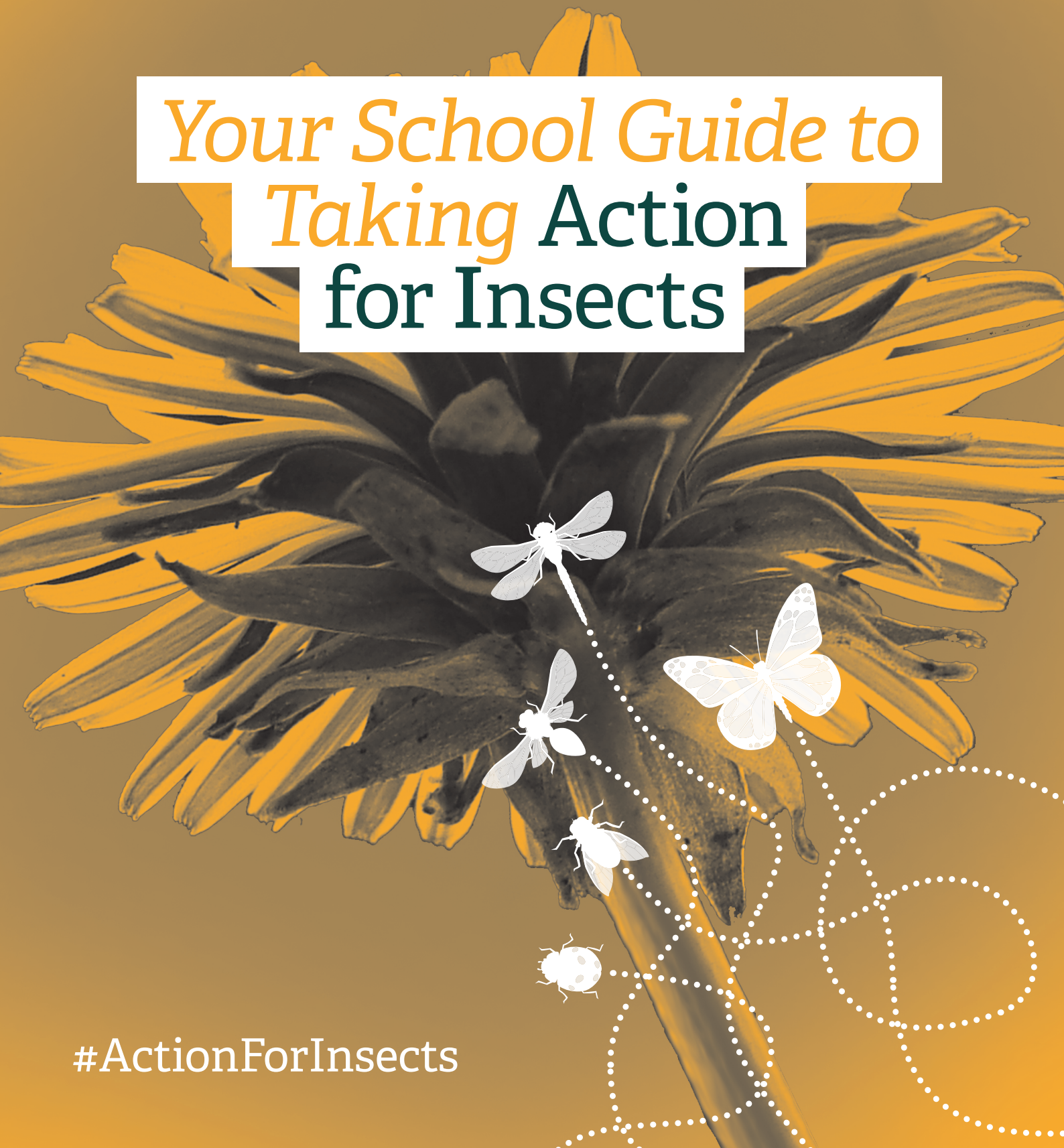
Your School Guide to Taking Action for Insects



#ActionForInsects

For teachers: Taking action for insects

Photo: Paul Harris / 2020VISION

Our bugs, moths, butterflies and other minibeasts are in deep trouble. Insects are dying out up to eight times faster than larger animals and 41% of insects face extinction.

But all is not lost. Urgent action is needed to reverse this trend, which is why The Wildlife Trusts have launched the Action for Insects campaign **www.wildlifetrusts.org/take-action-insects** and want schools to get involved.

As part of the campaign, we have created a series of learning sessions and resources that you can access online at **www.wildlifetrusts.org**, and that we hope you will find inspiring and help to get your class excited about insects! Whether its through doing a 'great bug hunt', creating insect homes and hotels in your school grounds, or delivering a campaign to help insects, there are lots of ways that your school can make a difference and learn at the same time.

Through six sessions, which can be delivered as a series or as stand alone activities, your students will be encouraged to learn about habitats and to investigate their local environment, whilst considering their place in it and how they can change it for the better. They'll have excellent opportunities for writing with a purpose, and developing skills in simple classification, creative arts, geography and science exploration.

Each session comes with its own detailed delivery plan and can be delivered within whatever timeframe suits you and your students – from an afternoon's lesson to a full multi-week programme.

Enjoy! And please share what you are doing – send us your pictures, videos, letters to **watch@wildlifetrusts.org** – and share on your social media using **#ActionForInsects**

To find out more about this campaign, please go to **www.wildlifetrusts.org**

Session	Summary of Activities
1. Can it be true?	To introduce the amazing world of insects, a series of facts and figures will be used to identify the incredible work that they do - from pollination to composting.
2. When is bug not a bug?	An introduction to the different types of insects found in the UK and resources to conduct a great bug hunt.
3. How insect-friendly is our school?	Using their knowledge of differences between creatures to survey different parts of the school to discover where the best and worst areas are for insects.
4. Where have all the insects gone?	Students explore the reasons for loss of the insects. Students can consider what the future would look like without insects through poetry, art or music.
5. What can we do?	Students will explore different ways to help insects, from habitat creation through to changing behaviours in gardening and lifestyles.
6. Action for Insects	Using their learning from the previous sessions, students will create and run their own Action for Insects activity or project. This could be a practical task such as creating a wildflower meadow or bug hotel in the school grounds, or a campaign to encourage others to do things for insects in their gardens and communities.

Learning and nature

The Wildlife Trusts believe that everyone should have the chance to experience and learn more about the natural world in their daily lives. By ensuring people of all ages and backgrounds have access to, and education in, the natural world, we can improve mental and physical wellbeing, and safeguard the environment for the future.

The Wildlife Trusts would like every school child in every place of learning to be able to spend at least an hour outside every day, immersed in inspiring wild play and nature-based learning experiences. **Taking part in Action for Insects in your schools is a great place to start** or a great way of developing outdoor learning you may already have in place.

There are lots of great ideas and resources in this pack and at **www.wildlifetrusts.org** and your local Wildlife Trust may have school's projects local to you.

We know that:

- Accessing wildlife-rich places brings health and wellbeing benefits and increases our feeling of connection with nature and works for people of all ages and backgrounds.[1]
- Children exposed to green spaces for 20 minutes a day engage in five times more physical activity.[2]
- Children in deprived areas are nine times less likely to have access to green space and places to play.[3]

The New Economics Foundation (NEF) 'Five Ways to Wellbeing' – ***Connect, Be Active, Take Notice, Keep Learning, Give*** – is an evidenced based framework of actions that can improve personal wellbeing and outdoors learning can support all these actions. Because people and nature's wellbeing are so connected to each other, we have added a 6th way – **'Care For The Planet'**. By experiencing and learning about the natural world, people feel better and are far more likely to understand how they can take better care of it.

Photo: Misty Hutton / Avon Wildlife Trust

[1] The Wildlife Trusts 30 Days Wild 5 Year Review **www.wildlifetrusts.org/30-days-wild-5-year-review**; Nature Connectedness among adults and children In England **http://publications.naturalengland.org.uk/publication/6005041314136064**

[2] The Importance of Nature for Health (Wells et al 2007, Bowler et al 2010)

[3] Greater Expectations - Raising Aspirations for our Children (National Children's Bureau 2013) **www.ncb.org.uk/sites/default/files/uploads/documents/Policy_docs/GEXP_final WEB.pdf**

The Wildlife Trusts believe that everyone should have the chance to experience and learn more about the natural world in their daily lives. By ensuring people of all ages and backgrounds have access to, and education in, the natural world, we can improve mental and physical wellbeing, and safeguard the environment for the future.

No matter where you live in the UK, there is a Wildlife Trust inspiring people about the natural world. Each day we work to save, protect and stand up for the wildlife and wild places near you.

Supported by more than 850,000 members, we take action for insects on our 2,300 nature reserves, through our work with a whole range of people and sectors including learning and school communities, individual teachers and a whole range of educational establishments. By encouraging everybody to look after insects where they live. We hope that you will join us.

The Wildlife Trusts
info@wildlifetrusts.org
wildlifetrusts.org

@WildlifeTrusts
/wildlifetrusts
thewildlifetrusts

#ActionForInsects #WilderFuture

Photo: Alan Price

Can it be true?

Action for Insects Session 1 — Lesson Plan

Key Learning Outcomes

Students will:

- Learn some amazing facts about insects
- Identify a range of insects from the UK
- Be more aware of how important insects are in their lives

Starter activity	Resources
■ What do you know about insects?	Whiteboard/paper to record facts the students come up with.
Main activities	
■ Give students the statements that are on the cards so that they can use them to order the outcomes onto a number line. Ask them to put the cards in order of smallest to greatest (they don't have to know the answer or get it right, just order them). Once completed, either give students all the numbers and see if they can allocate the correct numbers to the facts, or just read out the numbers and facts in the correct order. What surprises are there? Did they get it right?	Session 1, resource 1 fact cards and answers.
■ Using the *Olympic Insects facts* shown on the resource — what would the results look like if each of those insects was a human? For example, calculate how far or high they would be able to jump. Which insect do they think is the most incredible and why?	Session 1, resource 2 — PowerPoint image for five incredible insects' Olympic contenders.
■ Wildlife TV shows often make it seem that all the beautiful and amazing insects live elsewhere. Show students the amazing insects on their doorsteps by using the PowerPoint and notes to share startling facts and features about UK insects.	Session 1, resource 3 — PowerPoint of UK invertebrates with facts.
Plenary/summary	
■ Q&A plenary from the facts learned and discussion on Top Trump categories and scoring.	Session 1, resource 4 — Top Trump template and scoring suggestion.

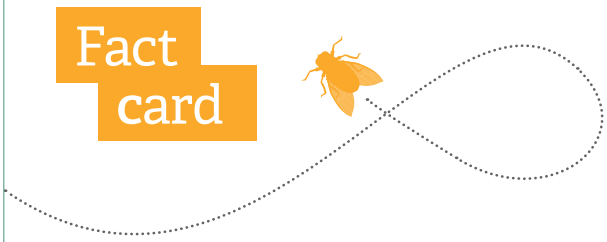
Possible follow up

- Research and imagine their own insect. Create a Top Trump for it.

Useful links for finding out more

- wildlifewatch.org.uk/wildlife-zone
- uksafari.com/invertebrates.htm
- buglife.org.uk/bugs/
- dkfindout.com/uk/animals-and-nature/invertebrates/

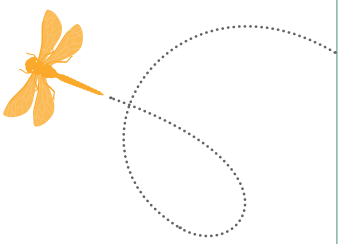
Fact card



How many legs does an insect have?

#ActionForInsects

Fact card



How many insect species do scientists believe there could be in the world?

#ActionForInsects

Fact card

How many ants are there for every person on the planet?

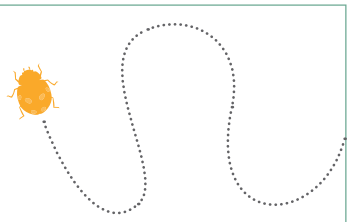
#ActionForInsects

Fact card

How many days (on average) does a honeybee live for?

#ActionForInsects

Fact card



Of all the species in the world – what percentage are insects?

#ActionForInsects

Fact card

How many different types of beetle are there?

#ActionForInsects

Fact card

How many insects live in Antarctica?

#ActionForInsects

Fact card

What is the length (in centimetres) of the longest insect in the world?

#ActionForInsects

Fact card

How old (in millions of years) is the oldest insect fossil?

#ActionForInsects

Fact card

How many eggs can a termite queen lay in a day?

#ActionForInsects

Fact card

What insect lives for only one day?

#ActionForInsects

Fact card

At what speed (kmph) can the world's fastest flying insect fly at?

#ActionForInsects

Fact card answers

How many legs does an insect have?
(6)

How many insect species do scientists believe there might be in the world?
(9,000,000)

How many ants are there for every person on the planet?
(1,400,000)

How many days (on average) does a honeybee live for?
(38)

Of all the species in the world – what percentage are insects?
(90)

How many different types of beetle are there?
(380,000)

How many insect live in Antarctica?
(2 - a wingless midge and a louse that lives on the bodies of Weddel seals)

What is the length (in centimetres) of the longest insect in the world?
(57 – chans megastick)

How old (in millions of years) is the oldest insect fossil?
(400)

How many eggs does a termite queen lay in a day?
(30,000)

What insect only lives for one day?
(A mayfly)

At what speed (kmph) can the world's fastest flying insect fly at?
(56 kmph - dragonflies)

Olympic insect contenders

Action for Insects Session 1 — Resource 2

RUNNING
Cockroach
50x body length per second

LONG JUMP
Grasshopper
25x body length

FASTEST FLYER
Dragonfly
56 kmph

WEIGHTLIFTING
Ant
20x body weight

HIGH JUMP
Meadow froghopper
100x body height

Key facts about 10 cool minibeasts

Action for Insects Session 1 — Resource 3

1. Ladybird spider

An endangered arachnid (a spider — eight legs, two body parts, rather than an insect — six legs, three body parts) found only a few sites in Dorset and Devon.

Males are 6-9mm long, females are 10-16mm.

Only the males look like ladybirds!

2. Stag beetle

The UK's largest beetle – males can reach 75mm long. They are named because their jaws look a bit like the antlers of a stag (male deer).

3. Emperor dragonfly

One of the largest dragonflies in Europe at 78 mm long. Like all dragonflies, the young (nymphs) spend years developing in ponds or ditches before emerging.

4. Ant woodlouse

(Disclaimer: this is not actually an insect but a crustacean!)

The smallest of the 30+ woodlice species in the UK.

It is all white and lives in ants' nests where it cleans their house for them by eating droppings.

5. Ruby tailed wasp

There are a number of different types, but being only 10 mm long they are easy to miss! They may be beautiful but, like many wasp species, are parasites, feeding on others to survive.

6. Puss moth caterpillar

Keep an eye out for this caterpillar on willow trees, one of their favourite plants. Like all moths (and butterflies) the adult looks very different after metamorphosis.

7. Pill millipede

(Disclaimer: this is not actually an insect but a myriapod!)

Don't be fooled, this is not a woodlouse though it does look one.

It can roll itself into a complete ball (pill) when it is protecting itself, so does have very similar behaviour traits!

8. Great green bush cricket

At 7 cm long this really is the largest of our cricket species. It is found in southern England. The male “sings” to the female by rubbing his front wings together.

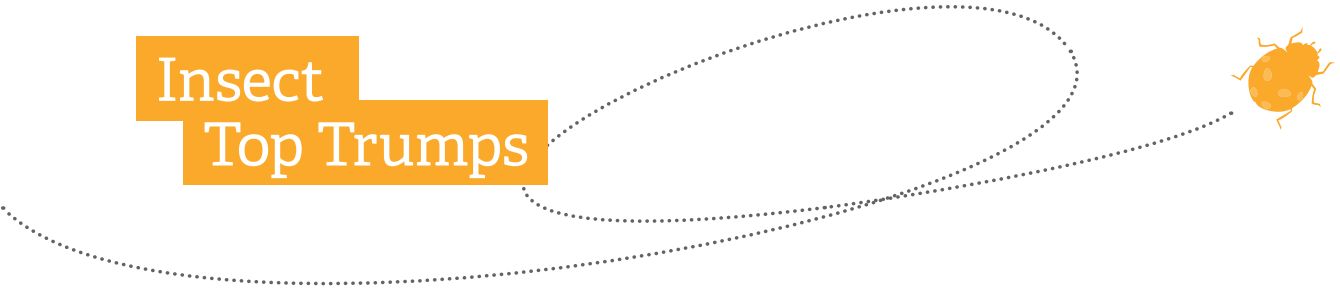
9. Glow worm

Despite its name, this is actually not a worm but a beetle! It is only the female that “glows” to attract the males to mate, but the larvae and eggs can also emit some light!

10. Hornet mimic hoverfly

Pretending to be something else can keep you safe from predators. Many hoverflies do this, but this hornet mimic is the largest at nearly 2 cm long. Don't be scared, they don't have a sting!

Insect Top Trumps



Insects are amazing creatures. Learn more about our weird and wonderful insects by playing a game of Top Trumps. Photocopy this template and make your own pack of cards!

A scoring guide

Here are some suggestions for categories you might like to use. But it's up to you, so get creative!

Name of creature .....

How long is the creature in mm? .....

How heavy is the creature in mg? .....

How fast is the creature in m/s? .....

How does it attack or defend itself? .....
Score out of 10:
- *could large jaws, poison, sting all get high scores?*
- *which combination gets the most points?*

How easy is it to see? .....
Score out of 10:
- *bright colours score low*
- *completely camoulflaged scores 10*

Picture in here

COOL FACT:

Length .....

Weight .....

Speed .....

Weapons .....

Camouflage .....

When is a bug not a bug?

Action for Insects Session 2 — Lesson Plan

Key Learning Outcomes

Students will:

- Recognise differences between creatures.
- Begin to classify animals into groups.
- Use their knowledge to design their own creature and predict things about it.

Starter activity	Resources
■ Ask students to come up with words to describe a "bug" — could be actual names, descriptions, what they understand as a meaning. Come up with a definition that is written down and placed on display. Return to this definition and revise at the end of the session.	"Post-its" for ideas. Large paper/board to put ideas on and final definition.
Main activities	
■ Use the insect images and ask students to group them. They can choose how they do that before discussing the reasons for doing it (useful words – 'Invertebrates', creatures without a backbone —they make up an astounding 97% of all animals on the planet).	Session 2, resource 1 — images of different insects
■ Use the PowerPoint resource to introduce the basic differences that scientists use to "classify" (group) animals. Make sure that there is an emphasis on the fact that insects are a huge family and that they are grouped together into smaller families (such as "bug") based on smaller differences. How close to this was their grouping? What do they need to change?	Session 2, resource 2 — PowerPoint of invertebrates
■ Using the "Design an Insect" sheet, ask students to complete the challenge to make a new species. Students need to think about all the questions on the sheet in their design and be prepared to talk about their new creature (and name it!).	Session 2, resource 3 — Design an Insect sheet
Plenary/summary	
■ How good was our original definition of bug? What would we say now? How would you change it?	Original paper with definition on it.

Possible follow up

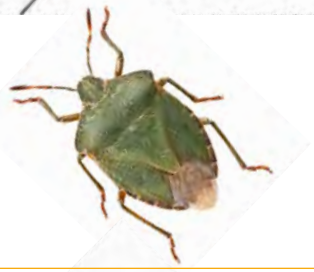
- Students create a 3D junk or clay model of their new creatures.

Useful links for finding out more

- imperial.ac.uk/media/imperial-college/research-centres-and-groups/opal/Invertebrates-guide--UPDATED-FINAL.pdf (excellent introduction to classifying invertebrates)

Grouping invertebrates

Which are the insects? Which species groups do the others belong to?

1. 	2. 	3. 	4. 
5. 	6. 	7. 	8. 
9. 	10. 	11. 	12. 
13. 	14. 	15. 	16. 

Classifying insects

Action for Insects Session 2 — Resource 2

How many legs does it have?

Which are the insects? Which species groups do the others belong to?

NONE

SIX

EIGHT

LOTS

Insects have six legs

INSECTS
The largest group

BEETLE

TRUE BUGS

BEES, WASPS & ANTS

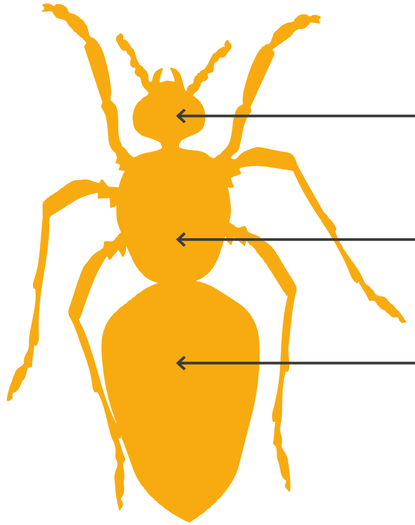
TRUE FLIES

DRAGONFLIES & DAMSELFLIES

GRASSHOPPERS & CRICKETS

BUTTERFLIES & MOTHS

All insects share the same body design... (3 clear parts)



...and they all have wings

Other invertebrates have no legs

MOLLUSCS

SNAILS

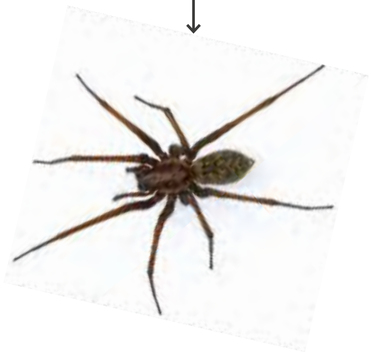
SLUGS

ANNELIDS

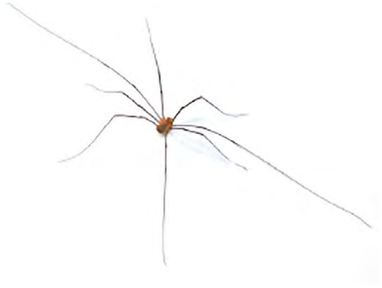
EARTHWORMS

Other invertebrates have eight legs

ARACHNIDS



SPIDERS
(two parts to their body)



HARVESTMAN
(one part to their body)

Other invertebrates have lots of legs

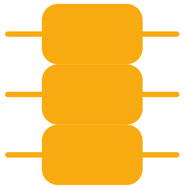
CRUSTACEANS

WOODLICE

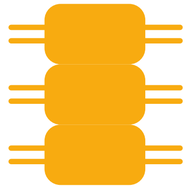
MYRIAPODS

CENTIPEDES
Different numbers of legs depending on which type (but never 100)

MILLIPEDES
Different numbers of legs depending on which type (but never 1000)

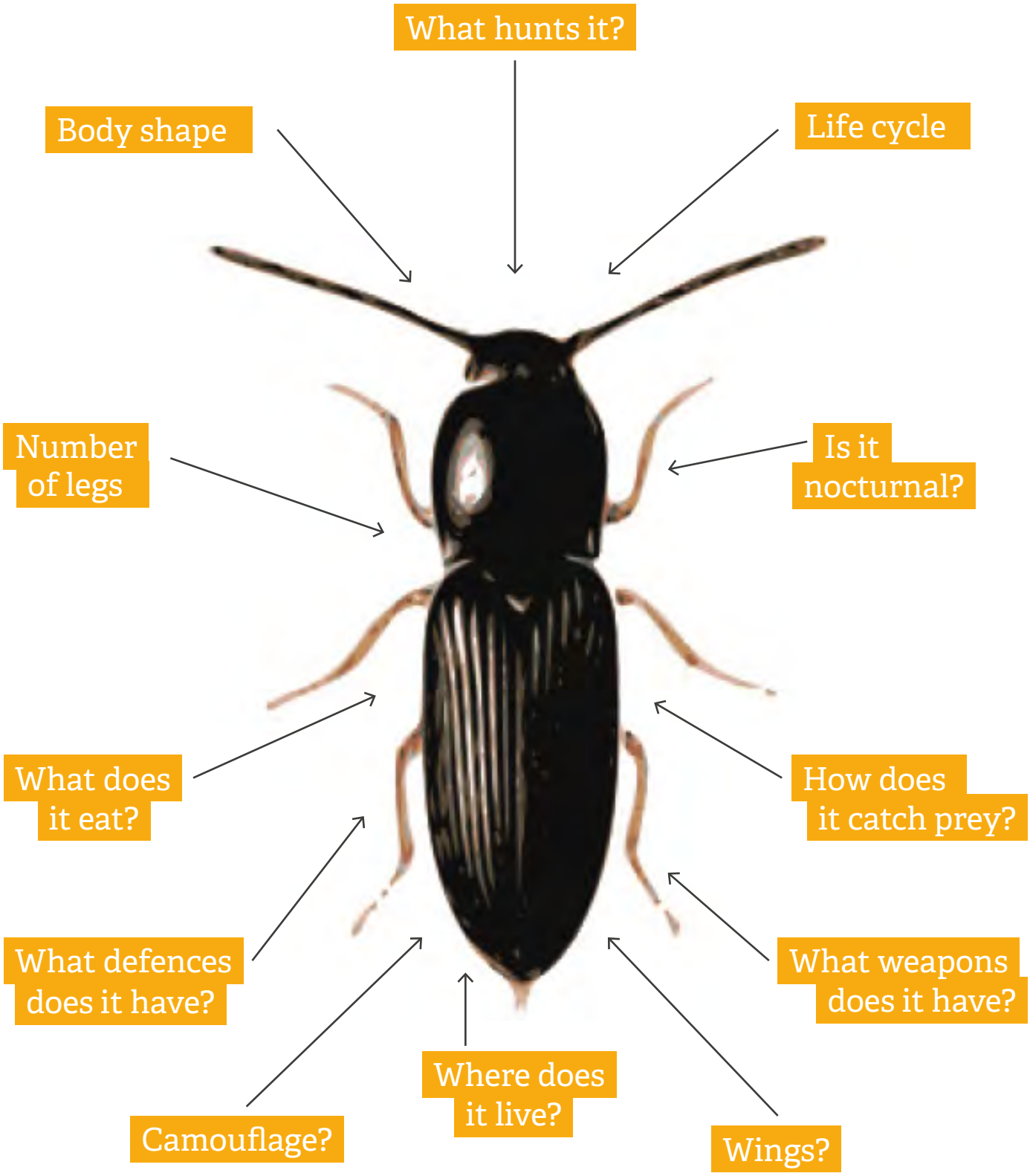


The main difference between them is that centipedes have one pair of legs per body segment whereas millipedes have two pairs!



Design an insect

Climate change poses a great challenge to insects with higher temperatures and more unstable weather making it difficult for some to survive. Then there are problems such as pesticides, food shortages and habitat loss. Can you design a new species that could survive all this? Remember, you need to think about the following...



How insect-friendly is our school?

Action for Insects Session 3 — Lesson Plan

Key Learning Outcomes

Students will:

- Complete a scientific survey of their school grounds.
- Identify where improvements can be made to the school grounds for insects.

Starter activity

- Explain that you are going to conduct a survey of insects (or a bug hunt even!). What do the students predict about what they will find on the school grounds and where? Record their ideas.

Resources

A google map of the school helps the conversation. Paper or whiteboard to record predictions.

Main activities

- Show the habitat images and ask students to identify which of those are present on their school grounds and which have more minibeasts.

Session 3, resource 1 — Habitat images

- Discuss the best method for conducting a "bug hunt" using the techniques described in the "conducting a bug hunt" resource.
- Use the identification sheets and basic recording sheet to complete a hunt on the school grounds. For spotter sheets and information see links at the end of this guide.

Session 3, resource 2 — Conducting a bug hunt guide and recording sheet

- Collate information about what students find; where and how did it compare with spotter sheets? Submit your findings to your local record centre.

Predictions from earlier

Plenary/summary

- Were any places better or worse than others? How could they be improved?

Their results and school map again.

Possible follow up

- Write up results and suggestions for improvements.

Useful links for finding out more

- wildlifewatch.org.uk/activities
- rbkc.gov.uk/PDF/Minbeasts%20pack.pdf (A complete guide to running a minibeast hunt — long but useful)
- schoolgardening.rhs.org.uk/Resources/Info-Sheet/Mini-Beast-Identification-Key (A basic identification flow chart)
- lostladybug.org/files/SweepNet09.pdf (How to make your own sweep net for surveying)
- amazon.co.uk/Minibeasts-Identification-Guide-Peter-Smithers/dp/0954025628 (A great book well-regarded by entomologists)

Habitat suggestions


Woodland


Orchard


Pond or water source


Hedges


Very short grass


Meadows or long grass


Fruit and veg beds


School playground and car park *(tarmac and paving)*

What places have more mini beasts?

Habitat suggestions


Dead wood


Scrubby edges


Gravel


Compost heap


Stone pile or stone wall


Garden shed


Stone wall

Anywhere else?

We're going on a bug hunt!

A bug hunt is an excellent way of building skills around scientific enquiry. The following guide gives some pointers on how to run one on your school grounds.

What you will need

- A Google map of your school grounds
- Clipboards
- Pencils
- Spotter sheets (see links at the end of this document)
- Recording sheet
- Collecting jars/pots with lids
- Magnifying glasses
- If available – sweep nets, trays, white sheet

Before you start

1. Using a Google map of the school, identify areas that can be surveyed and label them A, B, C, D etc.
2. Decide how long you will spend surveying each area (depends on how much time is available and how many areas are chosen). We'd advise at least 15 minutes per area. Identify a logical order to survey them in to reduce loss of time. Explain to the students that this is to make it as close to a fair test of which area is the best for insects.
3. Decide what level of identification you are going to do – into groups or down to species (time and accuracy are worth considering).
4. Briefly describe the techniques and determine which ones will be used (see below). Divide the tasks to specific groups if necessary. Ensure each group has the relevant equipment and recording sheets/clipboard/pencil.
5. Ask students to predict what they will find, and which area will be best or worst for number and variety.

Techniques

1. Habitat survey – identify the type of habitat that is most common in the area (refer to resource 1)
2. Log/stone turn – students turn over logs/stones carefully and record what is seen underneath. Ensure that the log/stone is put back as these are our insects homes.
3. Tree/hedge beating – this is a useful technique for seeing what lives in a tree canopy. Lay out a white sheet or tray beneath the tree or hedge. One student beats/shakes a branch to see what falls onto the sheet. Others identify as quickly as possible – the insects are likely to fly or run away fast!
4. Sweep nets – these are a great way to survey long grasses. You can buy them or make your own **www.lostladybug.org/files/SweepNet09.pdf** Students move through long grass sweeping the net backward and forward to see what falls in. Use pots to gently collect and identify what is in the net.
5. Pitfall trap – if you want to create a trap for crawling insects, these can be done the day before (but not left longer). Dig a small pot into the ground (yoghurt pot) and then place a couple of stones and a raised lid over the top to stop rain getting in. Passing insects will fall into the trap and can be identified (and released) the next day.

Figure 1 Pitfall trap

During the survey

1. Students record the area on their sheets and the main habitat in it.
2. Start the timer and set the students to record what they find on their recording sheets.
3. Give time warnings. Move on and repeat.

After the survey

1. Students reflect on what they have found and how it compares to what they had predicted.
2. Use data to create graphs/results and draw conclusions about insects types, number, variety and location. What does it tell us about the school?
3. Where are the best and worst places on site? How can they be improved?

Photo: Lyndsey Young

Safety considerations

It is always important to check the site before identifying areas you will survey. Do a walk over on the day to remove hazards.

Risk assess the areas for hazards such as water, sharps or stinging plants. Be aware that some of the "bugs" bite and sting!

Weather will affect results significantly – warm, dry days will produce more than cold wet days, so consider this in the planning.

Use the Wildlife Trust's handy spotter sheets here **www.wildlifewatch.org.uk/spotting-sheets** and search for:

- Bees
- Beetles
- Caterpillars
- Damselflies and dragonflies
- Ladybirds
- Moths
- Shieldbugs
- Snails
- Spiders
- Woodland butterflies
- Other unidentified minibeasts

Photo: Redaktar

Survey Recording Sheet

Area **Habitat**

Ants	Beetles	Butterflies, caterpillars & moths	Bees & wasps
Millipedes	Centipedes	Grasshoppers & crickets	Flies
Bugs	Worms	Mites	Earwigs
Snails	Woodlice	Spiders	Damselflies & Dragonflies
Slugs	Other		

Where have all the insects gone?

Action for Insects Session 4 — Lesson Plan

Key Learning Outcomes

Students will:

- Recognise that human activity has effects on the world around them.
- Imagine what the world will look like without insects and respond to that in a creative way.

Starter activity

- Why do we think insects are important? Come up with a list of all the things that insects do for us. Read out the facts from the resource sheet. Are students surprised by any of these?

Resources

Session 4, resource 1 — what have insects done for us?

Main activities

- In what ways do humans harm insects? Use the images in the resource and ask the students to rank them in order of how much harm they think they do. (There are four areas that are hinted at in the pictures – use of chemical pesticides, habitat loss, climate change and pollution. Encourage students to come up come up with more!).
- Feedback and discuss how these things harm insects (loss of habitat, poisoning, direct death etc).
- Ask the students to imagine what the world would be like without insects. How should we respond? Creative writing or art opportunities for the students can help demonstrate how they feel about what the world would be like without insects.

Session 4, resource 2 — what is harming insects?

Plenary/summary

- Share and discuss what students have created

Possible follow up

- Preparing a display of poems and pictures about the loss of insects.

Useful links for finding out more

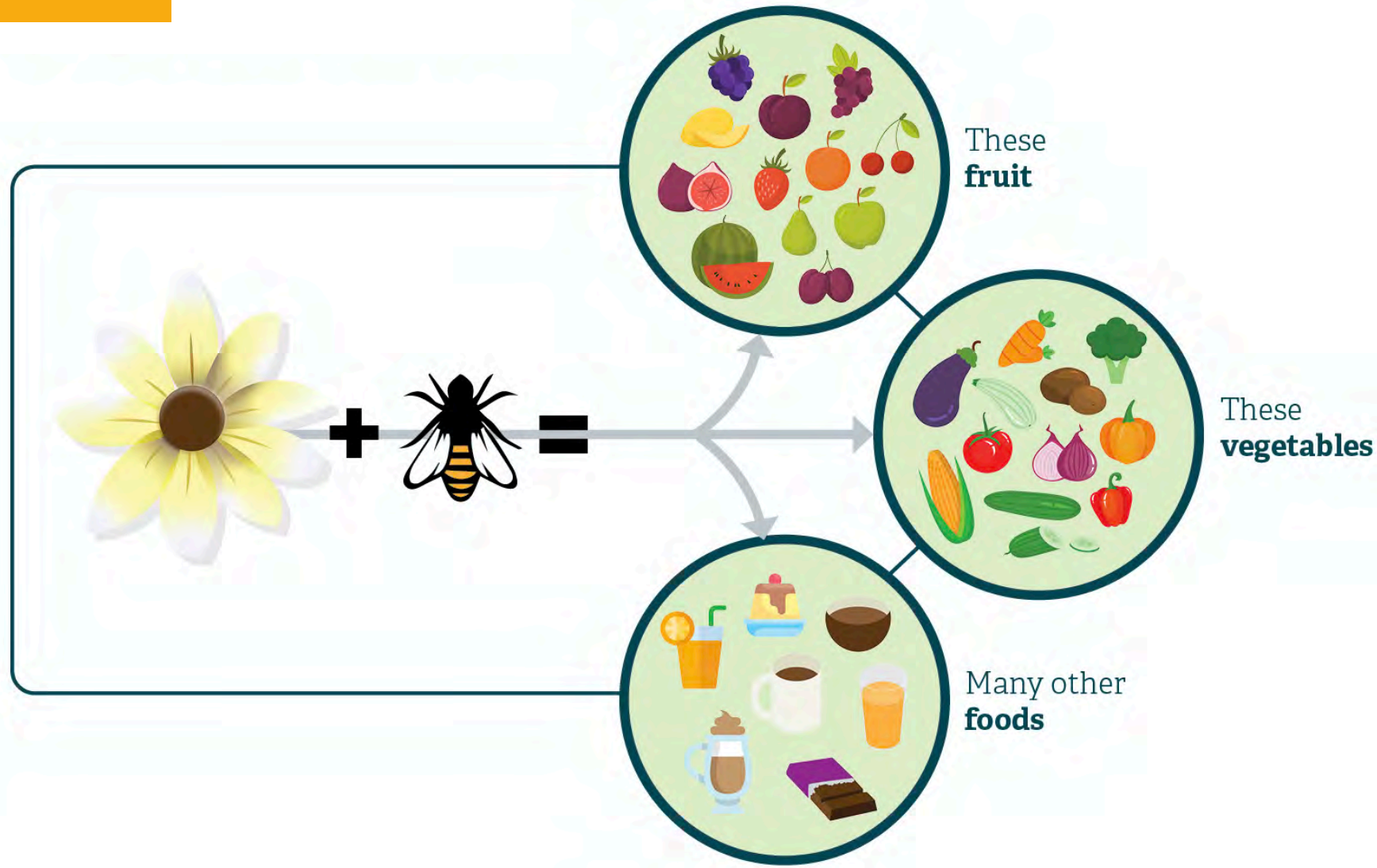
- youtube.com/watch?v=TyLTrejawx4 (Short video about insects disappearing — useful stimulus)
- theguardian.com/commentisfree/2015/aug/04/insects-uk-species-protect (things insects do for us)

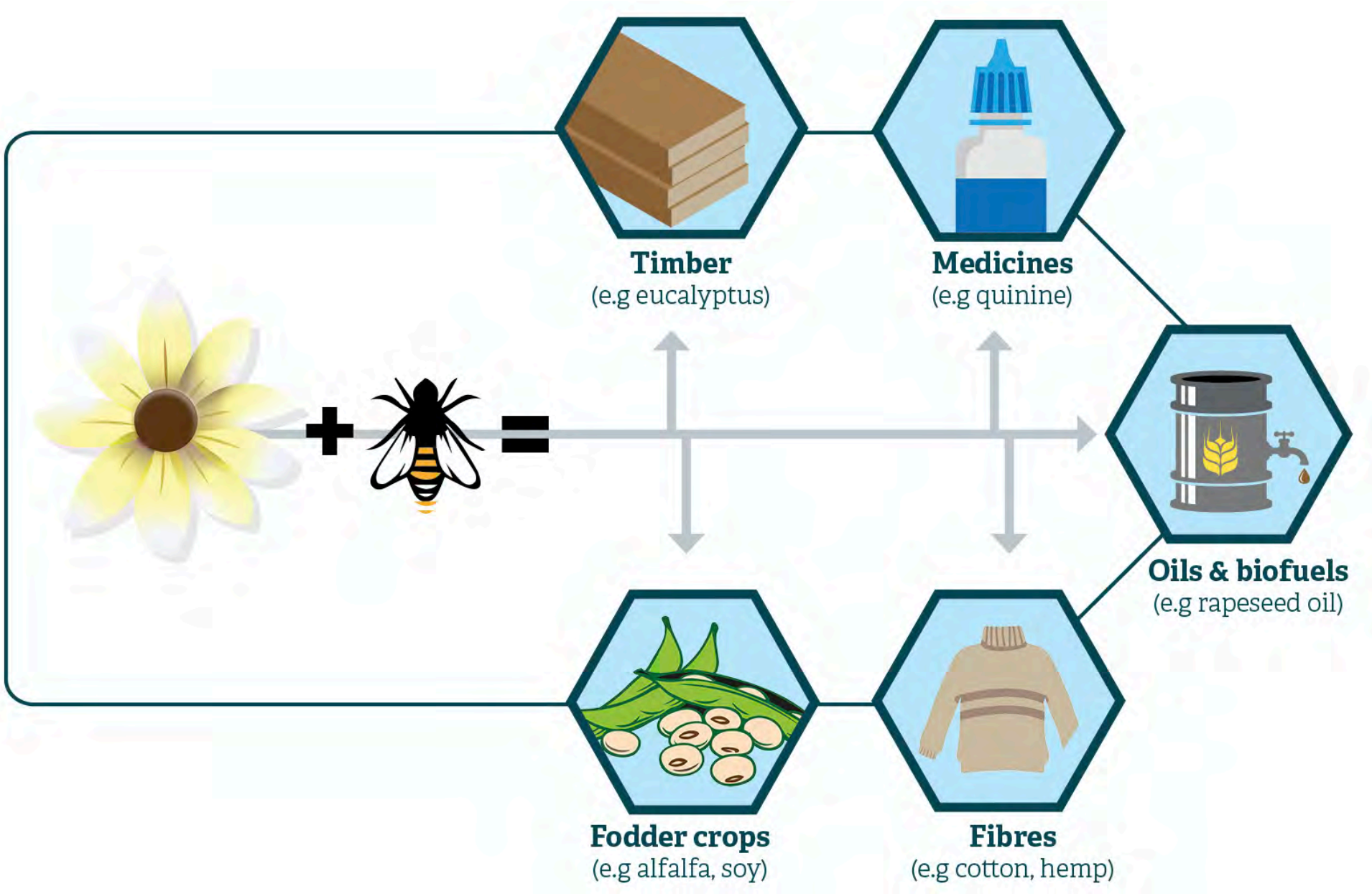
The role of insects — what they do for us

Action for Insects Session 4 — Resource 1


Nutrient recycling
Pollination
Approximately
3/4
of crops grown by humans require pollination by insects.
Decomposition
A service estimated to be worth between
$235 - $577
billion per year worldwide.
Pest control
Food for other species

If we didn't have pollinators we wouldn't have




Timber
(e.g eucalyptus)
Medicines
(e.g quinine)
Oils & biofuels
(e.g rapeseed oil)
Fodder crops
(e.g alfalfa, soy)
Fibres
(e.g cotton, hemp)

What else?

Decomposition

Dung burial estimated value in the UK of £367 million per year.

Pest control

Estimated to be worth $4.5 billion in the US.

Food chains

Countless species eat insects. Food chains would collapse without them...

They're beautiful and fascinating in their own right too!

What is harming insects?

Action for Insects Session 4 — Resource 2

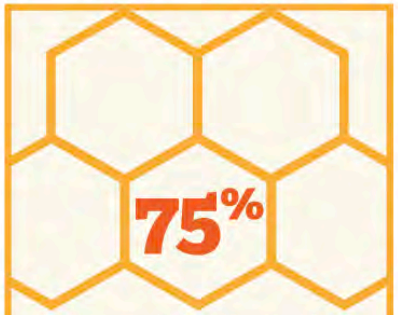
State of insects

Insects are dying out up to **8 times** faster than larger animals

41%

of insect species face extinction

Some bee and flower-visiting wasp species have gone **extinct in the UK** since 1850



A survey of honey samples from around the world reveals that **75% contain neonicotinoid insecticides**

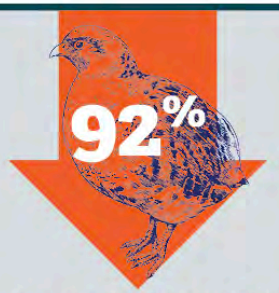
Overall UK butterflies have declined by

46%

The **red-backed shrike**, a specialist predator of large insects went **EXTINCT** in the UK in the 1990s

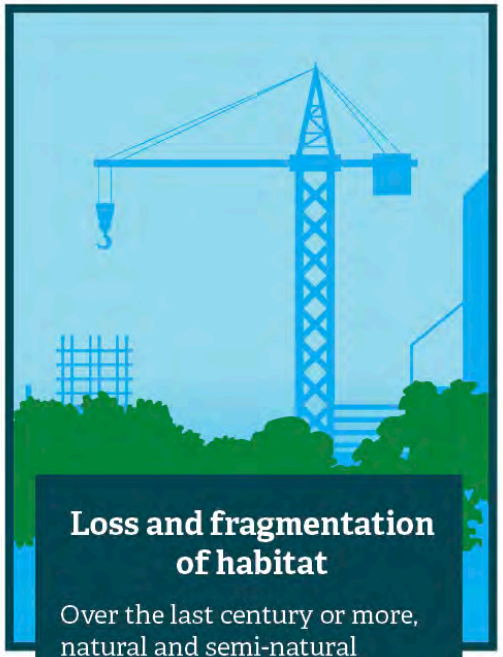
Number of **pesticide applications** has approximately **doubled** over the last 25 years

UK population of **spotted flycatcher declined by 93%** between 1967 and 2016



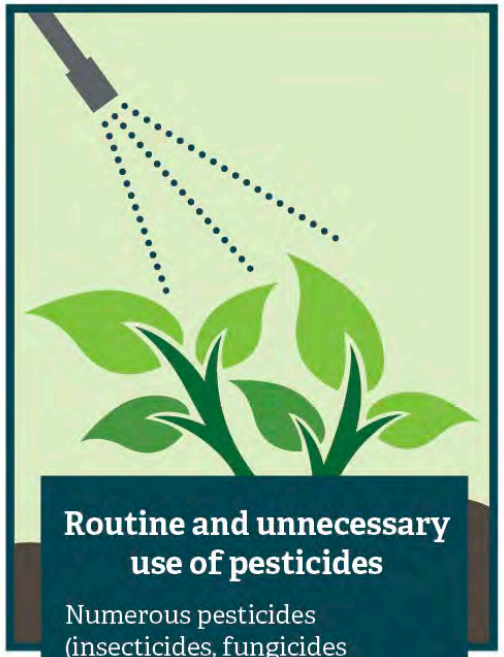
Once-common insect eating birds have massively declined in the UK: **grey partridge 92%, nightingale 93% and cuckoo 77%**

What is causing insect declines?



Loss and fragmentation of habitat

Over the last century or more, natural and semi-natural habitats have been lost, depleted and fragmented as a direct result of human activity. The health of the natural environment has been very low on the list of priorities when it comes to the development of our towns and cities, new housing, transport infrastructure and the way we produce food.



Routine and unnecessary use of pesticides

Numerous pesticides (insecticides, fungicides and herbicides) are freely available from garden centres, DIY stores and even supermarkets. Pesticides associated with intensive farming are implicated in driving declines of bees and other insects.

Climate change

Human-made greenhouse gas emissions are leading to climate change on a global scale. The impact of this is being seen on the range of some insects (areas they are found in), which have started to shift. For example European and North American bumblebees are starting to disappear from the southern edges of their range.

What is harming insects?

Reliance on harmful chemicals and pollution

16.9 thousand tons of pesticides are sprayed every year across our countryside. That doesn't include what we use in our gardens, towns and cities!

Chemicals, soils running off the land, plastic rubbish washing downstream... all mean that most UK rivers are not in a good condition and lots of our water insects are under threat.

Loss of habitat and habitat broken up

97% of our wildflower meadows have been lost since the 1930s.

94% of the UK's lowland peat bogs have been destroyed or damaged.

87% of the world's wetlands are gone...

Climate change

Because we are putting insects under pressure, they are less able to cope with climate change.

What can we do?

Action for Insects Session 5 — Lesson Plan

Key Learning Outcomes

Students will:

- Recognise that humans can have a positive impact on insects.
- Understand that they can make a difference and help insects.

Starter activity

- Q? What do all animals need in order to survive and thrive? (The answers you are looking for include: food, water, shelter (place to breed). Students may also say oxygen/air, which is also acceptable (pollution can affect this).

Main activities

- Use the image resource to identify things that can help insects. Students make a list of things that they think could be done in or around school based on the pictures and adding their own thoughts. You could consider asking students to walk around the outside of the school and think about how it would look to them if they were an insect – where can they eat? Where can they hide? How easy is it for them to fly or move around?
- Ask students to get into groups and draw a plan or map of the school and all the things they think can be done to make it better for insects. Ask them to write a list of actions and think about what they feel are the most important things to do. Follow the links provided at the end of this sheet for ideas.
- Discuss in groups what the next session (an Action for Insects' project) could look like and what they will need to prepare. Who do they need to talk to? What resources might they need? What are the easiest and the hardest things to do?

Plenary/summary

- Assign tasks and preparation for the next session.

Resources

Session 5, resource 1 — how can we help insects?

See links below for access to a range of resources

Possible follow up

- Get materials ready for following session.

Useful links for finding out more

- wildlifewatch.org.uk/activity-sheets (Lots of useful "how to" guides for wildlife projects. Many are insect/invertebrate focused and can be downloaded).
- See also resources in Session 6

How can we help insects?

- What spaces do we have for insects in the school?
- How can we make them better for insects?
- Can we create new insect friendly habitats?
- How can we better join them up?

Follow the principles of:

- **Bigger habitat patches** — expand the habitats you've already got and when creating new habitats make them as big as possible
- **Better management of existing habitats** — make sure there is good understanding of what each area of site could or should have and work towards that
- **More habitats** — create new high-quality wildlife-rich spaces wherever you can
- **Joined up** — link up wild places to help insects and other wildlife move between them.

Ponds, bogs and wet areas... one of the best things you can do for insects and other wildlife! Can you create more wet areas?

Wildflowers, native plants and fruit trees are great for pollinators. Any space for these in your school?

Artificial light can confuse moths and other insects. What lighting do you have at your school?

Bug hotels, log piles, rockeries... where can you create homes and hiding places for insects?

Road verges support 45% of our native plants — any verges around your school?

Compost heaps are great sources of food and provide homes for insects.

Wild corners and weeds... let the grass grow and leave areas untidy.

Harmful chemicals directly kill plants and insects and cause pollution of our water.

Can we stop using chemicals unnecessarily?

- What chemicals do we use in our school and for what?
- Can we find safer, different alternatives?

Action for Insects — taking action

Action for Insects Session 6 — Lesson Plan

Key Learning Outcomes

Students will:

- Design a project to help insects.
- Create and record actions they take for wildlife in their school/community.

Starter activity	Resources
■ Follow up discussion from last session. What do they want to achieve from an Action for Insects project?	Notes/follow up from previous session
Main activities	
■ Persuasive writing: ▪ Students could write to the school governors and leaders, asking them to make more space for insects at school and to stop using harmful chemicals where they don't need to. They could consider sharing their 'plan' for an insect friendly school and get school leaders to agree to take some of the plans forward. For example, leaving some 'wild' areas of the school grounds. Pledging to stop spraying weed killer on school premises etc. ▪ Students could use the persuasive writing exercise to contact their local MP to tell them of their concern and work for insects and ask them what they will do to help. ▪ They may want to write a short article for the school newsletter asking parents and other students to take Action for Insects and download their guides from The Wildlife Trusts' website (link below). See end of this section for suggestions of who to influence.	Session 6, resource 1 — persuasive letter example/template
■ Creating homes for insects: Students identify some practical things they can do at the school to help insects — like creating an insect corner with a bug hotel and log pile, and work in groups/in rotation to complete activities based on the campaigns/practical actions that they have decided on.	
■ Record with photos/video/written report how the "Action for Insects" session goes and share that with the school community and your regional Wildlife Trust (or national).	Session 6, resource 2 — ideas to get you started!
■ Download a certificate from the school resources page to post in your school telling everyone what you are doing. Take a picture and send it to us at watch@wildlifetrusts.org	Session 6, resource 3 — certificate template
Plenary/summary	
■ What difference have we made? How does it feel? What can we do at home or school to carry on helping insects in the long term?	Session 6, resource 2

Possible follow up

- Write up the day, prepare an assembly/newsletter to parents and school community.
- Publish report/images to social media and/or regional Wildlife Trust as part of the larger campaign using #ActionForInsects or share with us at watch@wildlifetrusts.org
- Encourage the wider school community to take action for insects, and download their guides from The Wildlife Trusts website (link below).
- Record how many students in the school take action and let us know!

Useful links for finding out more

- wildlifetrusts.org/take-action-insects to access individual and communities' packs that are full of ways to take action
- Wildlife Watch youtube channel — youtube.com/channel/UCbnBys2Hl1T26dzO_nbgbiw

Persuading others to take action

Action for Insects Session 6 — Resource 1

Who to persuade

Suggestions of people, institutions and organisations that students could write to persuade them to make changes for insects.

- Changing school grounds — Headteachers and Governors
- Changing local parks, verges, amenity green spaces — elected local authority members and non-elected staff
- Changing gardens — parents
- Changing consumer habits and businesses — local and national/multi-national companies who sell/use/sell products which are produced using insect harming chemicals AND/OR parents/Headteachers and Governors/elected local authority members and non-elected staff who make decisions that can affect insects
- Changing decision makers — Local MPs/UK Government for bigger issues around climate change, habitat and species loss.

Things to ask for

Suggestions of some things you can ask for — "STOP/START messages" are a good place to begin...

- **STOP** — using chemicals that harm insects
- **STOP** — destroying the places where they live
- **START** — making more wild places where insects can live and eat and move around
- **START** — being kind to the planet
- **START** — committing to protecting our insects by passing a motion about action for insects (see below for suggested motion text) and publish that commitment.

Suggested motion text

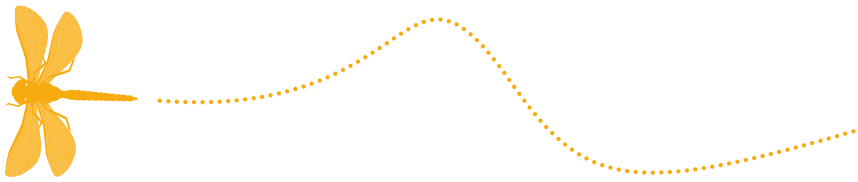
Change this to allow students to use their own words!

[Name of School, Authority or Council] acknowledges that insect populations are in serious decline locally and across the UK, and that everyone has a part to play to help them recover. We all depend on insects for a healthy and functioning natural world.

Therefore *[Name of School, Authority or Council]* pledges to take action to help reverse the decline of insects, and will work with *[our students and teachers, communities, organisations and land managers — delete as appropriate]* to better understand how our activities can affect insects.

We will reduce the routine and unnecessary use of pesticides across *[Name of School, Authority or Council]*'s estate and will support the creation and restoration of habitats in order to ensure pollinators and other beneficial insects can thrive.

We encourage *[parents, staff, all parts of society – delete as appropriate]* to do the same.



Put your address here

Put the date here

Dear <NAME OF PERSON>

RE: *[Put a title for your letter (like "Help for Insects")]*

I am writing to you about _____

_____

_____

I think that it is important because _____

_____

_____

I think that you should *[see some of the suggestions above]* _____

_____

_____

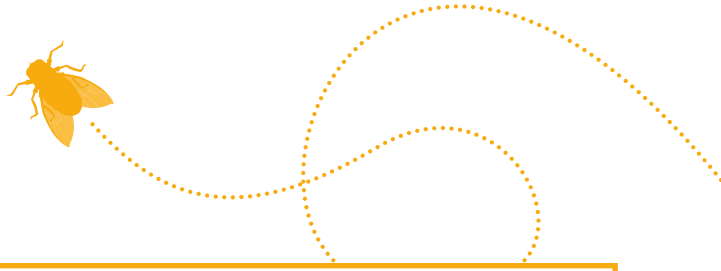
Thank you for taking the time to read this. Please let me know what you are going to do to help our insects.

I look forward to hearing from you.

Yours sincerely
[Your Name goes here]

Ideas to get you started

Action for Insects Session 6 — Resource 1



TOP TIP: Sign up to take Action for Insects (www.wildlifetrusts.org/take-action-insects) to get individual and community guides to action. These are full of great ideas to create insect homes, stop the unnecessary use of pesticides, who to influence for change and much more...

- Action plan for insects — develop your own / school action plan. Run a small forum of friends and adults to have a shared action plan to include: task(s); what needs to be done; who; what we need; who can we ask for help. Think about the BIG three:
  1. creating more insect homes (and stopping the use of peat-based compost, which is destroying insect homes!);
  2. connecting 'habitats' to help insects move around; and
  3. stopping the unnecessary use of chemicals that harm insects.

- Carry out a case study of a project or area that has attracted more insects as a result of work —bee homes/ log piles/ school grounds/ friend/local project.
- Prepare a 'home for sale' pack about an insect's home to encourage buyers (as you would do a house) and add in why the insect is no longer around and why. What makes this home special /what is needed for it to live here?
- Research and compile a compendium of projects that might have helped insects and created/demonstrated more biodiversity — small things like bee hotels/ log piles/ dead wood; to bigger projects like making areas of your community more wild or stopping the unnecessary use of harmful chemicals.
- Choose one insect and work out how to make your school or community a great place for it to live. Can you put what you have learned into action?
- Write, create a poster, audio recording or film telling a story about taking action —interview people to ask them about why, what and how they did — what was the result?
- Let the world know about good work for insects — write a press release, Twitter, Instagram or Facebook post. Think about where you would send it, who you want to send it to, how to make the story interesting.
- Create a landscape design plan, which you can submit to a 'planning authority' for an 'new home and or housing estate for insects'. Run a school town or parish council style meeting to decide if the project should go ahead.
- Develop wording for a petition or campaign to help insects in your community.
- Carry out observation and interviews on your peers doing activities as part of this campaign. What were WOW moments ? Send to your Wildlife Trust or to watch@wildlifetrusts.org.
- Create a miniature landscape for insects — mark the way with lolly stick flags that mark features; create a map and passport; take others on a journey to visit!
- Think about what you can do in your own home. From window boxes and pots, to log piles by the door... and share these with the class. Each student could make a commitment as to the action they are going to take and make it into a sign, placard or colourful piece of art.
- Hold an 'insect careers fair' at school. Pick jobs that insects do and think about similar jobs that people do...
- Hold a B'Oscars (Bug Oscars) awards ceremony. What is the best leading insect?Best supporting? Most deadly? Most colourful? etc. Work together to create categories and shortlists.
- Get involved in national 'counts' such as Butterfly Conservation's Big Butterfly Count or create your own school annual creature count event to track what impact you are having for insects.
- Give yourself a Certificate! Download our Action For Insects Certificate, fill it out and post it in your school. You will be telling others that you care about insects and what you are doing to make a difference. Take a picture and share it to spread the word!

Share what you are doing using #ActionForInsects and send us your letters, pictures, and stories to watch@wildlifetrusts.org.