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Inspired by Insects
Science Club

Museum of Natural History

HERITAGE FUND

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Inspired by Insects Science Club

WELCOME!

Welcome to *Inspired by Insects* , a Key Stage 2 Science Club offering four one-hour sessions designed to give young people a buzz about British insects! These resources have been produced by Oxford University's Museum of Natural History as part of the **HOPE for the Future** project. Funded by the National Heritage Lottery Fund, this project aims to inspire young people about British Insects, developing a love for and an interest in nature, and a sense of responsibility in caring for our local environment.

The *Inspired by Insects* Science Club will:

- Help young people discover the wonderful world of British insects through the museum's collection and by exploring insects in their local habitats.
- Develop an awareness of local natural history and a desire to care for it for the future.
- Support young people's development as Scientists by developing new skills, including insect classification, insect collection techniques and skills in scientific investigation.
- Link young people to the museum by inviting them to contact the experts.
- Increase young people's science capital, encouraging them to consider museums and science as relevant to their life choices.

Contact the Experts!

We would love to hear from you if you are running *Inspired by Insects* in your school. Please send us your insect-related questions, photographs of insects you have found for identification, or the results of your investigations and one of our museum experts will get back to you. We look forward to hearing from you!

Kate, Susie and Rodger, HOPE for the Future Learning Officers

Email: hopelearning@oum.ox.ac.uk

Inspired by Insects Science Club – Teacher's Notes

Session 1 – What is an Insect?

Session Outcomes

Children will:

- reflect on their understanding of and experience of insects
- understand that not all invertebrates are insects
- be able to name some characteristics of insects
- be able to classify invertebrates into 2 groups: insects and not insects
- begin to classify insects into groups corresponding to the *Big 5* orders of insects.

Resources and preparation:

- *Inspired by Insects* Presentation
- *HOPE for the Future* Photo Resources, cut so that the children can sort the images. You could also use insect specimens for the sorting activities, if available.
- Sorting hoops
- *Inspired by Insects Big 5* Order labels

Session Plan:

Slide 1 – What will the children be doing at the *Inspired by Insects* Science Club?

- Finding out about the wonderful world of insects on our doorstep
- Learning how to classify, find and collect insects
- Making insect hotels and using them to carry out an insect investigation
- Contacting museum experts to find out even more about insects (During the Science Club you have a `direct line' to the museum to ask questions, send in photos and share findings of your investigations.)

Slide 2 – Look at the range of invertebrates on the slide and begin by asking the children about their own experiences of insects.

Have you ever seen insects like this? Where? Can you name any of them? Do you have a favourite insect? Do you have an insect experience you would like to share? Are there any animals on the slide that you think aren't insects? Why?

Challenge misconceptions about spiders, woodlice, centipedes etc being insects.

Activity:

Give the children some images from the Photo Resource to sort into three groups – insect, not insects and any that they are not sure about. Make sure they have some of the animals from Sheet 5 which includes some non-insect invertebrates, and from Sheet 6 which includes larval forms of insects.

Questions for the children to think about:

Which ones are insects? Which ones are not insects? How do you know? What makes an insect an insect? Can you think of at least 2 characteristics of insects?

Common misconceptions include that the following are insects: spiders, centipedes, woodlice, millipedes, worms, snail, slugs. Also, the children may have found the photographs of insect larvae confusing because many do not have obvious characteristics of insects. For example, they may not have wings, antennae, an exo-skeleton or 6 clearly visible legs. Explain that at different stages of the insect lifecycle insects can look very different from the adult form. The classic characteristics of an insect often only apply to the adult stage of the life cycle.

Support children's understanding of the characteristics of an insect by using:

Slide 3 – Characteristics of insects:

- 6 legs arranged in 3 pairs
- 3 distinct body parts – head, thorax, abdomen. Note that in insects that undergo complete metamorphosis (such as butterflies and beetles) the 3 distinct body parts are only seen in the adult stage of the lifecycle.
- 2 antennae – these are sense organs but not for touch as the common name `feelers' would suggest. They sense smell and sometimes humidity and are made up of lots of individual joints allowing them to be highly mobile.
- Exoskeleton – insects have hard outer skeletons, not internal bones like humans and other mammals. Again, this is often only seen in the adult stage of the lifecycle. In some insects the exoskeleton looks like hairs (think of the body of a butterfly) but this is in fact made from the same hard material that, for example, a beetle's hard wing cases are made from. The material is called *chitin*.
- Most adult insects have at least one pair of wings. Many insects, however, have stages of their lifecycle that do not have wings.

Slide 4 – *Why are these not insects?*

This slide shows a variety of animals which are commonly found in school grounds that children may mistakenly think are insects.

- Spiders (Arachnid) have 8 legs and 2 distinct body parts.
- Millipedes (Myriapod) have segmented bodies with a two pairs of legs on each segment. The animal with the highest number of legs on the planet is the millipede species *Illacme plenipes* which has 750 legs!
- Centipedes (Myriapod) have segmented bodies with one pair of legs on each segment.
- Woodlice (Crustacean) have 7 pairs of legs.

Slide 5 - Scientists love to sort (classify) animals into groups and give them names. *Why do you think that is?*

The main reason is so that people can be sure that they are talking about the same species. This helps scientists to:

- Monitor biodiversity and any changes in insect populations, for example, as a result of climate change or other forms of human impact
- Understand genetic connections between species and groups which helps us to understand how insects evolved
- Target conservation projects precisely and evaluate their effectiveness
- Identify types of insect (groups or species) in order to understand whether they are in decline or extinct.

Activity:

Using the insect images from Photo Resource 1,2,3 and 4, and/or specimens from the previous activity, invite the children to think of ways they could put the insects into groups. Discuss their ideas.

Explain that scientists sort animals into groups called *orders.*

Video:

Watch the video: The Bug Five! with Dr Lindsay Turnbull from the University of Oxford which explores the 5 most common insect orders in the UK.

Slide 6 - recap the Big 5 orders from the video.

- Beetles –Coleoptera
- Butterflies and moths – Lepidoptera
- Flies – Diptera

- True Bugs – Hemiptera
- Bees, wasps and ants - Hymenoptera

Activity:

Look at the images/specimens of insects again.

Can you sort the insects into the Big 5 orders?

You could do this as a whole group using hoops and the labels provided or in smaller groups. The species and orders are on the back of the images but encourage the children to have a go without looking, then check their answers. Review the children's ideas together. Explain that over the next few weeks you will be looking for insects in the school grounds and carrying out an investigation, so knowing about the Big 5 orders will help you to classify what you have found and to collect data.

Slide 7 – During the *Inspired by Insects* Science Club, the group will be able to contact insect experts (entomologists) at the museum. Watch the video:

Get in touch!

You can:

- ask questions about insects or the insect collection at the museum
- send in photographs of insects that you find for ID
- tell us what you discovered in your investigations.

Encourage the children to think of a question for the museum and send them to us at hopelearning@oum.ox.ac.uk

Slide 8 - Looking ahead to next week: Going outside and exploring the insects in your local environment.

Welcome to
Inspired by Insects!
Session 1- What is an insect?

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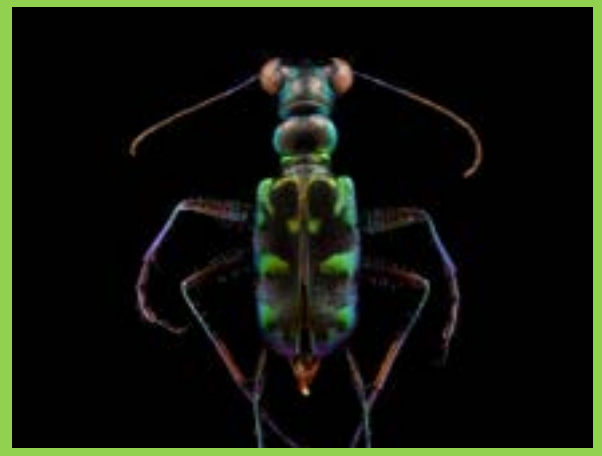










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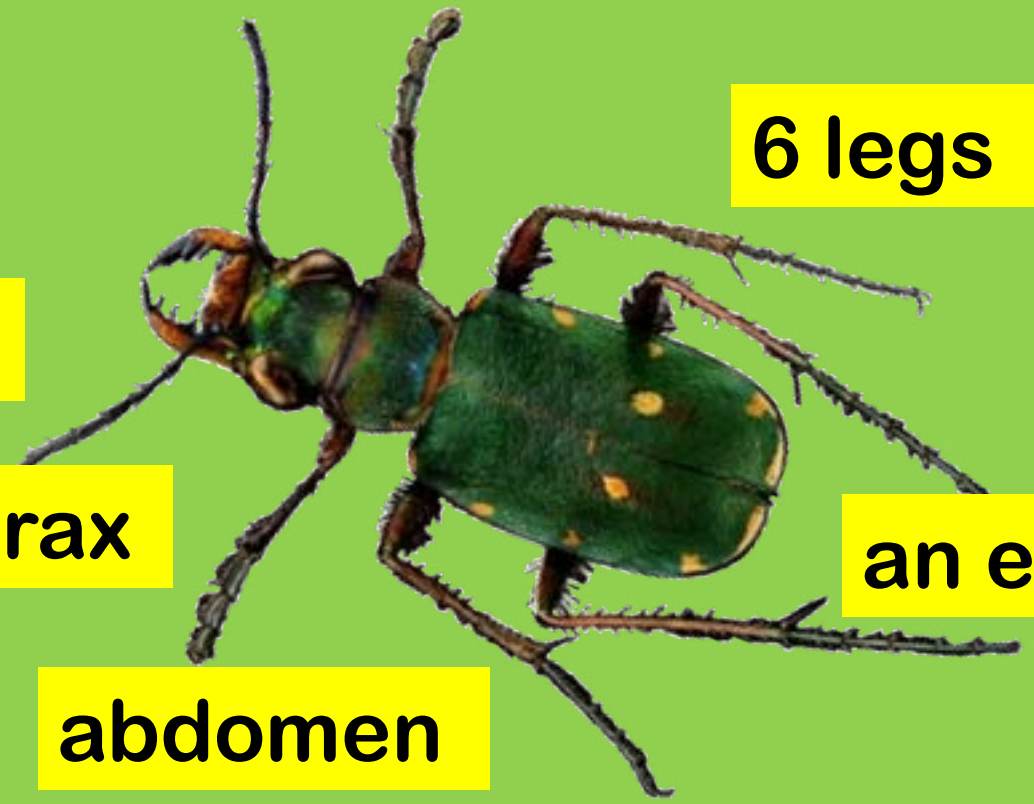
All insects have:

a pair of antennae

3 body parts:

6 legs

head



thorax

an exoskeleton

abdomen

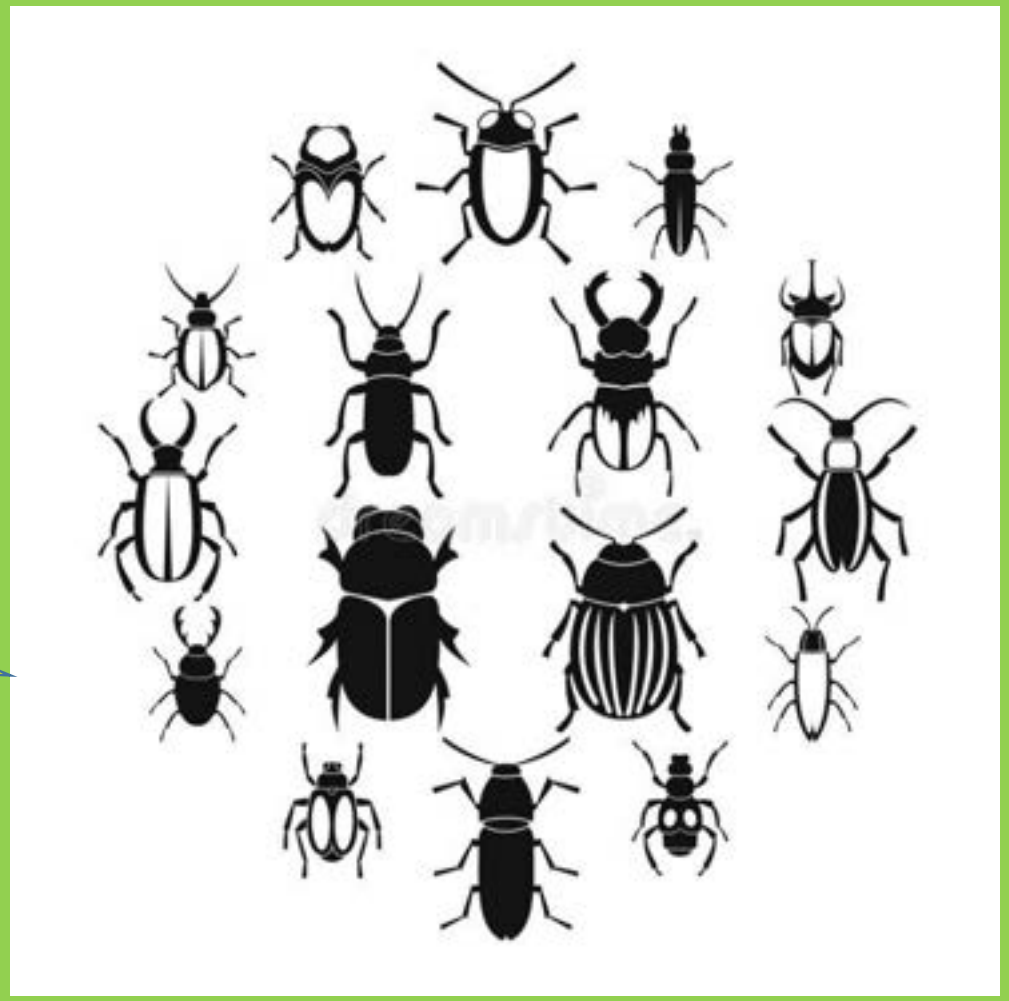
Most adult insects have:

At least one pair of wings

Did you spot these non-insects?

Scientists love to sort animals into groups!

CLASSIFICATION



Look at the insects again. How could we sort them into groups?

[Meet the Big 5 Orders of insects!]

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Classifying Insects

Scientists sort insects into groups called **Orders**. The Orders with the greatest number of species, the 'Big 5', are:

True flies (Diptera)

Bees, wasps and ants (Hymenoptera)

Beetles (Coleoptera)

Butterflies and moths (Lepidoptera)

True bugs (Hemiptera)

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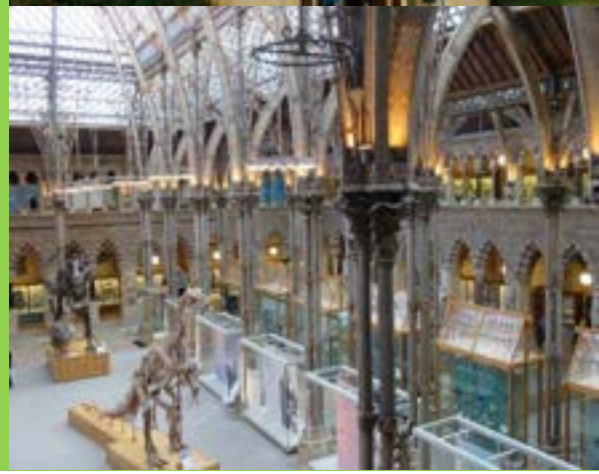
Contact us!

Your *Inspired by Insects Science Club* has special access to the insect experts at Oxford University's Museum of Natural History! Watch this video:

Get in touch!

Email your questions, photos, and findings to hopelearning@oum.ox.ac.uk



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Next week

Looking for insects outside

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Inspired by Insects Science Club – Teacher's Notes

Session 2 – Let's find some insects!

Session Outcomes

Children will:

- learn where and how to find insects, using different techniques
- use their knowledge of insect orders to identify insects
- begin to collect data about what they have found.

Resources and preparation:

- *Inspired by Insects* Presentation
- Collecting equipment, such as small pots or tubes and trays for observation
- Insect nets, if available
- White sheet of cloth or a laminated A3 piece of white paper to use whilst `tree beating'
- Magnifying glasses
- Clipboards and pencils, if available
- Copies of the *HOPE for the Future* recording sheet
- Identification resources, if possible (see list of recommended resources at HOPE Learning for Teachers | Oxford University Museum of Natural History)

Health and Safety:

Children should be made aware of stinging insects, such as bees and wasps, and be warned not to collect stinging insects, just to observe them.

The area you are going to use should have been checked for litter and other dangers prior to the children going outside.

Session Plan:

Slide 1 - Explain that this week we are going to go outside to see what insects we can find.

Slide 2 and 3 - *Where do you think you might find insects in the school grounds?*

Encourage the children to think like an insect! *If you were an insect, where would you like to live?* Encourage them to think about all the different vegetation in the school grounds, including trees, flowers and grass. Insects might also be hiding underneath logs, stones or leaves and some insects may be spotted flying in the air.

Slide 4 and 5 - *How do you think we might find and observe insects?*

Answers may include looking carefully, using nets (if available), collecting in pots/tubs and looking at insect finds in trays.

Slide 6 – You can also find insects that live in bushes and trees by using a method called 'beating'.

Video – watch the video to learn how to use the beating technique: Finding insects in trees and bushes

Slide 7 – Prepare to go outside. Remind the children about the Big 5 orders that they learnt about last week. Challenge them to find insects in all of the 5 orders. Show the children any equipment that you have to help them (see list of resources for suggestions). You might like to introduce the recording sheet at this stage. However, you could also discuss this later, after children have had a chance to have a good look for insects without the need to record.

Whilst you are outside, share finds with the group. If the children have pots or tubes, insects can be collected and shared. Take photographs and send these to the museum. We would love to see them!

Slide 8 – Discuss what you found. *Where did you find the most insects? Which orders of insect did you find? Did you find any insects that you know the name of? Did anything surprise you?*

Ask the children if they would like to ask the museum anything. You might like to compose an email with the children and send in your questions and photos. (hopelearning@oum.ox.ac.uk)

Slide 9 - Looking ahead to next week: Making insect hotels and planning an insect investigation.

Welcome to
Inspired by Insects!
Session 2 – Let's find some insects!

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Where can we find insects?





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Did you think of…






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How can you find and observe insects?





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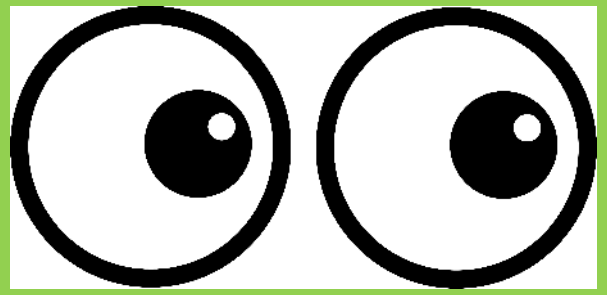
Did you think of…



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How to Find Insects!

One way to find insects is using a method called ‘beating’.

[Watch the video to find out how]

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Beetles
Coleoptera

Bees, Wasps, Ants
Hymenoptera

Flies
Diptera

True Bugs
Hemiptera

Butterflies, Moths
Lepidoptera

Let's go and find some insects!

Challenge: Can you find at least one insect from each of the Big 5 orders that you learnt about last week?

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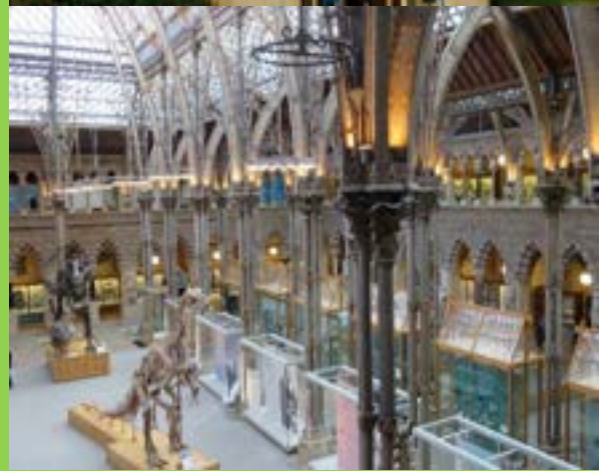
What would you like to ask the museum?

Email your questions, photos, and findings to hopelearning@oum.ox.ac.uk



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Next week

Making insect hotels and planning insect investigations

Please bring a large, clean, plastic bottle with the top and bottom cut off to form a tube.

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Inspired by Insects Science Club

Session 3 – Insect Investigations

Session Outcomes:

Children will:

- make insect hotels to use in an investigation
- plan all aspects of an insect investigation – devising a question, making a prediction, planning what to do and what to observe and record
- set up their investigation.

Resources and Preparation:

- *Inspired by Insects* Presentation
- 1lt clean plastic bottles with the top and bottom cut off to form a tube. (Last week the children were asked to bring these to the session but it may be good to have some spares.)
- A range of natural materials for the `filling' of the insect hotels, eg leaves, grass, small sticks. These can be collected with the children during the session or you might like to have a supply ready if you think it would be challenging for the children to collect enough.
- *HOPE for the Future* Investigation planning sheet
- *HOPE for the Future* Recording sheet

Session Plan:

During this session, children will work in pairs or small groups to plan an insect investigation that they can carry out using insect hotels they have made.

Slide 1 - Explain that this week we are going to make insect hotels that we will use in an insect investigation. You might like to have an example of an insect hotel to show. The children will plan and set up an insect investigation, leave the hotels for a week and then look at them to find the answer to their investigation question.

Slide 2 – The first step is for the children to think of an investigation question. Remember that they will be using insect hotels to answer the questions. Have a look at the example questions on the *Inspired by Insects* Presentation.
What would you do to carry out each of these investigations? How would you make sure your investigations were fair? What would you keep the same and what would you change? What would you observe/record?

Example Questions	What would you do?	What would you record?
Do different insects prefer insect hotels with grass or leaves?	Make 2 insects hotels, identical except for the `filling'. One would have grass and the other leaves.	Use the recording sheet to record the number of insects in each of the Big 5 orders for each of the different hotels.
Do we find more insects in long grass or short grass?	Make 2 identical insect hotels and site them in two different areas of the school grounds.	Use the recording sheet to record the number of insects in each of the Big 5 orders for the two different locations, or just count the number of insects in each location.
Which order of insects is the most commonly found in insect hotels in our wildlife area?	Make 1 insect hotel and site it in the particular location stated in your question.	Use the recording sheet to record the number of insects in each of the Big 5 orders.

What would you like to find out?
Working in pairs or small groups, children should think about what they noticed about insects in your school grounds last week, the different habitats and areas you have available, and then come up with an investigation question.

Slide 4 – 9 – You could use this template to plan your investigations and to help children think about the different elements of planning and carrying out an investigation.
You may feel that you do not want each group to complete a planning sheet, but looking at an example is a useful tool in helping children to think about exactly what they are going to do to answer their question.

Slide 10 - Introduce the recording sheet and model how it could be completed. You may already have used this sheet in Session 2. Remember, next week, when the children look at what is in their insect hotels, they will need two different sheets if their investigation involves two different insect hotels.

Slide 11-12 – Instructions for how to make the insect hotels. See the separate instruction sheet. You might like to make the insect hotels outside so that the children can collect nesting materials to put in them. They are best made in a tray so that they can easily be transported to the required site.

Slide 13 – Time to go outside and site the insect hotels in the school grounds.

Slide 14 – Remember to get in touch. Send your investigation questions, photos or any questions you have to us at hopelearning@oum.ox.ac.uk

Slide 15 – Looking ahead to next week: we will be finding out the results of our investigations.

Welcome to
Inspired by Insects!
Session 3 – Insect Investigations

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Using insect hotels to help us investigate insects

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Here are some investigation questions you could answer using insect hotels:

1. Do different insects prefer insect hotels with grass or leaves?

2. Do we find more insects in long grass or short grass?

3. Which order of insects is the most commonly found in insect hotels in our wildlife area?

What would you like to find out?

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Our Investigation

Names:

Our question

What do you want to find out?

What do you think you will find out?
(Make a prediction.)

Doing our investigation

What will you do?

What will you need to keep the same?

What will you observe or measure?

Our conclusion

What *did* you find out?

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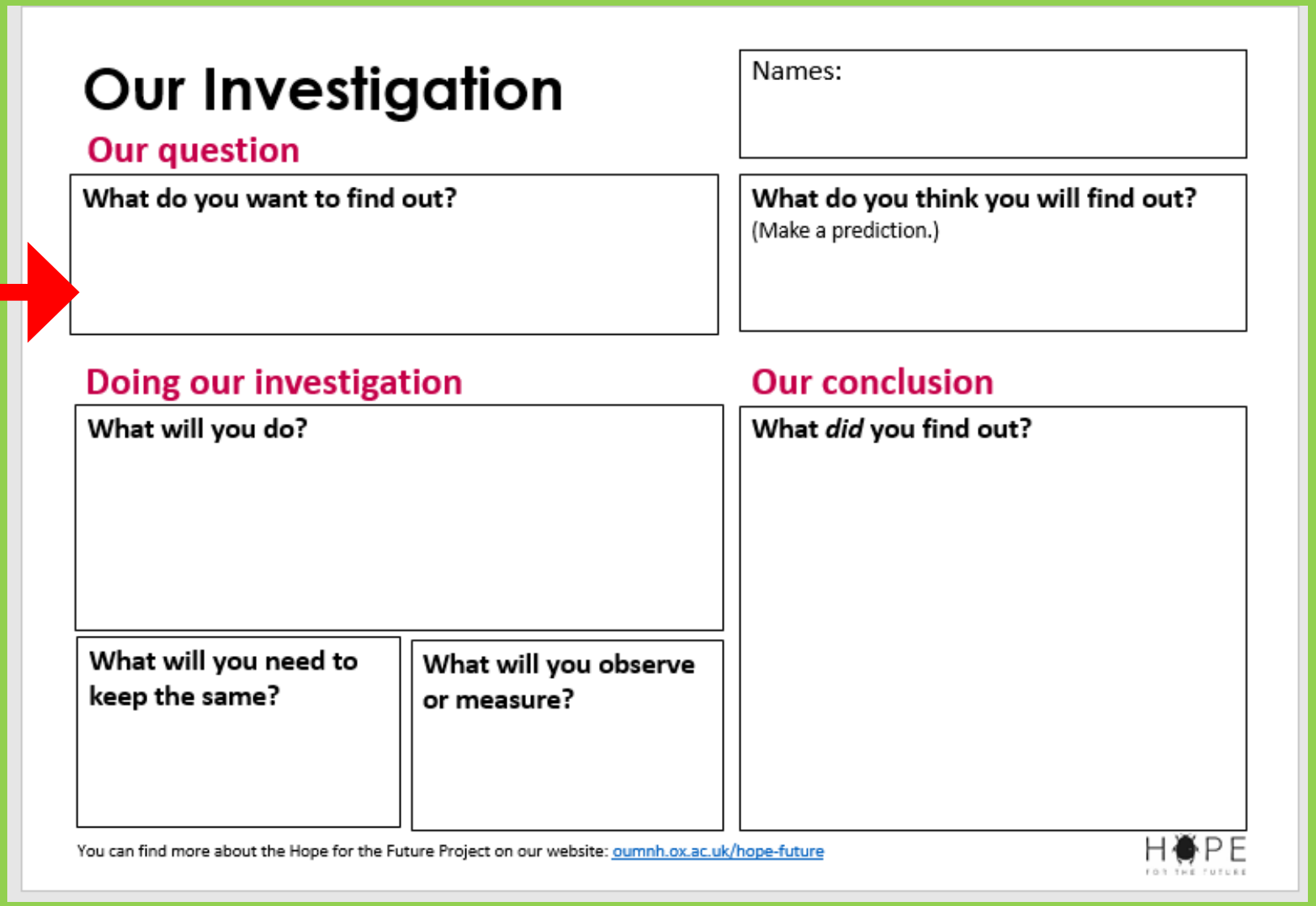
Add your question to your planning sheet.



Our Investigation

Names:

Our question

What do you want to find out?

What do you think you will find out?
(Make a prediction.)

Doing our investigation

What will you do?

What will you need to keep the same?

What will you observe or measure?

Our conclusion

What *did* you find out?

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What is your prediction?

Our Investigation

Names:

Our question

What do you want to find out?

What do you think you will find out?
(Make a prediction.)

Doing our investigation

What will you do?

What will you need to keep the same?

What will you observe or measure?

Our conclusion

What *did* you find out?

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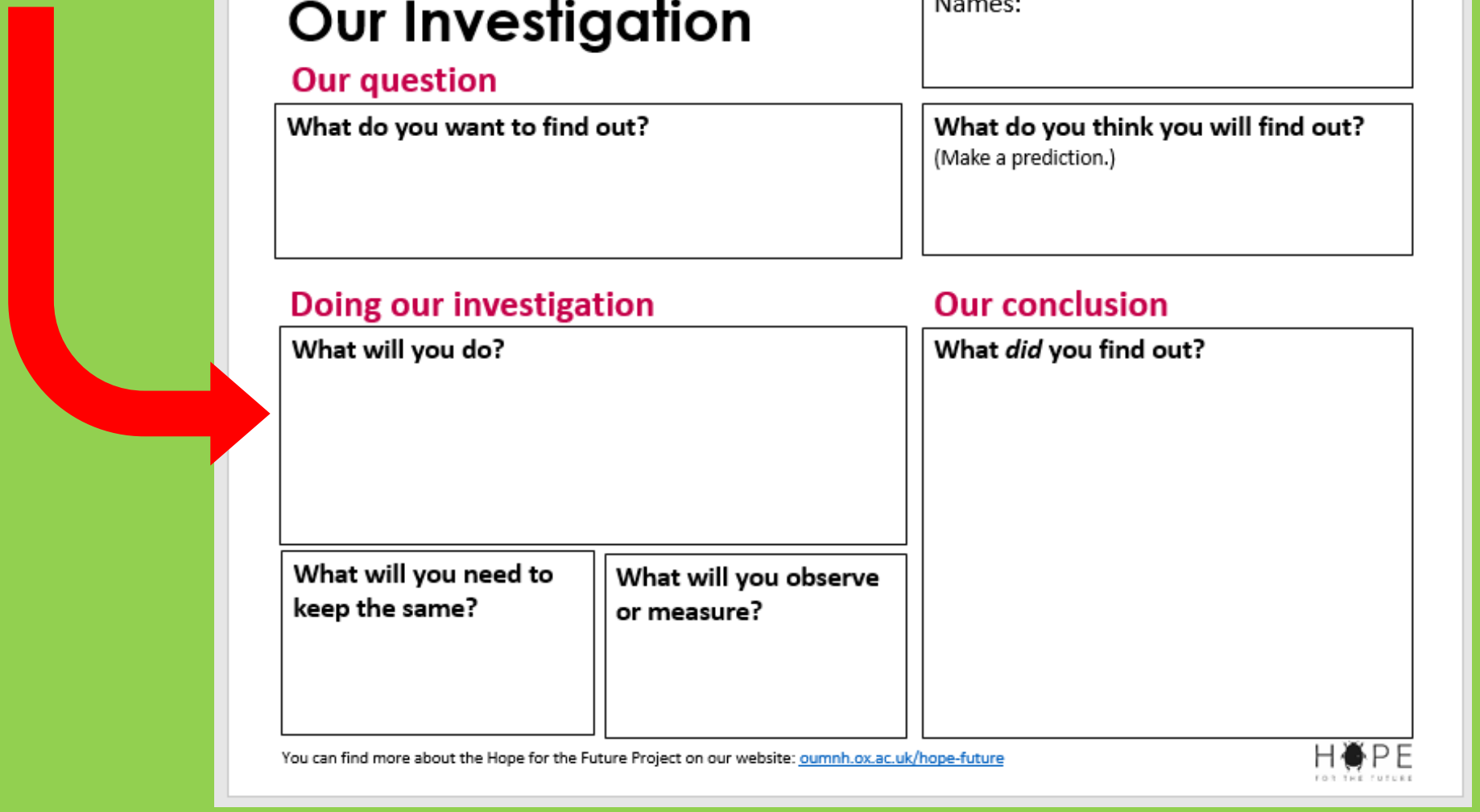
Method: What will you do to answer your question?



Our Investigation

Names:

Our question

What do you want to find out?

What do you think you will find out?
(Make a prediction.)

Doing our investigation

What will you do?

What will you need to keep the same?

What will you observe or measure?

Our conclusion

What *did* you find out?

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Do you need to keep anything the same to make it fai

Our Investigation

Names:

Our question

What do you want to find out?

What do you think you will find out?
(Make a prediction.)

Doing our investigation

What will you do?

What will you need to keep the same?

What will you observe or measure?

Our conclusion

What *did* you find out?

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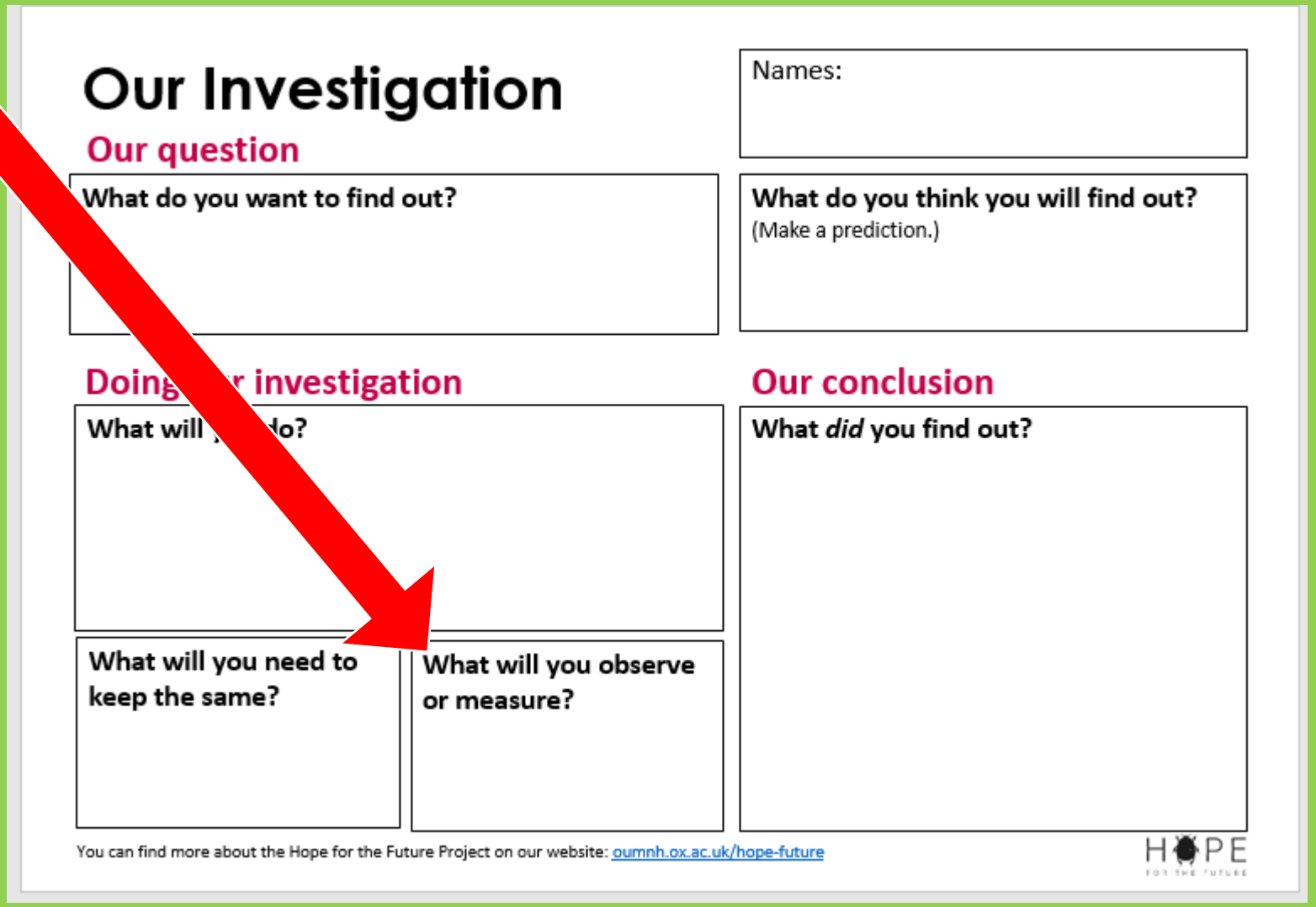
What will you observe/measure?
How will you record this?



Our Investigation

Names:

Our question

What do you want to find out?

What do you think you will find out?
(Make a prediction.)

Doing our investigation

What will you do?

What will you need to keep the same?

What will you observe or measure?

Our conclusion

What *did* you find out?

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Recording Sheet – Investigating Insects

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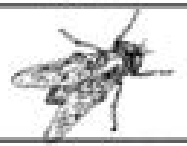
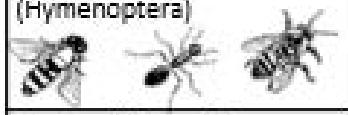
Date: Start time: End time:

Weather conditions:

Type of Insect	Identifying features	Tally (𝍸)	Total Number of Insects	Extra notes
Beetles (Coleoptera) 	Outer wings form a hard case			
Flies (Diptera) 	Have one pair of thin, transparent wings			
True bugs (Hemiptera) 	Have mouthparts adapted for piercing and sucking			
Bees, Wasps and Ants (Hymenoptera) 	Most have two pairs of thin, transparent wings and a narrow 'waist' between thorax and abdomen			
Butterflies and Moths (Lepidoptera) 	Wings are covered in tiny scales			
Other insects				

How to make an insect hotel

You will need:

A large plastic bottle with the top and the bottom cut off so that it forms a tube.

Natural materials such as sticks, leaves, moss and grass

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How to make an insect hotel

What to do:

Begin to fill the tube with layers of natural materials.

Add more layers including sticks to give structure.

Continue until the tube is packed tightly with the materials.

Site your insect hotel according to your investigation question and leave it for at least a week.

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Let’s set up our investigations!





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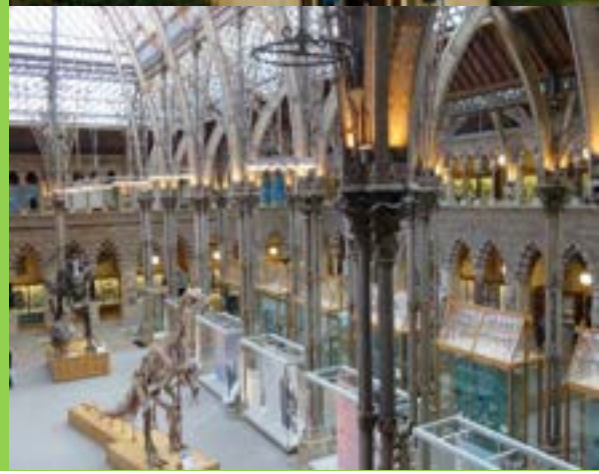
Send your investigation questions to the museum.

Email your questions, photos, and findings to hopelearning@oum.ox.ac.uk



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Next week

Find out who is living in our insect hotels and collect the data to answer our questions

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Inspired by Insects Science Club

Session 4 – What did we find out?

Session Outcomes:

Children will:

- collect and record data from their insect hotels
- review what they have found out and present their findings to the group
- consider why insects are important and discuss what we can do to help stop insect decline.

Resources and Preparation:

- Children will be revisiting the insect hotels that they set up last week
- *Inspired by Insects* Presentation
- *HOPE for the Future* Recording sheet
- Trays to observe the contents of the insect hotels
- Large clear plastic bags
- Magnifying glasses
- Clipboards and pencils, if available
- Identification resources, if possible (see list of recommended resources at HOPE Learning for Teachers | Oxford University Museum of Natural History)

Session Plan:

Slide 2 - In this session, the children will collect and record data in order to find out the answer to their investigation question. Begin by asking the children to remind themselves of their investigation questions and what they are going to record. Explain that are we going to discover what is in the insect hotels. Discuss that you will need to empty the contents of the hotels carefully into a tray so that you can look at what is inside and record the order of the insects you find. If you have large, clear plastic bags these can be used to empty the contents carefully and then closed to stop insects flying away. Ensure that the children understand they will need to be very gentle with the contents of the insect hotels in order to make sure that insects are not damaged

and do not escape before you have had a chance to record them. Discuss with the children about what to do with the insects once they have been recorded. Remind them that it is important to make sure that all the insects have been put back in their appropriate habitat.

Slide 3 - Remind children about the recording sheet and how to record their data. *Will you need one or two recording sheets for your investigation?*

Slide 4 – Going outside to find out the results!

Slide 5 - Reviewing the data and drawing conclusions:

What did you find out?

What is the answer to your question?

Were you surprised by the results?

Were there any problems with your investigation? What would you do differently next time?

What investigations could you carry out next?

Children could present their results and conclusions to the group.

Slide 7 - Watch this video

(https://youtu.be/f0gq0EyuB-A)

Why are insects important?

What is happening to insect populations around the world?

What could you do to make a difference?

Slide 8 - Remember to send us the results of your investigations, any questions you have about insects or photos of any insects you have found. We would love to hear from you! hopelearning@oum.ox.ac.uk

Slide 9 - Congratulations on completing the *Inspired by Insects Science Club*. We would love to hear about your experience of running the club. Please email us on hopelearning@oum.ox.ac.uk telling us that you have completed the club. We will send you a quick evaluation form and in return you will receive an *Inspired by Insects* badge for each child who took part.

Welcome to
Inspired by Insects!
Session 4 – What have we found out?

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What was your investigation question?

How are you going to find out the answer to your question?





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Recording Sheet – Investigating Insects

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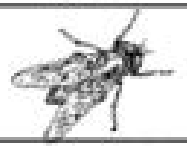
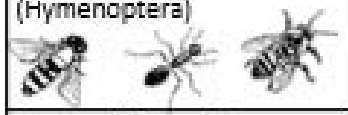
Date: Start time: End time:

Weather conditions:

Type of Insect	Identifying features	Tally (𝍸)	Total Number of Insects	Extra notes
Beetles (Coleoptera) 	Outer wings form a hard case			
Flies (Diptera) 	Have one pair of thin, transparent wings			
True bugs (Hemiptera) 	Have mouthparts adapted for piercing and sucking			
Bees, Wasps and Ants (Hymenoptera) 	Most have two pairs of thin, transparent wings and a narrow 'waist' between thorax and abdomen			
Butterflies and Moths (Lepidoptera) 	Wings are covered in tiny scales			
Other insects				





Let's go outside and find out the answers to our questions!





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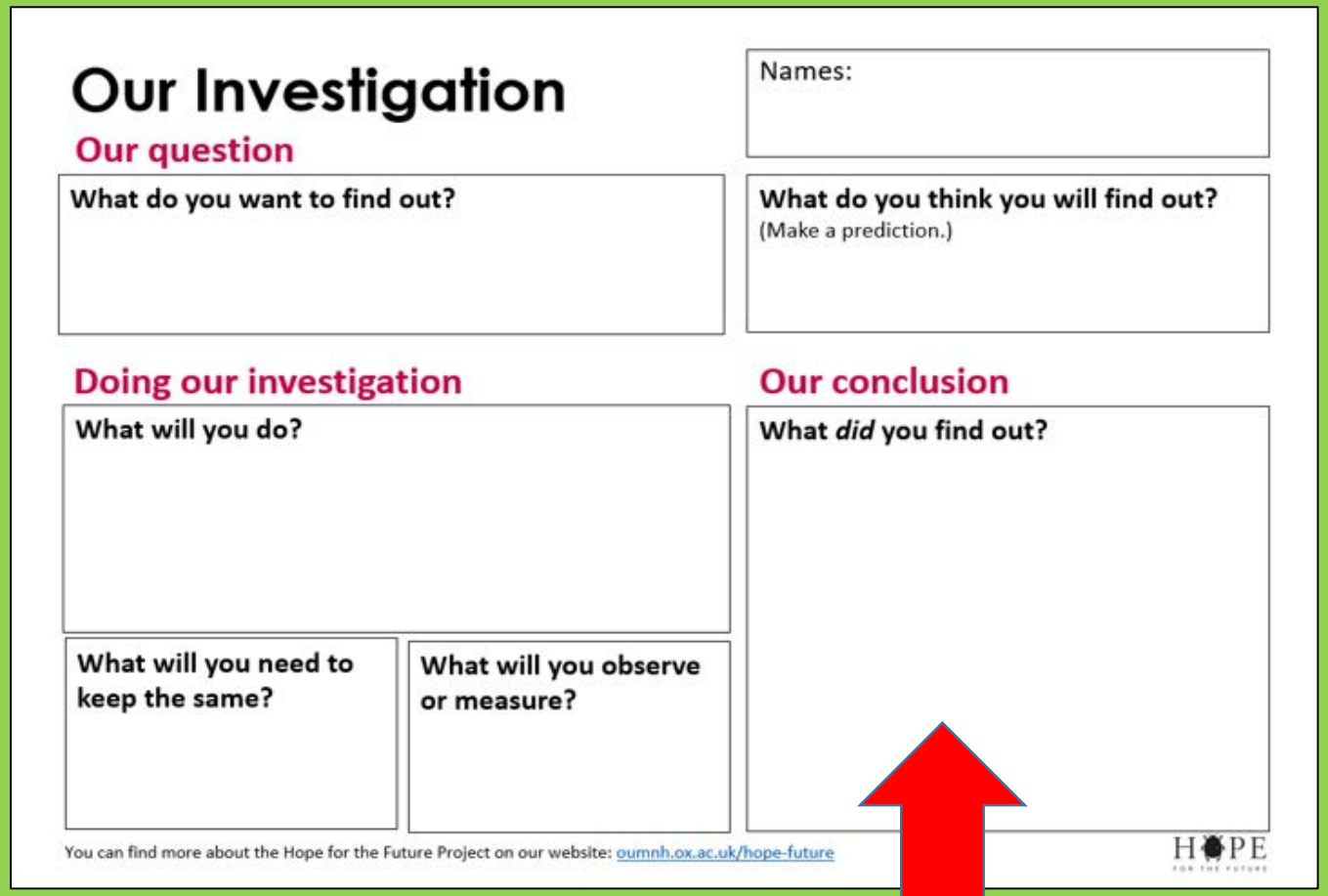
What did you find out?

What does your data suggest is the answer to your investigation question?



Our Investigation

Names:

Our question

What do you want to find out?

What do you think you will find out?
(Make a prediction.)

Doing our investigation

What will you do?

What will you need to keep the same?

What will you observe or measure?

Our conclusion

What *did* you find out?

You can find more about the Hope for the Future Project on our website: oumnh.ox.ac.uk/hope-future

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Over to you . . .





Why are insects important?

Watch this video video to find out:

- why insects are important
- what is happening right now to insect populations
- What you can do to help.





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Remember to get in touch!
We are looking forward to your emails.

Send your questions, photos, and findings to
hopelearning@oum.ox.ac.uk

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What next?

- Keep in touch: hopelearning@oum.ox.ac.uk
- Visit us here at the Museum of Natural History in Oxford
- Take a look at our website to find out about insect-related activities such as Science Shows and Summer Schools
- Check out our blog for young entomologists crunchyontheoutside.com

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Photo Resource 1

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Hornet Clearwing Moth

Sesia apiformis

Lepidoptera

Acorn Weevil

Curculio glandium

Coleoptera

Shrill Carder Bee

Bombus sylvarum

Hymenoptera

Green Shield Bug

Palomena prasina

Hemiptera

Wood Ant

Formica pratensis

Hymenoptera

Large Blue Butterfly

Phengaris arion

Lepidoptera

Photo Resource 2

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Common Earwig
Forficula auricularia

Dermaptera

Clouded Yellow Butterfly
Colias croceus

Lepidoptera

Cuckoo Bumblebee
Bombus sylvestris

Hymenoptera

Dor Beetle
Geotrupes stercorarius

Coleoptera

Great Green Bush Cricket
Tettigonia viridissima

Orthoptera

Southern Hawker-Dragonfly
Aeshna cyanea

Odonata

Photo Resource 3

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Dock Bug
Coreus marginatus

Hemiptera

Blue Bottle
Calliphora vomitoria

Diptera

Cinnabar Moth
Tyria jacobaeae

Lepidoptera

Buff-tailed Bumblebee
Bombus terrestris

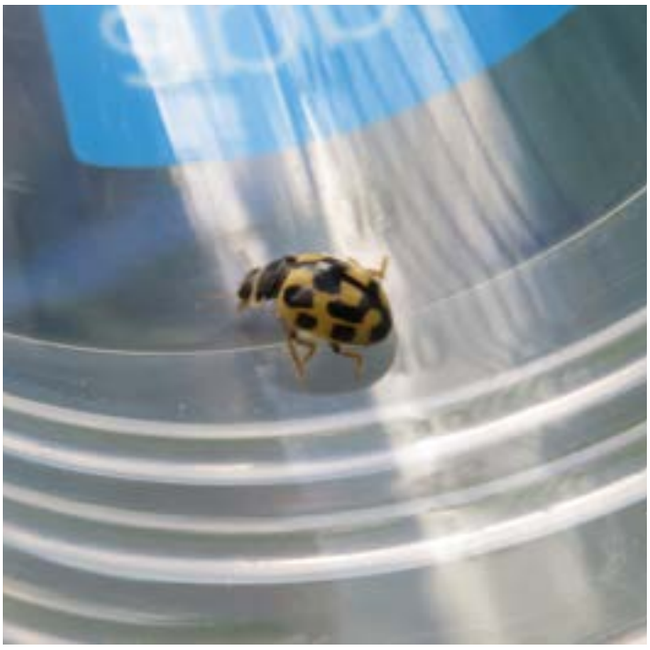
Hymenoptera

Common Wasp
Vespula vulgaris

Hymenoptera

Stag Beetle
Lucanus cervus

Coleoptera



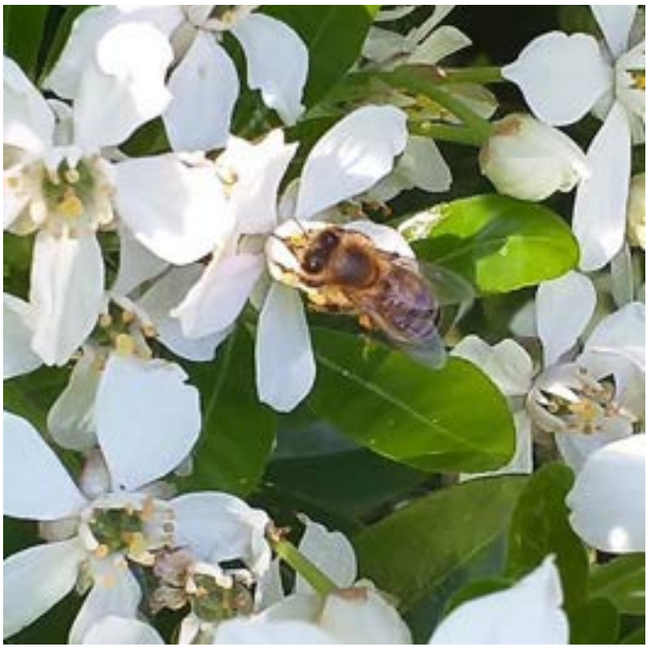


Photo Resource 4

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Honeybee
Apis mellifera

Hymenoptera

14-spot Ladybird
Propylea quatuordecimpunctata

Coleoptera

Hoverfly
Heliophilus pendulus

Diptera

Comma Butterfly
Polygonia C-album

Lepidoptera

Cranefly

Diptera

Hawthorn Shield Bug
Acanthosoma haemorrhoiale

Hemiptera

Photo Resource 5

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Millipede

Myriapod

Snail

Mollusc

Earthworm

Annelid

Spider

Arachnid

Centipede

Myriapod

Woodlice

Crustacean

Photo Resource 6

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Harlequin Ladybird Larva

Harmonia axyridis

Coleoptera

Harlequin Ladybird Larva FlickrHornbeam Arts CC BY-NC 2.0

Blue Bottle Fly Larva

Calliphora vomitoria

Diptera

Blue Bottle Fly Larva *Calliphora vomitoria* by Bugldy 99 CC BY-NC 2.0

Painted Lady Butterfly Chrysallis

Vanessa cardui

Lepidoptera

Devil's Coach Horse Beetle Larvae

Ocypus olens

Coleoptera

Dark Arches Moth Larva

Apamea monoglypha

Lepidoptera

Peacock Butterfly Larva

Aglais io

Lepidoptera

Peacock Caterpillar Flickr Mark Seton CC BY-NC 2.0

Inspired by Insects Science Club

Session 1 – Labels for *Big 5 Orders* sorting activity

Butterflies and Moths *Lepidoptera*	
Bees, Wasps and Ants *Hymenoptera*	
Flies *Diptera*	
True Bugs *Hemiptera*	
Beetles *Coleoptera*	

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Inspired by Insects Science Club

Session 3: How to make an insect hotel

You will need:

- A large plastic bottle with the top and the bottom cut off to form a tube.

- Natural materials such as sticks, leaves, moss and grass

What to do:

- Begin to fill the tube with layers of natural materials.

- Add more layers including sticks to give structure.

- Continue until the tube is packed tightly with the materials.

- Site your insect hotel and leave it for at least a week.

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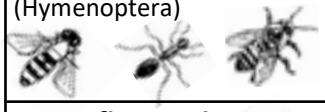
Bees, Wasps and Ants (Hymenoptera) 	Most have two pairs of thin, transparent wings and a narrow 'waist' between thorax and abdomen			
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