post-visit activity

## CATERPILLAR CAMOUFLAGE

TEACHER'S NOTES

### Session aims:

To focus the attention of the pupils and encourage them to look closely at the environment around them. To teach them about camouflage and how wildlife uses colour to its advantage.

*You will need to set up this activity in advance of the visit.*

Tie these caterpillars to natural objects along a section of path that you plan to take the group,. Use some memorable trees or natural objects as a start and finish.

The object of the activity is for the pupils to look for and collect up the different coloured threads. They will find that they collect all the brightest colours first and then the greens, browns and blacks, which are much harder to find as they are camouflaged. If you know how many threads you have put out you can keep count, as they are collected. Once this has been completed, bring the group together to discuss the advantages of camouflage for animals and the advantages of using bright colours to warn away predators. Remind the pupils that it is not only the small insects that use camouflage, but birds and mammals are camouflaged as well, and if they wish to see more wildlife on their walk they will need to keep their sense sharp and their voices quiet!

what you will need:  
A variety of coloured threads  
(caterpillars)





# Brede High Woods

## Educational Resources

For late spring/summer ►

Pre-visit activity

On-site activity

Post-visit activity

## BUTTERFLY HUNT

TEACHER'S NOTES

### Session aims:

The butterfly hunt can only be done between April and September.

To teach about the variety of butterflies and day flying moths that can be found in Brede High Woods.

This activity is only suitable if the sun is shining, otherwise the results will be very disappointing. Actual butterfly surveys have to take place on sunny days with no rain and between the hours of 10am and 5pm when it is warm enough for the butterflies. You can also adapt the form to use at school or elsewhere, you will need to add some species that are common to the habitat you are studying and some can be removed to avoid confusion.

If you have a large group you will need to split the group up with an adult to lead each group. You will need to begin at a junction so that the groups can go in different directions and have an agreed time scale and set meeting place to return to.

Explain that butterflies feed on nectar and this is found in flowers. Flowers grow where it is sunniest and in woodland in the summer. This is along the edges of paths, in clearings and in areas that have recently been coppiced. So on their butterfly hunt, they will need to stick to places that are sunny and warm otherwise they will not find any butterflies. They will need to be quiet and have sharp eyes watching out for butterflies, which will probably fly off, as they get closer. It is also difficult to identify some of the butterflies from a distance. If the group is having trouble they should stand still and agree altogether on what they have seen. If they are still and quiet enough they

might see the same butterfly land elsewhere and give them a second chance. Also they must try not to count the same butterfly more than once.

Once they have collected their results discuss what each group has found. Did anyone see a day flying moth? Moths are related to butterflies, most are nocturnal but some like the 6-spot burnet moth at Brede High Woods fly and feed in the day. Ask the class how might they have to change their survey techniques to do a survey on moths at Brede High Woods? You can find out more about moths and how to do a survey at your school by going to [www.mothscount.org](http://www.mothscount.org)

### Post visit extension activity

Using the numbers of butterflies found on the hunt, put the results into a table for the class to use to draw butterfly pictograms on graph paper showing what they found. Encourage them to draw the right colours and patterns for each type of butterfly.

### what you will need:

A clipboard, record sheet and pencil  
per group

A butterfly ID sheet per person/pair



# Brede High Woods

## Educational Resources

Pre-visit activity

On-site activity

Post-visit activity

### PEACOCK PREDATOR GAME

TEACHER'S NOTES

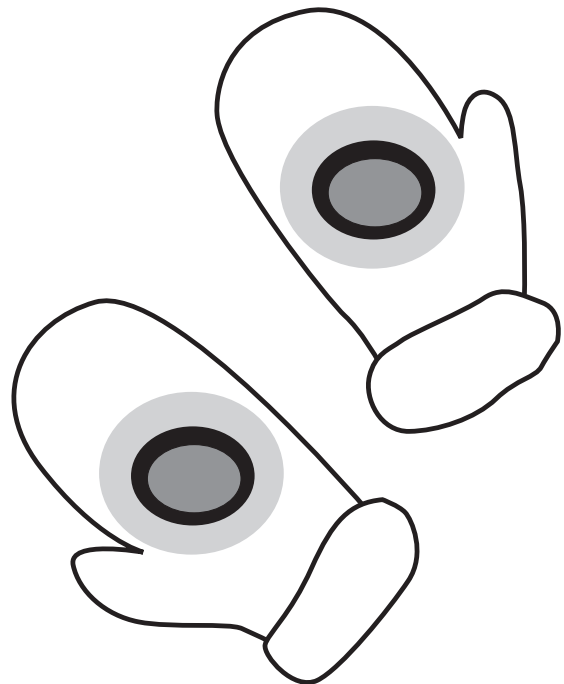
#### Session aims:

To teach about camouflage and defence strategies that wildlife use to protect themselves from predators.

The peacock butterfly uses colour to defend itself from predators. Its underwings are black and look like a dead leaf, so that when it is at rest it is very difficult for predators to see it. As a predator approaches, the butterfly opens and closes its wings rapidly, thus flashing its false eyes to scare the predator away. The wings rub together and make a scraping noise, which also frightens the predators.

The aim of the game is to demonstrate how the peacock frightens away potential predators. It works best on rusty surfaces, so the beneath the trees in the leaf litter is a good choice. Sit the class in a circle and ask them to be very quiet. Sit one pupil in the middle of the circle blindfolded and wearing the mittens. Point to someone in the circle. They become a hungry bird. The hungry bird has to creep up on the butterfly and tap it on the shoulder (eat it). If the peacock hears the hungry bird it has to flash its eyes (the palms of the mittens) in the direction of the danger. If the peacock flashes its eyes in the right direction, the bird has to fly off home with an empty stomach. Choose another bird. Keep going until the peacock is eaten.

Ask the class if they know of any other animals that have interesting ways of defending themselves from predators.



## STAINED GLASS BUTTERFLIES

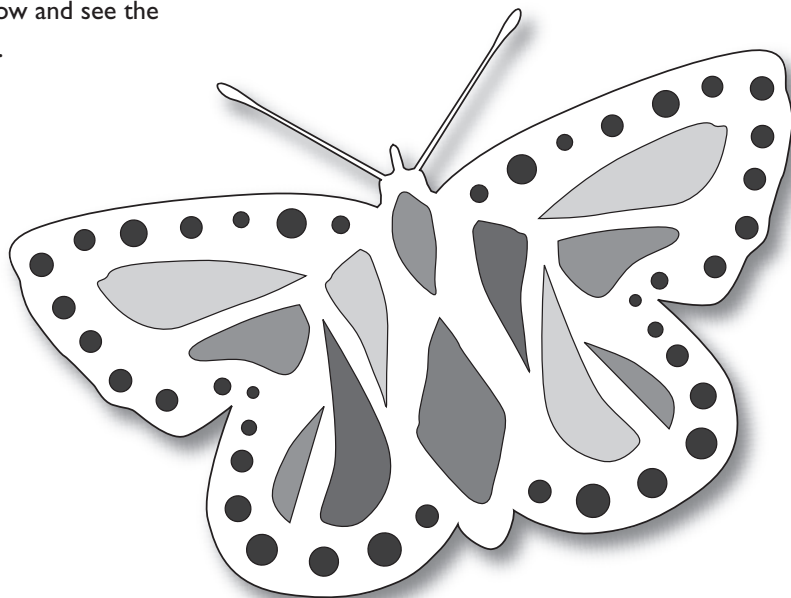
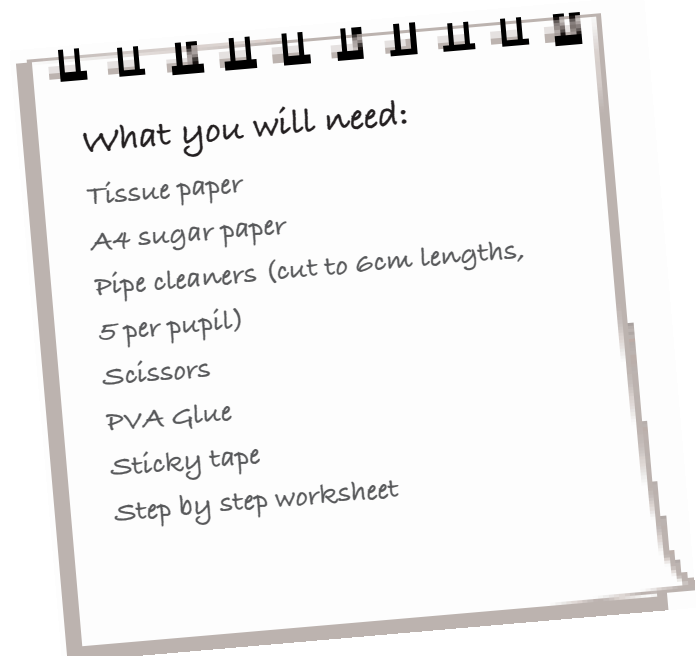
TEACHER'S NOTES

### Session aims:

To reinforce what has been learnt about the colours of butterflies and how they use camouflage and colours to defend themselves from predators.

### Stained glass butterflies – step-by-step instructions

1. Fold the sugar paper in half and draw half a butterfly shape with its wings open. Cut out the shape.
2. With the paper still folded to keep the butterfly symmetrical, draw on simple patterns and shapes and cut these out so that both wings are the same.
3. Use different coloured pieces of tissue paper to fill in the shapes you have cut out. Make sure both wings are the same.
4. When you have arranged the tissue paper, carefully glue the pieces to the sugar paper, and leave the butterfly to dry.
5. You can add some eyes using paper, antennae, a proboscis (long curled tongue) and legs using pipe cleaners and sticky tape.
6. When it is dry you can stick on a window and see the colours change as the light shines through.



# Brede High Woods

## Educational Resources

Pre-visit activity

On-site activity

► Post-visit activity

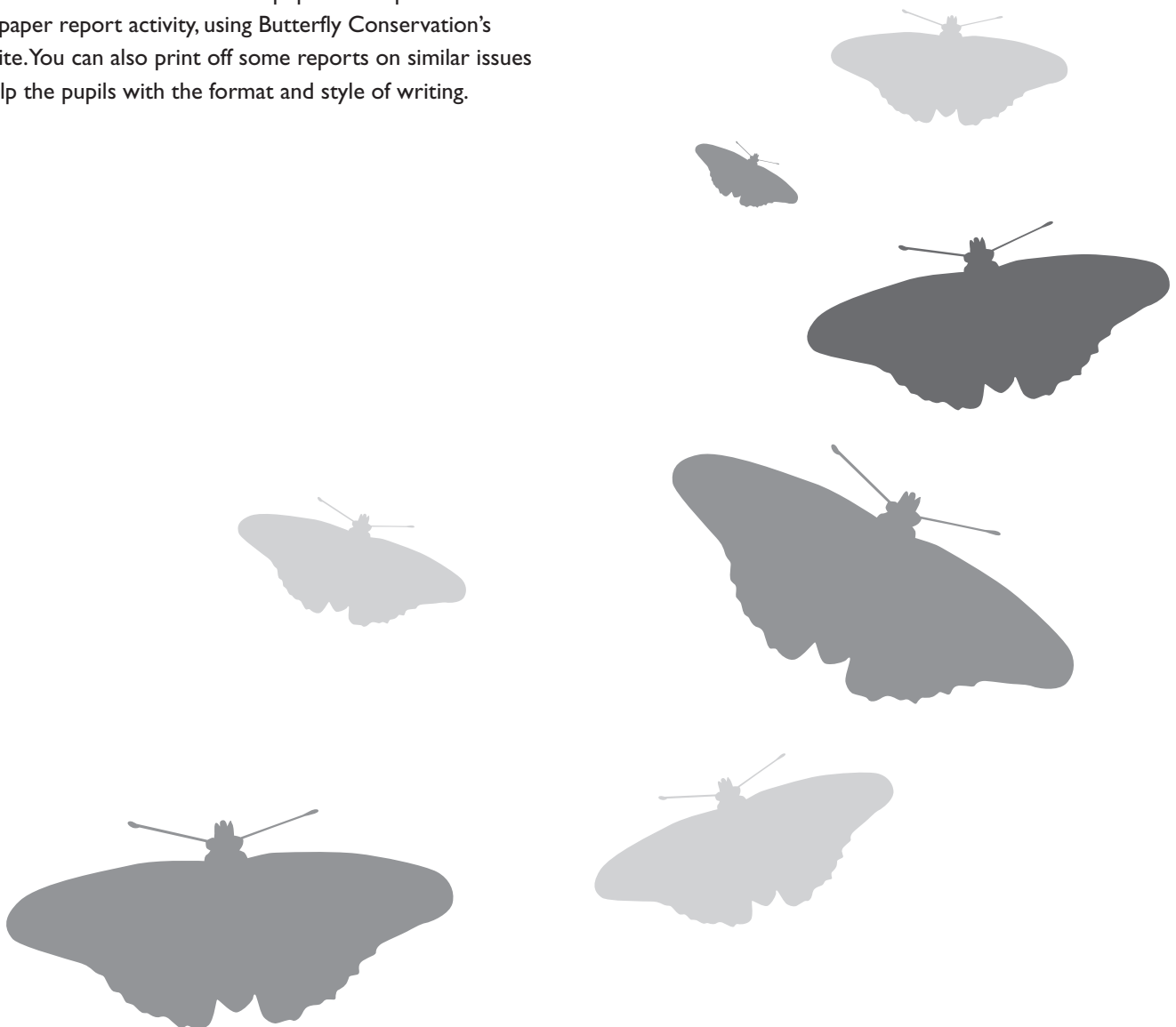
### BUTTERFLIES IN THE ENVIRONMENT

KS3 TEACHER'S NOTES

#### Session aims:

To teach the relationships between animal populations and the environment.

Print out the worksheet for each pupil to complete the newspaper report activity, using Butterfly Conservation's website. You can also print off some reports on similar issues to help the pupils with the format and style of writing.



# Brede High Woods

## Educational Resources

Pre-visit activity

On-site activity

► Post-visit activity

### BUTTERFLIES IN THE ENVIRONMENT

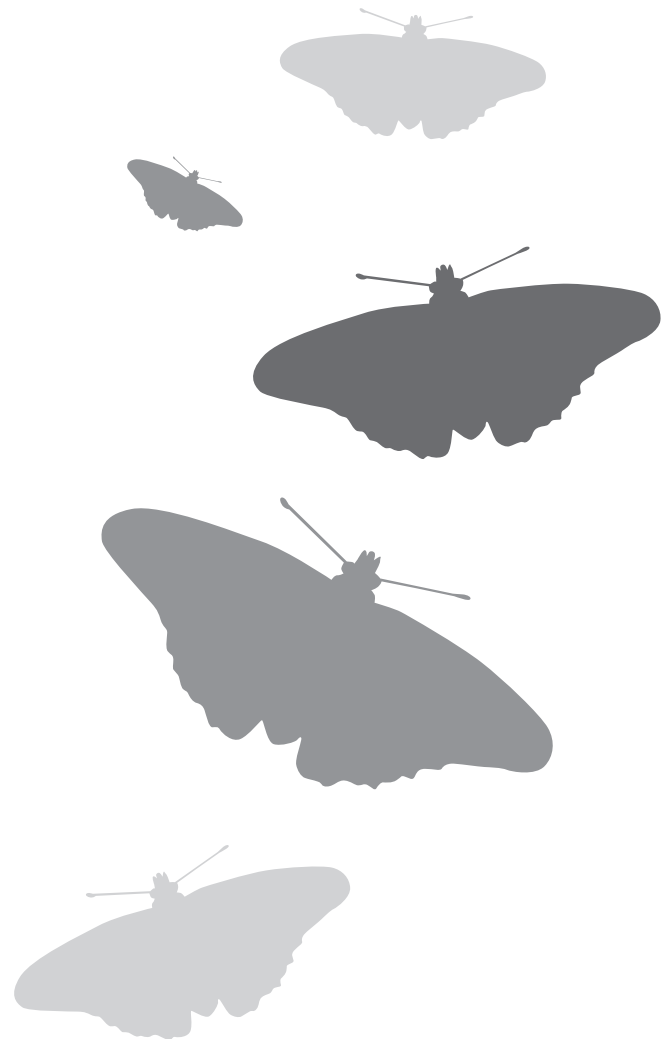
KS3 WORKSHEET

You are a newspaper reporter and you have been asked to write an article about the concerning decline of butterflies in the countryside. Your article needs to explain to everyday people the problems faced by butterflies and encourage them to do what they can to help. Use the Butterfly Conservation website to help you.

You need to cover the following points:

- How does the weather and climate affect butterflies?
- What threats are facing the habitats where butterflies live?
- If butterfly numbers decline what happens to other animals in the food chain?
- What can people do to help butterflies?

Use examples of species and places around the UK. Remember that some butterflies are specific in their requirements for food and habitat types and other species are more general. Some butterflies can fly over long distances others cannot. Therefore changes to the environment will affect some species of butterflies more than others.



### WHICH BUTTERFLY AM I?

FACTSHEET

#### What do I look like?

Stick your picture in the box and label the body parts.



#### What does my caterpillar look like?

Draw and colour a picture of the caterpillar in the box.



#### What habitats do I like to live in?

#### What does my caterpillar like to eat?

#### What is my favourite nectar plant?

#### How do I defend myself from predators?

(Your butterfly might have eyes on its wings to scare away predators)

#### Where do I lay my eggs?



# Brede High Woods

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Pre-visit activity

On-site activity

Post-visit activity

### BUTTERFLY HUNT RECORD SHEET

Date of visit .....

Time spent on your butterfly hunt (minutes) .....

Describe what the weather is like. ....

| Species seen             | Tally count | Total |
|--------------------------|-------------|-------|
| Small skipper            |             |       |
| Grizzled skipper         |             |       |
| Large white              |             |       |
| Green veined white       |             |       |
| Cabbage white            |             |       |
| Orange tip               |             |       |
| Small copper             |             |       |
| Holly blue               |             |       |
| Common blue              |             |       |
| Peacock                  |             |       |
| Small tortoiseshell      |             |       |
| Red admiral              |             |       |
| Comma                    |             |       |
| Painted lady             |             |       |
| Silver-washed fritillary |             |       |
| Meadow brown             |             |       |
| Gatekeeper               |             |       |
| Ringlet                  |             |       |
| Speckled wood            |             |       |
| Small heath              |             |       |
| Burnet moth 6-spot       |             |       |
| Brimstone                |             |       |