

Creating Pollinator Homes

Learning Objectives:

- Communicate; share experiences, ideas and information.
- Improve understanding of human impact on nature and the need to conserve wildlife habitat .
- Understanding the importance of insect pollinators and their habitat needs.

Key Topics: Design & Technology, Science

Location: Indoors and Outdoors.

Equipment: See the activity section.

Key Words: Habitat, Pollinator, Flower, Nectar, Pollen, Shelter.

Background:

With pollinators in decline, the more nesting habitat we can provide for them the better. Where natural habitat is limited we can help by providing places for some bees to nest. Not all bees live in a big social hive, some bees live alone. These solitary bees like to nest in hollow plant stems and you can make ready made nesting space for them in your school grounds.



Red Mason Bee (*Osmia rufa*)



Common Lacewing
(*Chrysopa perla*)



Discussion:

Start the session by asking students to think about what insect pollinators might need in terms of habitat and shelter - what they might like or dislike.

Examples of what they like might include:

- Shelter in trees, log piles and plant stems.
- Warmth in sunny, sheltered spots.

Activity - Build your own Bee Hotel

What you will need:

- Hollow plant stems or bamboo canes .
- Garden twine or string /cut drainpipe/cut plastic bottle
- Saw, knife or secateurs to cut the canes.
- A nail or hook to attached the bee hotel to a wall or fence.



Leafcutter bee (*Megachile willughbiella*)



How to do it:

- Cut the hollow plant stems into 10-20cm sections.
- Tie a bundle of 15-20 plant stems together with garden twine or string (or bundle together inside a cut section of drainpipe or plastic bottle).
- A variety of plant stem thicknesses will allow different species of solitary bee to nest.
- Hang the bee hotel in a sunny but sheltered area at least 1 metre above the ground in a sunny, sheltered position, preferably south-facing.
- Alternatively you can drill different sized holes (2-10mm) into a log or piece of untreated timber.

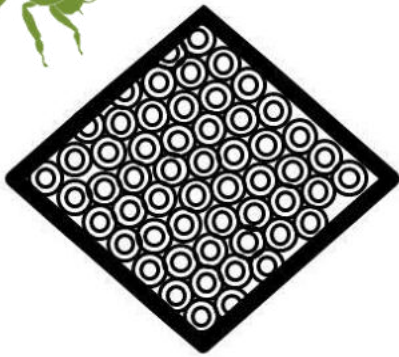
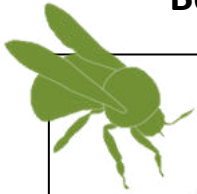


Bee Creative! - Design your own Bee Hotel

You can protect your new bee hotel from the elements and provide extra insulation by creating a box frame into which you can insert your plant stems, bamboo canes or blocks of wood.

The box frame can be any shape that will allow water to flow off the roof.

Below are some examples of different shaped bee hotels.



Diamond



Pentagon



Oval/Circle



Teardrop



Hexagon



House



Create a Super Bee Hotel!



By putting together a variety of different shapes and types of bee hotel you can create a larger bee hotel (see the photos below).



Use the shape ideas and photos to encourage students to design their own bee hotel.

By putting your plant stems or bamboo canes into the end of a plastic drinks bottle you can make a bee hotel that you can personalise. You can draw, paint or print a design on paper and insert it between the canes and the bottle!



Follow up activities

Discussion:

Having designed and made your bee hotels ask students to think about how they could be improved upon? Also how could you make the school grounds even better for pollinators? (See the 'Our School Grounds' activity sheet).

If you would like to share photos of your completed bee hotels with us then please email them to:
coasttocoast@buglife.org.uk

Your hotels may also be used by other bugs such as ladybirds, spiders and lacewings looking for a safe place to shelter!

Is a solitary bee using your bee hotel?

Take the students outside to look at the bee hotels. You will know if a solitary bee such as a mason bee or leaf-cutter bee is using your bee hotel if the hollow tubes are blocked with a leaf or mud.

A female solitary bee will usually use one hollow tube to the exclusion of other females (although that one female may end up using several tubes if she lives long enough). She will create a series of cells each containing a food parcel of pollen and nectar for the grub. Only a single egg is laid in each cell. The adult solitary bee eventually seals the entrance to the tube with mud or a perfectly sized section of leaf. You may notice some nearby plants have half moon or full-circle shaped cuttings. These are made by leafcutter bees which cut them using their scissor-like mandibles.



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