

Build a Bee Hotel

For such little creatures, bees play a very big role in our world! By pollinating plants and trees, they help to produce one third of the food we eat.

Unlike honey bees that live in hives, some bees are solitary bees which means they live alone and make their nests in small holes. These bees need our help as there are fewer trees and less green space in the city and our towns for them to make their nests. This is a big problem because solitary bees are master pollinators: one single Red Mason bee can do as much pollinating as 120 worker bees!

VIPs (Very Important Pollinators), like Mason Bees, deserve 5* accommodation. You can help to keep our city abuzz, and to protect our food supply, by building a Bee Hotel for solitary bees to nest in. It can be as simple or as ambitious as you like, so long as there are tubes in which your visitors can lay their eggs.



**Bee
in the
City**

ARUP

? DID YOU KNOW?

It takes about 22,700 bees and 10 million foraging trips to make just one jar of honey!

SPOT THE BEE



GARDEN BUMBLEBEE

Big, fat and fluffy! Bumblebees have long tongues that help them feed on pollen in long-stemmed plants, and live in colonies of up to 400. They can have white or red tails.



TAWNY MINING BEE

A furry, solitary bee with an orangey coat and black face. It builds its nest underground: look out for small volcano-like mounds of earth in lawns.



ASHY MINING BEE

A solitary bee known for its distinctive ash-grey and black stripes. Males have a white, hairy 'moustache' on their lower face.



RED MASON BEE

A small, gingerly-coloured bee. Its name comes from its habit of nesting in cavities between brickwork, but it will happily frequent a Bee Hotel too!



HAIRY-FOOTED FLOWER BEES

A solitary bee with long, orange hairs on its middle legs. They look like bumblebees but are smaller and quicker.



HONEY BEE

Black and gold, and on the look-out for nectar to turn into honey. Honey bees live in colonies of up to 100,000.

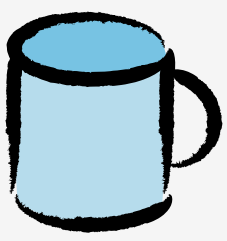
Illustrations by Kelly Stanford

? DID YOU KNOW?

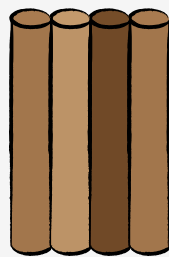
Scientists have found that purple and mauve are bees' favourite colour flowers; but they can't see red at all.

INSTRUCTIONS

YOU WILL NEED



A CYLINDRICAL CONTAINER
Plastic milk bottle, tin can, plant pot or coffee mug



BAMBOO CANES
Twigs, plant stems, paper straws or sheets of paper



SCISSORS OR CRAFT KNIFE



PENS & PAINT BRUSHES
To decorate your Bee Hotel



STRING
Twine, wire or something similar to hang up your hotel



1 PREPARE YOUR CYLINDER

If you're using a plastic drinks bottle, remove the label, then carefully cut off the top portion of the bottle to make a cylinder.

Decorate your hotel with anything you like.



2 PREPARE YOUR TUBES

If you're using bamboo or twigs, ask an adult to help you cut them to the right length. If you're using paper, cut the sheets to the right length and roll them into tubes of varying diameters.



3 PLACE YOUR TUBES INSIDE YOUR CYLINDER

Pack your cylinder with your tubes, pushing them in tightly.

Top tip
The tubes should be a couple of centimetres shorter than the length of your cylinder, so that the nest is sheltered from the rain.

Top tip
Fill your cylinder completely! This will stop the tubes falling out and protect the nests from birds.

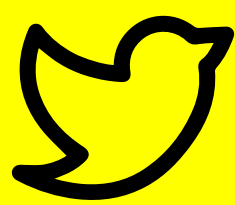


4 PUT YOUR HOTEL IN PLACE

Tie your string, twine or wire around your cylinder, and place in a hedge or hang it from somewhere secure. Against a wall or fence is best.

Your Bee Hotel must be constructed by an adult or with adult supervision. Please take extra care when using tools and adopt all recommended safety precautions.





#STEMBeeHotel

SHOW US YOU'RE THE 'BEE'S KNEES' BY ENTERING OUR PRIZE DRAW

Tag a picture of your finished Bee Hotel using the hashtag #STEMBeeHotel on Twitter or Instagram, and you could win a pocket habitat, plus some bee-friendly flowers to plant in it.

Please refer to competition T&Cs below.

WHERE SHOULD I PUT MY BEE HOTEL?

Unlike bumble bees, solitary bees don't have furry coats, so they need sun and shelter to keep them warm! To make your hotel a popular destination for local bees, put it somewhere that's open, quiet and sunny, and sheltered from any breeze. This could be a garden, a balcony, or a green space at your school or near your house. Hang or place the Bee Hotel at least a metre off the ground, and then keep an eye out for your first visitors!

HOW WILL I KNOW IF MY BEE HOTEL IS BEING USED?

When bees have laid their eggs in a tube, they'll seal it with either mud or leaves.

BED AND BREAKFAST

Bees are much more likely to check into your hotel if there's something for them to eat and drink nearby. You can make your own 'Bee Bar' by placing some stones in a saucer or basin of water. Bees can't swim so they'll perch on the stones to drink.



? DID YOU KNOW

Bees fly at an average of 13 to 15 miles per hour (mph). The average walking speed for a human is just 3 mph.



T&Cs – Applicable to the 'Build a Bee Hotel' competition

Ove Arup & Partners Limited (registered company no. 1312453) of 13 Fitzroy Street, London W1T 4BQ ("Arup") is the promoter ("Promoter") of this free competition. Subject to these Terms and Conditions, all persons who tag their photo #STEMBeeHotel before the stipulated closing deadline will be entered into a free prize draw to win a Pocket Habitat and Wildflower (the "Prize").

1. By entering the 'Build a Bee Hotel' Prize Draw, in association with 'Bee in the City' you will be deemed to accept these T&Cs.
2. You must be a UK resident and over the age of 16 to enter. Participants under the age of 18 must have permission from a parent/legal guardian to enter, and the Promoter reserves the right to ask for proof of permission.
3. The competition opens at 00:00am on 24.07.18 and closes at 23:59pm on 30.09.18 ("Competition Period"). Entries received outside of this time period will not be considered.
4. No purchase is necessary; however, internet access and a valid Twitter or Instagram account are required. Entry to the competition is free and entered through sharing a picture of a Bee Hotel created by the participants, on Instagram or Twitter, using the hashtag #STEMBeeHotel. The photo on Twitter or Instagram must be kept live until a winner is chosen.
5. By entering, Participants confirm and warrant that they have obtained the consent of any person/friends that appears in the photo that has been uploaded.
6. Participants warrant that any images they submit are their own work;
7. Participants warrant that any images they upload do not infringe or violate the rights of any third party, including but not limited to, ownership, copyrights, trademarks, patents, logos, licensing rights, rights of publicity or privacy or any other intellectual property rights;
8. The person that uploads the photo to Twitter or Instagram is considered to be the participant, any other person in the photo will not have any rights to the prize.
9. The promoter will not be liable for any failure of receipt of entries. The promoter takes no responsibility for any entries which are lost, delayed, illegible, corrupted, damaged, incomplete or otherwise invalid.
10. Entries will be rejected if they: i) have not been uploaded specifically for the promotion; ii) contain defamatory, malicious, indecent, immoral or other inappropriate content including sexist or racist language or imagery, iii) include the names, likenesses, photographs or similar of any individual without their express permission; iv) condone or encourage violent or anti-social behaviour; v) cause offence on the ground of religion, gender, sexual orientation, nudity, disability or age; or have negative attitudes about the promoter or any of its related partners.
11. The Promoter reserves the right, at its sole discretion, to eliminate or disqualify any entries or entrants that it regards as being in breach of these conditions or the spirit of the promotion.
12. Only one entry per person is permitted. Participants will be able to win one "Pocket Habitat and Wildflower" prize only once during the entire Competition Period. The prize must be dispatched to a UK postal address.
13. All entries received by the closing date will be collected together and one (1) winner will be drawn at random from all the entries received in accordance with these T&Cs. The winners will be selected at random by a computer process that produces verifiably random results or by an independent person, or under the supervision of an independent person. The draw will take place on or after 01/10/18.
14. The promoter's decision is final. No correspondence will be entered into.
15. The winners will be notified by direct message on the relevant platform through which they entered within 10 working days of the competition closing date and will be given details of how to claim the prize.
16. In the event that the winner fails to respond to the Promoter to confirm its acceptance of the Prize within a reasonable period of time, the Promoter reserves the right (in its sole discretion) to forfeit the Prize or select an alternative winner from the Competition (and is entitled to continue this process thereafter) until a winner on these terms is found.
17. Arup may announce the winner's full name and county and the winner(s) may be required to take part in publicity related to the competition. By entering this competition, the winner(s) hereby agree to take part in any such publicity.
18. Prizes are non-negotiable, non-transferable and non-refundable. No cash alternative is available. Where a prize becomes unavailable for any reason, the promoter reserves the right to substitute the prize for a prize of equal or higher value.
19. A paper copy of these T&Cs and/ or the name and county of winner may be obtained by sending a request and stamped addressed envelope to the following address: STEM Bee Hotel Competition, Marketing Department, Arup, 6th Floor, 3 Piccadilly Place Manchester M1 3BN United Kingdom.
20. Promoter is Arup. Prize Provider is Arup. Arup reserves the right to (i) amend or withdraw these T&Cs at any time and without notice, and (ii) terminate or suspend the competition at any time due to circumstances beyond its control.
21. **This promotion is in no way sponsored, endorsed or administered by, or associated with, Twitter or Instagram. You understand that you are providing your information to Arup and not to Twitter or Instagram and you release Twitter and Instagram from any liability which may arise in connection with this Prize Draw.**
22. Any personal data relating to the winner or any other participants will be used solely to administer the competition and in accordance with current UK data protection legislation.
23. These T&Cs (and any related disputes) are subject to interpretation under the laws of England and to the jurisdiction of the courts of England and Wales.

Disclaimer

Arup is not liable for any damage, loss, actions, demands, claims or disappointment arising out of or in connection with this Competition. Other than for liabilities that cannot be excluded or limited by law, Arup's total liability shall not exceed the value of the relevant prize.



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