

Science – Year 3/4A Spring 2

Plants

A Feast of Flowers, Fruits and Seeds

Session 3

Resource Pack

Honey Dip for Fruit

Ingredients

2 tablespoons of yoghurt (fruit or plain)

1 tablespoon of runny honey

Optional extras choose from:

2-3 drops vanilla extract

$\frac{1}{2}$ teaspoon cinnamon

A sprinkling of lemon zest



Method

1. Spoon the yoghurt and honey into a small bowl or cup.
2. Mix it up until smooth and creamy.
3. Stir in one of the optional extras if required.
4. Pour the dip into a ramekin and put it on a serving plate with a selection of fruit dippers.

Honey Dip for Vegetables

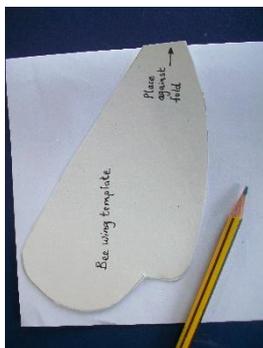
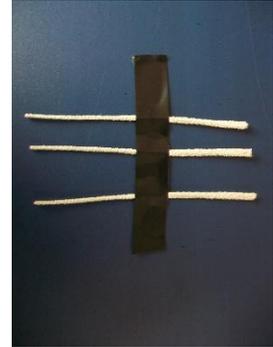


Substitute the yoghurt for mayonnaise or cream cheese and add a teaspoon of chopped herbs, e.g. parsley, dill or chives. Serve with crunchy vegetable dippers.

Task Sheet

I can make a bee puppet and use it to explain how flowers are pollinated.

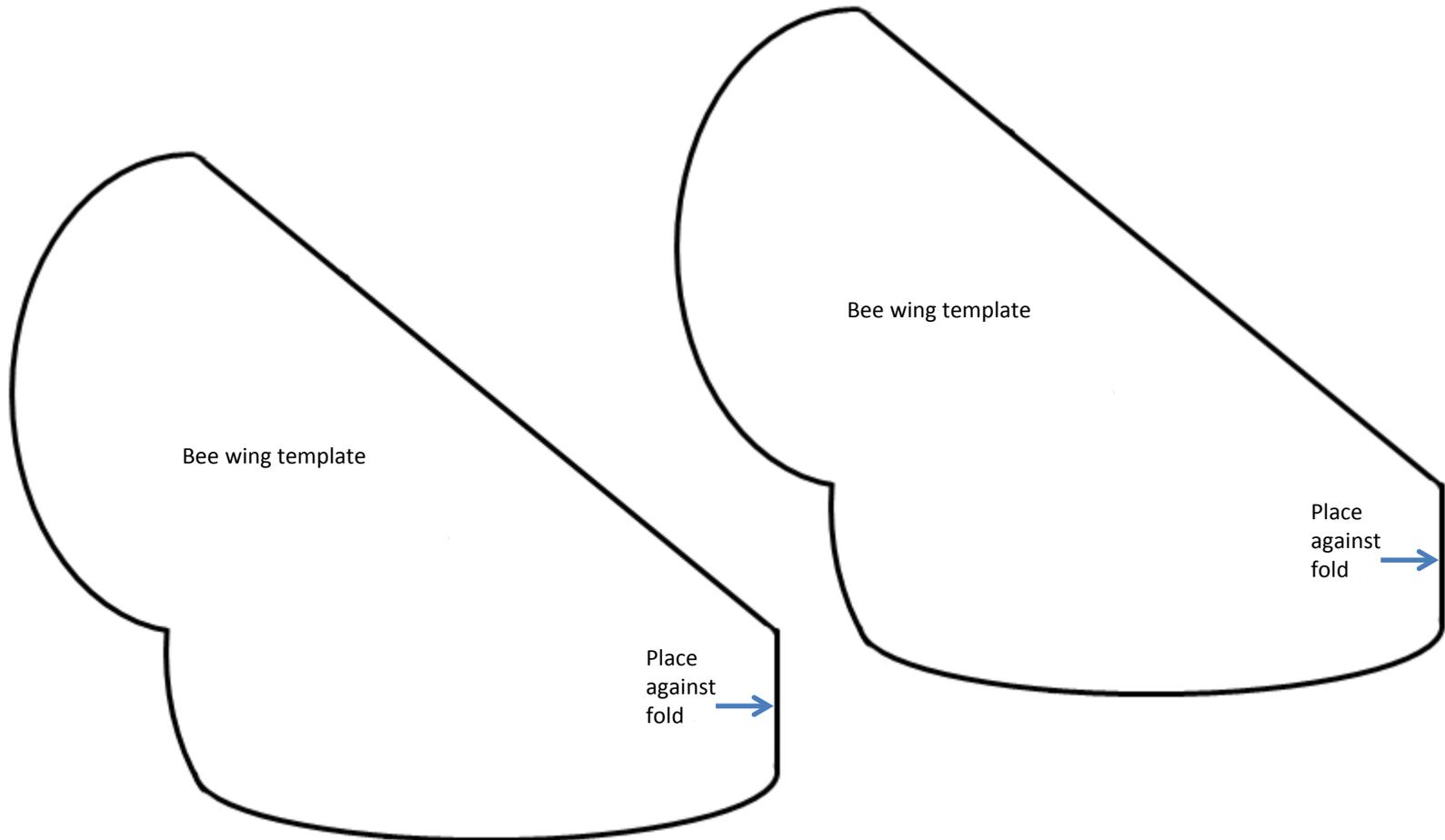
Work with a partner and use the photos to remind you how to make a bee puppet.



Pretend to be wildlife film presenters. Work together to write and practise a commentary that explains how bees and other insects pollinate flowers. Explain why this is important and what happens to flowers after pollination. Use the key words to help you.

Key Words: flowers, nectar, attract, pollen, stamens, male, transfer, stigma, female, pollination, fertilization, hive, honey, waggle dance

Template Sheet



Waggle Dance Game Instructions

This is a game for 2 teams. The teams take it in turns to be bees and flowers. For each round, one of the bees must communicate the location of a target flower by doing the waggle dance. The rest of the hive then fly to the flower they think is the one with the best nectar. The team wins points for every bee that selects the right flower.

You will need:

- **A playing space** - this could be the classroom, the hall or even an outside space. Ideally the space needs a hive area where the bees can buzz about and waggle dance. So if you are using the classroom it would need a carpeted area (or you could move the tables back).
- **Some sticky notes and a pen**
- **A tambourine**

To play the game

1. Divide the class into 2 equal (or almost equal teams). Name one the Honeybees and the other the Bumblebees. Explain that the winning team will be the team who best communicates using the Waggle Dance.
2. Explain that the teams will take it in turns to be bees and flowers. The Bumblebees will start by being the flowers. They should spread themselves out in a circle (or semicircle if you are in the classroom and your carpet area is at the edge of the room). The flowers should be close enough to touch each other with extended arms. Don't worry if your space is small as it doesn't matter if the flowers are closer than arm's length apart. Try to get the flowers evenly spaced. Once the flowers are in position, they should stand still and silent (as flowers do), although of course it's fine to wave gently in the breeze.
3. The Honeybees should stand in the middle. This is the beehive.
4. Write the name of one of the flower children secretly on a sticky note.
5. Explain to the children that you are going to secretly select one of the Honeybees and tell them who the flower with the best nectar is. Only that bee will know which flower it is. All the Honeybees should close their eyes and put the heel of their palms gently over their eyes to ensure no peeking. Tell the children that you have the name of the flower with the best nectar written on a folded sticky note in your hand and you will choose the bee by gently touching one of them on the head. The bee who feels this should open their eyes and look at the name on the sticky note in the teacher's hand. They should quickly check on where this flower is standing.
6. Walk slowly around the bees before selecting your target. After this child has seen the name, continue walking slowly around for a few more seconds to make it less obvious where the target bee is.
7. Tell the honeybees they can open their eyes. Then ask all the bees to buzz gently around the hive, they can fly to a flower or two if they like (without touching the flowers) and back to the hive but they should keep alert because one of them is

going to begin a Waggle Dance after a few seconds. The bee who knows where the good nectar is should do their Waggle Dance in the centre of the hive as a figure of eight (as practised in the lesson) and perform the waggle section 3 times, pointing in the direction of the named flower but without looking at that flower. They should then fly off outside the circle.

8. Now shimmer the tambourine to signal that it's time to choose which flower has the best nectar. All the bees in the hive must fly to the flower they think it is before the tambourine stops shimmering. Explain to the children that it is best for each bee to make up their own mind and not just go to the same flower as everyone else because they might be wrong!
9. Ask the Waggle Dance bee to tell everyone which flower had the best nectar. The Honeybees will get a point for every bee that got it right.
10. Swap over bees and flowers and play again.
11. Play more rounds if time allows and add scores as you go. If it is too easy, play a second round with the flowers closer together.

Session 3 Teachers' Notes

Health and Safety

- Check on your children's dietary restrictions ahead of the session and adapt recipes accordingly. If you have any children that are dairy free, you could use dairy free yogurts (now commonly available in supermarkets).
- Build in good food hygiene routines and discuss the reasons for this.
- If children are cutting their own dippers, remind them about the safe use of cooking equipment (particularly knives). A good technique to teach children cutting up fruits and vegetables with sharp knives is to use a fork to hold the food onto the chopping board and to use the knife in the other hand to slice between the prongs. This keeps all fingers well clear of the blade.

Making Honey Dip

Organisation

It is suggested that you take a group of children at a time to make and taste a honey dip whilst the remainder of the class work on their bee puppet and wildlife commentary. This could be one third or one quarter of the class at a time depending on the number of children you have. If you have additional adults, you may decide to ask them to lead the food activity whilst you support the remainder of the class. To speed up the food activity, you could prepare your fruit or vegetable dippers ahead or stick to dipping items that take little or no preparation, e.g. mini bread sticks, grapes, or easy peel tangerines. If you have plenty of time or enough adults to run 2 food groups simultaneously, you could allow the children to prepare their own dippers, e.g. carrot and cucumber batons or apple slices.

Assemble your equipment and ingredients ahead to facilitate smooth transitions.

Recipes

The suggested recipe is incredibly quick and easy and is made simply by mixing runny honey and one other ingredient (Greek yoghurt, mayonnaise or cream cheese) in a ratio of 1:2. Variations can be made by adding other simple flavourings (see recipe).

You could allow groups some choice in which variety they make or keep it simple and all make the same.

Making Bee Puppets

This activity could be done by the children as an independent activity but would be easier to manage with an extra adult. To make it easier, prepare all the bee resources ahead, e.g. cut enough strips of yellow dishcloth (4 for each bee) and lengths of garden wire (2 per bee). Have a number of wing templates available and enough task sheets for each pair to have their own.

Yellow dishcloths and black socks can be sourced very cheaply from High St shops that sell everything for £1. Use black electrical insulation tape to attach the pipe cleaner legs. It is inexpensive, strong and very sticky!