

Waggle dance game



Age: Infant, or junior with extensions

Time: 15-30 minutes for game, 45-60 minutes for groups to go out and do the wildflower survey.

- Aims:**
- Children will be able to identify some flowers that bees like
 - Children will understand that bees collect nectar and pollen from flowers to eat
 - Children will understand that bees make nectar and pollen into honey to feed their larvae (babies), and to feed themselves over the winter
 - Children will understand that honey bees do a waggle dance to tell other bees where there is nectar and honey

Set-up: Place flower pictures on the walls of the hall; or for the extension game attach them to cones so they can be moved about. Draw a sun on a piece of paper and write 'top' on another (if using).

Split the children into teams and place a mat on the floor for each team as their 'nest'.



Flower pictures and surveys:

There are six flower pictures in the file 'Bee Cause flower id.pdf'. However, if you will be doing a flower survey:

- You might want to choose flower pictures that are growing in the school grounds so the children can find them.
- Or, if there are no bee-friendly flowers in the school grounds, you might want to place pictures of flowers at locations where you think it would be good to plant some flowers – that way, the children will see that there are no bee-friendly flowers at the moment but there could be
- Or the children could do the survey and discover there are no bee friendly flowers for themselves

Background:

The next page is about bees and waggle dancing. It is for your reference, but could also be copied and given to older children.

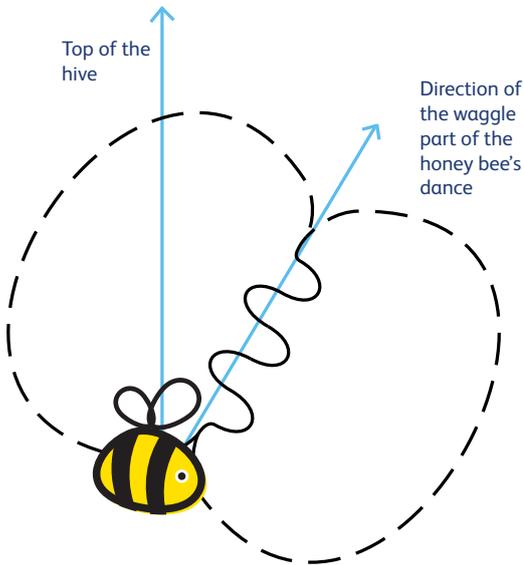
There are more flower pictures to choose from at www.foe.co.uk/beeseducation



Bees and Waggle dancing

If a honey bee finds flowers with a lot of nectar and pollen, she goes back to the nest. She tells the other bees about it so they can find the flowers as well.

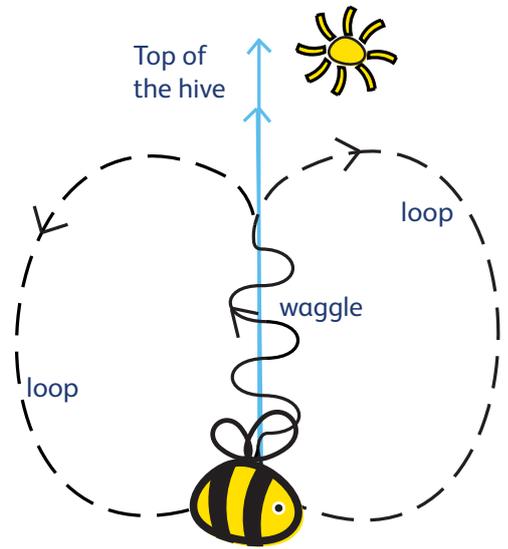
The honey bee does a waggle dance in the nest where it is dark. She doesn't dance on the floor – she dances on the honeycomb, which is upright like a wall.



The bees notice the angle between the top of the hive and the direction of the waggle.

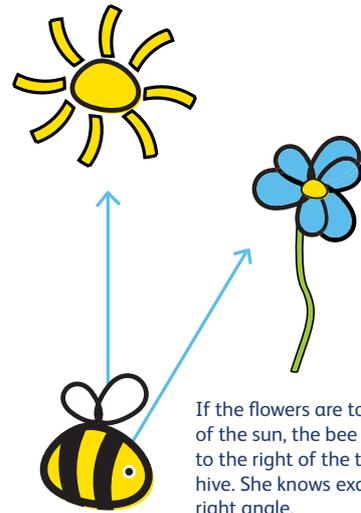
The other bees go out of the nest, find the sun and fly at the same angle to the sun.

There is a link to a video of bees doing the waggle dance here: www.foe.co.uk/beeseducation

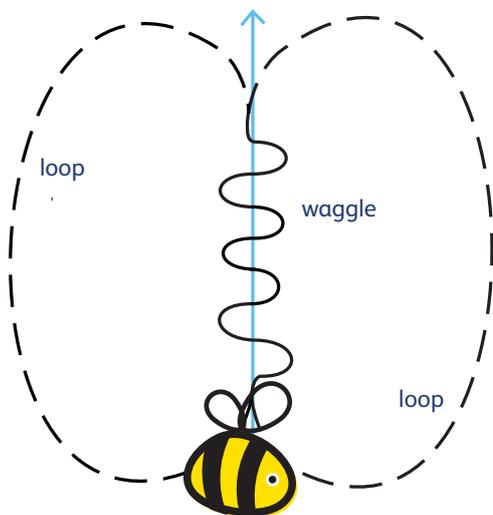


If the bee dances up to the top of the hive, the others bees must fly straight towards the sun.

The bee dances as if the top of the nest was the sun. She dances in a straight line wagging her tail, in the direction of the nectar and pollen. She then loops back round, waggles again, loops the other way, waggles...



If the flowers are to the right of the sun, the bee waggles to the right of the top of the hive. She knows exactly the right angle.



If the waggle is longer, the flowers are further away.

If the dancer repeats the dance lots of times and more bees join in with the same dance, there is a lot of good nectar and pollen. As the nectar and pollen run out, fewer bees do the dance.

The dancing bee lets the other bee smell the pollen so they know the type of flower.

The waggle dance game

Discuss: Bees feed on pollen and nectar, which are found in flowers. Bees take pollen and nectar back to their nests to feed their larvae (babies) and make it into honey to store for winter.

Role play: Children pretend to be bees and buzz slowly round the room, visiting the flowers to see what they look like and pretending to take honey back to the nest.

Tell the children which flowers need pollinating. The children need to go and stand next to the right flower. To start with say the name of the flower, then give clues until all the children have found the right picture. E.g. Lavender...it's purple...it's got spikes of little flowers... Repeat until they can find all of them.

Waggle dance: Children sit on their mats. Ask them to tell you how to get to the dinner hall. Say the bees need to tell each other where their dinner hall is too, which for them is flowers with nectar and honey in. They can't talk or point so they do a waggle dance. Show them how to do a waggle dance and which flower you are pointing to.

Ask for a volunteer and whisper to them which flower has nectar and pollen. They need to waggle dance towards the right flower. The other children go to the flower they think the dancer bee means. This could be done as individuals or the team on each mat could decide and send one person to the right flower. Repeat.

You can just ask the children to dance directly towards the right flower or you can add in some of the extra information about waggle dances as an extension for juniors:

- You could start with the sun and 'top' next to each other on the wall, then move the sun to different places.
- You could have flower pictures on cones so some could be placed nearer or further away, so the distance could be danced by the bees.
- You could tell a whole group which flower, where the sun is, how far and how much nectar and honey. They need to tell the rest of the class using a waggle dance.

A bee-friendly flower hunt

A small group will do this at a time (a quarter of the class?), while the rest do a craft activity or game (see below).

Take the flower pictures off the walls and take them outside to a bee-friendly area in the school grounds or nearby. There are more flower pictures to choose from at www.foe.co.uk/beeseducation if the ones that are chosen are not common in the area near the school. Use the recording sheet to tick the flowers that you can find.

As an extension you could compare two different areas. For example a bedding plant area with a wild area. Have a look in the school grounds to see where would be a good place for some/more bee-friendly flowers.

Bee crafts and games

- Give each child a toilet roll, yellow and black (and orange and white and brown) tissue paper and glue, and ask them to decorate the roll to look like a bee. Pipe cleaners and wobbly eyes would finish it off.



Note: If a Friends of the Earth school visitor is running this session, the location must be agreed with the school in advance and there must be a teacher / teaching assistant to accompany the group as well.

- Using clay make a 3D sculpture, poke lots of holes in it, then fire in a kiln. It's a bee hotel that is also a work of art. You can place them in your bee friendly area in the school grounds. There are also ideas for making bee hotels with more easily available materials at www.foe.co.uk/beeseducation

- Play the beetle game with a dice but draw a bee. (Discuss how many of each body part a bee has before you start and where they join together. You could draw a bee on the board.)



Roll dice and score:

- 6 for the bee body (abdomen and thorax)
 - 5 for the head
 - 4 for legs
 - 3 for each wing
 - 2 for an eye
 - 1 for antennae.
 - First to complete and shout BUZZZY BEE wins each round
- Make tessellating hexagonal bee cell paintings or models.

