



Building a Bug Hotel

Summary:

This activity is the perfect way to show children that they can make a positive impact on the wildlife in their local environment. This is key if we want to help young people to feel connected to nature and to become proactive about issues such as biodiversity loss. It is also a great way to encourage resourcefulness and creativity, as you will be using as many upcycled materials as possible. You could even ask your learners to bring in materials from home that would otherwise go in the bin to further encourage them to think about their impact on the environment.

This activity sheet is aimed at educators, to provide you with information and guidance so that you can lead this activity with your learners.

Key Stage / Age group: It can be easily tailored to any age group - the links below are from the [National Curriculum for England](#).

National Curriculum links (Primary):

KS1 & KS2 - Science

Working Scientifically - please see National Curriculum Guidance for working scientifically objectives

Year 1:

- Plants: identify and name a variety of common wild and garden plants
- Animals including humans: identify and name a variety of common animals
- Seasonal Changes: observe changes across the four seasons

Year 2:

- Living things and their habitats: identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants and how they depend on each other; identify and name a variety of plants and animals in their habitats including mirror habitats.

Year 3:

- Living things and their habitats: recognise that living things can be grouped in a variety of ways; explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment; recognise that environments can change and that this can sometimes pose dangers to living things.

Year 4:

- Living things and their habitats: describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird; describe the life process of reproduction in some plants and animals.

Year 5:

- Living things and their habitats: describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences including microorganisms, plants and animals; give reasons for classifying plants and animals based on specific characteristics.

KS1 & KS2 Geography:

Geographical skills and fieldwork:

Use simple fieldwork and observational skills to study the geography of their school and its grounds and the key human and physical features of its surrounding environment (KS1)

Use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs and digital technologies (KS2)

KS1 & KS2 Design and Technology:

Make: Select from and use a range of tools and equipment to perform practical tasks

Time needed: 30 mins - 2 hours, depending on how complex you want to make your bug hotel.

Location: Outside

Activity links:

We recommend using this activity in conjunction with our [BioBlitz](#) activity so that learners can track how their bug hotel is attracting wildlife. The activities would suit both formal and more informal learning environments - as well as the National Curriculum links this activity could be undertaken by a gardening club, after school club or Eco-team. There is nothing more motivating and empowering than seeing that everyone can have a positive impact!

How to build a bug hotel

Bug hotels, or wildlife hotels provide a safe spot for many different species. It is important to support wildlife in our environments, as their habitats, breeding and feeding grounds are very often in decline. By creating a bug hotel, you could not only be providing a safe place for insects such as bees, ladybirds, and beetles, but also for other wildlife such as hedgehogs and toads!

You can buy ready-made bug hotels, but it's much more fun to build your own. Here are some ideas which you can adapt. Get creative and support biodiversity!

This activity sheet provides information on how to construct 2 different types of Bug hotels - one large and one smaller have a think about what is more suitable - Also once constructed you could link to the bioblitz worksheet and carry out regular surveys.

Materials: where possible use materials that are reused - you could ask to provide materials in the weeks leading up to the creation of the bug hotel.

Small Bug hotel

What you will need:

- Plant pot - with holes at base. If you don't have a pot, you can use another plastic container (e.g. large yoghurt pot or small ice cream tub) but you will need to put holes in the base. You will need to get an adult to create these for you.
- Gardening gloves
- Secateurs
- Selection of natural materials collected off the ground. Suggestions include:

Pine cones and teasels

Hollow bamboo canes and hogweed stems

Small sticks - can have leaves attached

Pieces of tree bark

Straw

Dry leaves (leaf litter/ forest floor)

Seed heads e.g. sunflower

Small stones

How to make your mini bug hotel:

- Start by placing your sticks around the edge of your pot. You may need to cut/break your sticks to fit your pot. It's ok to have sticks either poking out the base or longer than your pot.
- Continue to add your natural materials as you like until there is no more space – turn your pot upside down to check if anything will fall out!
- Fill any remaining small holes with your dry leaves (leaf litter).
- To finish, turn your pot on its side and place it in your garden. To encourage a variety of insect to visit their new habitat choose a dry, semi shaded and quiet/undisturbed location.

What insects will visit my Bug Hotel?

Insects are important to our ecosystem and essential to animal food chains. Your bug hotel will provide much needed shelter during the colder winter months and insects will have a dry place to lay their eggs and create new nests sites for spring.

- **Solitary bees (pollinators)**

Hollow bamboo canes and hogweed stems

- **Ladybirds**

Dry leaves / sticks /straw and pine cones / teasel seed heads

- **Centipedes, millipedes, woodlice and wood boring beetles (Stag beetle)**

Decaying deadwood – sticks

Loose bark

- **Ants, slugs, worms and snails**

Leaf litter and decaying dead wood

Challenges:

- Find out three amazing facts about four of the minibeasts above.
- Which of these minibeasts do you think is the most impressive and why?
- Not all minibeasts are insects. Can you find out what an insect is and give two examples?
- Why are many insects under threat?

View video by clicking [this link](#)

Large Bug Hotel



1. CHOOSE YOUR SPOT

- Choose somewhere that has level and firm ground - you don't want your bug hotel toppling over!
- The placement of your bug hotel will influence the kind of wildlife you will attract. Some species like cool, damp conditions, while others prefer sunny spots. If you can, choose a spot which gets partial sun to attract an array of wildlife species - so perhaps place it partially under a tree, for example.
- Keep your bug hotel a little way away from any vegetable beds.

2. BUILD THE BASIC FRAMEWORK

You will need:

- Wooden pallets - The basic framework is generally made with wooden pallets - these are sturdy and give the bug hotel structure. Choose reclaimed pallets if possible.



Ideally make your bug hotel 4 or 5 pallets high, with the bottom pallet upside down, as this will create openings at either end which can be used as a hedgehog house! You can use more pallets to make it bigger, but if you do, make sure you secure each pallet to the one below it and build it somewhere where it won't be knocked over - it will be heavy!

- Bricks (preferably those with holes through them) - these can be placed at the bottom of the structure if you would like to give it a bit more height. This space could end up being used by hedgehogs as a safe refuge!

3. FILL THE GAPS

You can use any of the following

- Dead wood and bark - this is an increasingly rare habitat which supports beetles, centipedes, spiders, woodlice, fungi, and the larvae of wood-boring beetles.
- Hollow stems (such as from shrubs, herbaceous plants, or bamboo canes) - these are used by solitary bees as nesting sites. If you are using bamboo sticks, one way to create a nice waterproof habitat for bees is to take an old plastic bottle and cut off the base, filling it with bamboo sticks.
- Dried sticks and straw or hay - this acts as a safe nesting site which many invertebrates can use to burrow into. For example, ladybirds love to hibernate in dry sticks.
- Stones, tiles (e.g. old roofing tiles), and old terracotta pots- place these at the centre of your bug hotel, creating a cool and damp covered area for frogs and toads to shelter in the winter.
- Dry leaves - dry leaves mimic the forest floor and provide a home for a variety of invertebrates, such as beetles, ladybirds.
- Corrugated cardboard - if you roll up a piece of corrugated cardboard and put it in a waterproof cylinder, it will create a home for lacewings. You can do this by cutting the base off of a plastic bottle and filling it with the rolled-up cardboard.
- Pine Cones - these have lots of little nooks and crannies for insects to live, breed, and feed.
- Planks of wood - these add stability wherever you need it, as well as creating more gaps.
- Whatever else you can find - preferably natural materials such as sand, moss, wood chips, or other wooden materials, and particularly those which are being reused!



4. MAKE A ROOF

You can use either:
Old roof tiles or anything else that you can find



Tips & ideas:

- Plant wildflowers around your bug hotel - these will not only make the area look beautiful, but it will also make sure your new garden inhabitants have food to eat! You could even add some soil to the roof of your bug hotel and plant some wildflower seeds into it - just make sure you choose flowers that like dry conditions best.
- Keep an eye on who's moved in! Use our [BioBlitz sheets](#) to track the wildlife found in your bug hotel and in the area surrounding it. This way you can see how you are supporting biodiversity in your area while using the opportunity to learn a bit more about them.

5. SOME OTHER OPTIONS

Small Bee Hotel (Good activity to link to a visit to a wood to collect materials) or ask parents to collect materials prior to the event

If you want to do a smaller activity which will also link into the curriculum and also provide a lovely home for Bee's [use this link](#) for building a Bee Hotel.

Additional information

<https://www.woodlandtrust.org.uk/blog/2019/09/how-to-build-a-bug-hotel/>
<https://www.rspb.org.uk/helping-nature/what-you-can-do/activities/build-a-bug-hotel>
<https://www.wildlifetrusts.org/wildlife-explorer/invertebrates/bugs>