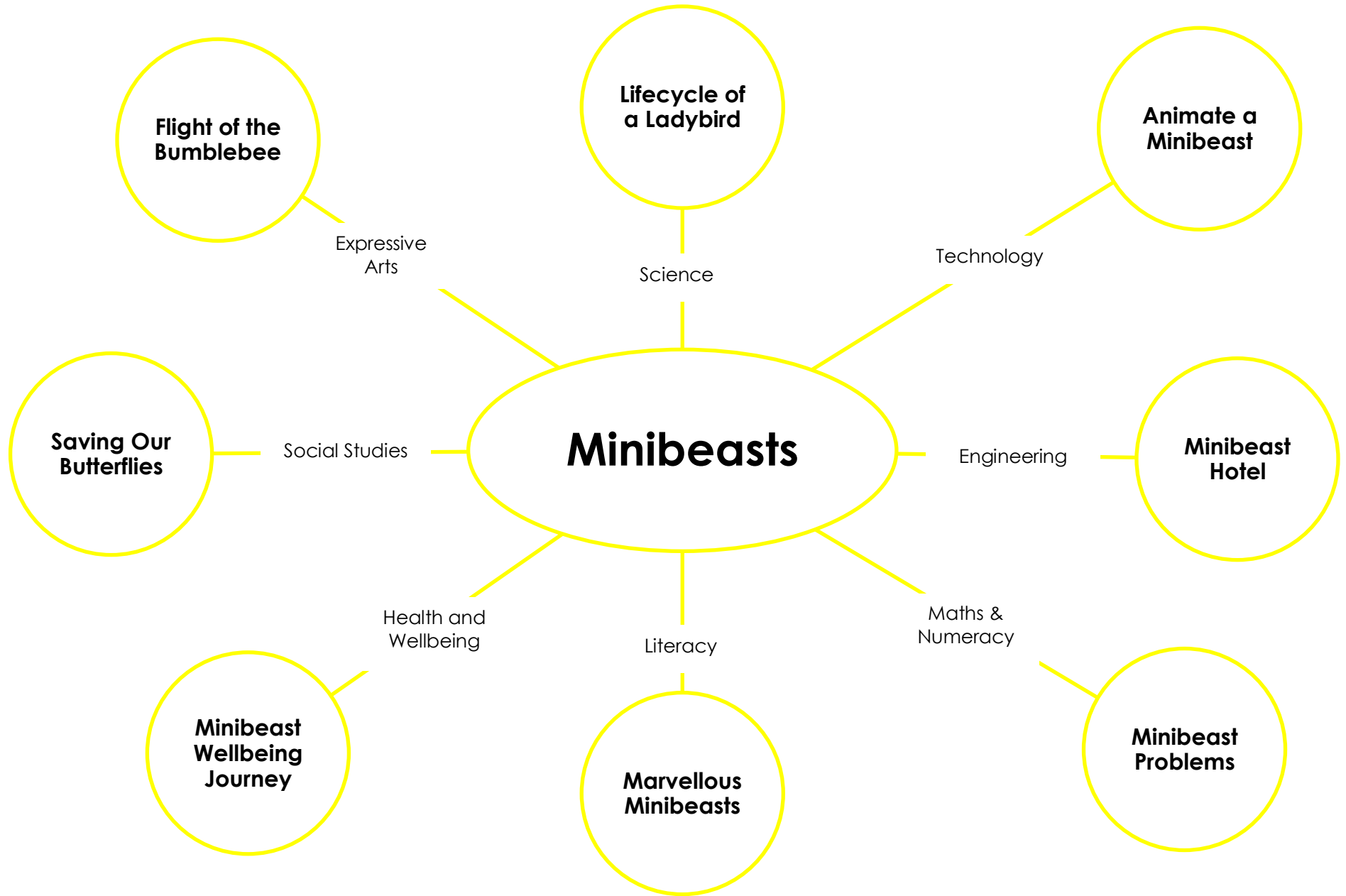




Learning from Home



Science Challenge



Lifecycle of a Ladybird


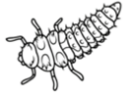

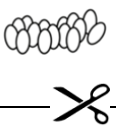
Did you know that there are over 5000 different species of ladybird in the world! Ladybirds (sometimes called ladybugs) are beetles. There are 46 different types in the UK, but only 26 look like a classic ladybird, brightly coloured and patterned.

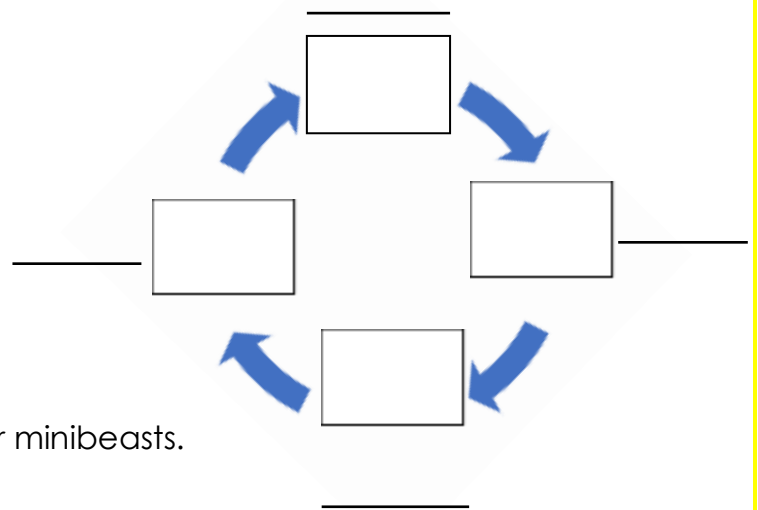
Many species are named after the number of spots. 2-spot, 7-spot and 10-spot ladybirds are all common. Counting the spots is not always a good way to identify them though, as the number of spots can vary a lot. Not all ladybirds even have spots; some have stripes, patches or streaks.

A ladybird's lifecycle has four stages: egg, larva, pupa and adult.

- Egg - Ladybirds lay eggs one or more times a year (species vary), in batches of up to 40. They are yellow or orange and will hatch within 4-10 days.
- Larva - The larvae vary in colour and markings. Many are grey with mottled spots, but yellow, buff or brown larvae are also found. A larva sheds its skin four times over a 3-6 week period, before attaching itself to a leaf or stem and becoming a...
- Pupa - The sleepy pupal stage usually lasts up to two weeks. A lot is happening inside - the ladybird is going through metamorphosis.
- Adult - Newly emerged ladybirds are bright yellow. Over the first few hours, the wing casing hardens and the distinctive colour patterns develop.

Task: Click here to watch: https://www.youtube.com/watch?v=ws_D5nXOAJg then place the different pictures and labels in the correct places to complete the life cycle of a ladybird diagram.

pupa	eggs
larva	adult
	
	



Extension: Why not research the lifecycle of other minibeasts.

Information from www.bbc.co.uk/breathingplaces/ladybirds/

Images from <http://www.supercoloring.com/> and www.clipart-library.com

Technology Challenge



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Animate a Minibeast

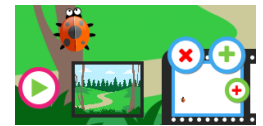
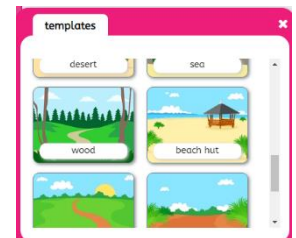
Your Task: Use a computer program to animate a minibeast sprite.

To visit the website click here: <https://www.j2e.com/jit5#animate>



Instructions:

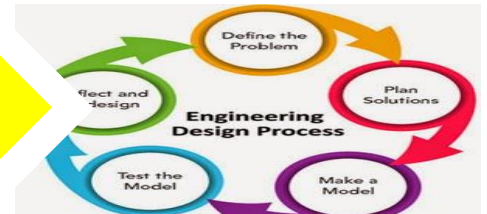
1. Find and choose the 'Wood' template.
2. Click on the word 'Animals' underneath the picture of the lion. Scroll down and click on minibeasts.
3. You can now start to create your animation. (Each box represents 1 frame of animation.)
4. Start by choosing the ladybird sprite. Use the – button to make it smaller and drag it across and place it at the bottom of the tree trunk on the left-hand side. Click, where you want the ladybird to be. It should now also appear in the 1st frame box.
5. Now click onto the second frame box, option buttons should appear showing it is active.
6. Now click back on the ladybird, but this time, drag it across and place it higher up the tree trunk. Again, you should see a ladybird appear – this time in the second frame box. (Showing its new position)
7. Repeat the process until your ladybird reaches the top of the tree.
8. When you have finished, click on the green play button to watch your animation of a ladybird climbing up a tree.
9. Now have fun exploring other animations. Start with adding other minibeast sprites. You can try more complicated animations using more than one sprite and / or having the sprites get larger or smaller, or moving their bodies from side to side as you become more familiar with how the program works.
10. Have fun!



Share your animation with someone at home.

Activity and images from [j2e.com](https://www.j2e.com)

Engineering Challenge

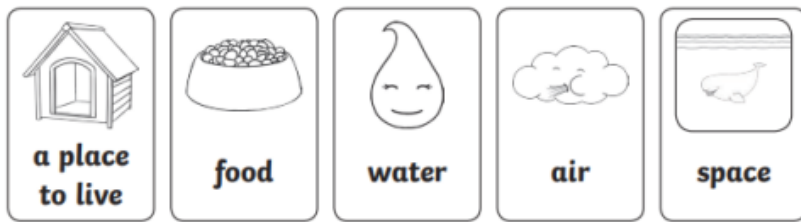


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Minibeast Hotel

Your Task: Design and build a minibeast hotel for the beasts in your garden or a place nearby.

Remember, all living creatures, including minibeasts need the following things to survive.



Natural	Man Made - Recycled
 leaves  rocks  logs  grass  twigs	 cardboard box  egg box  plastic bottle  toilet rolls  lollipop sticks  plastic straws

You Will Need: a selection of natural and man-made recycled materials.

Plan it: You may wish to research using the internet or using an encyclopedia or reference text first to get some ideas for your hotel. You could also ask an adult at home. List your materials and make a drawing of what you think your hotel will look like. Try to add labels.

Build It: Use your plan to help you with the construction.

Test It: Place your minibeast hotel in the desired location – it will be safer if you have a spot nearby where less people are likely to notice it.

Reflect: What worked well / what didn't work so well?

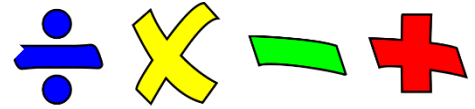
Improve It: What can you change to make your hotel more attractive for bugs?

Safety Note: Always wash your hands after touching minibeasts, soil, leaves etc.

Remember: You should not keep bugs trapped – allow them to return them to their own habitats if possible.

Activity and images from TES

Maths & Numeracy Challenge



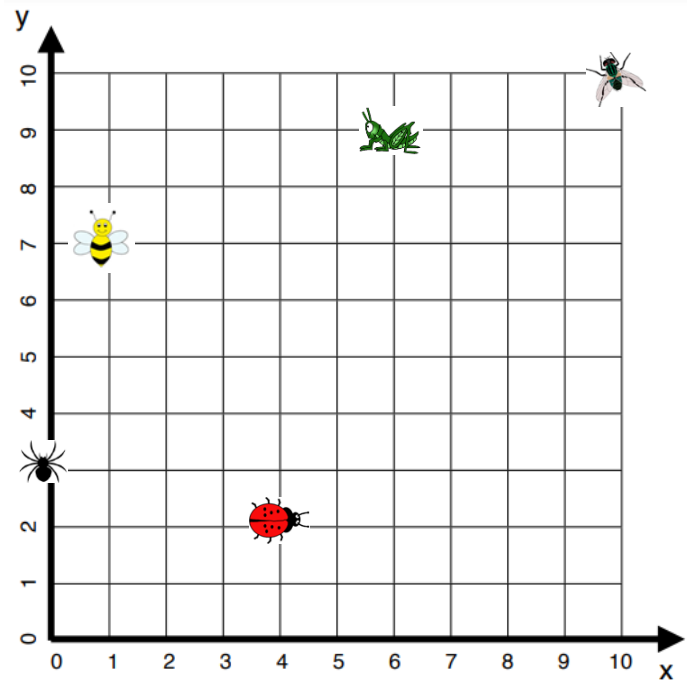
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Minibeast Problems

Use the information in the table below to help you work out the answers to the minibeast problems.

Minibeast	Spider	Ant	Bees	Woodlouse	Butterfly
Number of legs	8	6	6	14	6
Miscellaneous	2 body parts	3 body parts	3 body parts	Average 2.5mm long	4 wings

- There are 4 spiders in a cave. How many legs are there altogether? How many body parts?
- Work out the total number of legs and body parts if there are 15 ants plus 13 butterflies.
- Work out the total number of legs left in the beehive if there were 23 bees and 11 flew away.
- Darren counted 8 woodlice and Jamie counted 6. If the woodlice were laid out end to end, how long would they measure? (Calculate in mm and cm)
- If there were 23 caterpillars and 6 turned into butterflies, how many caterpillars would be left? How many butterfly legs would there be now? How many wings would there be?
- Plot the following on the coordinate grid.
 - A worm at (2, 2)
 - A slug at (7, 6)
 - A beetle at (10, 8)
 - A moth at (9, 4)
- Now write down the coordinates of these minibeasts then translate (move) them and write down the new coordinate.



Images from www.clipart-library.com
Grid from www.teachingideas.co.uk/

Minibeast	Original Coordinate	Translation	Finishing Coordinate
Ladybird	(,)	Up 3	(,)
Bee	(,)	Right 6	(,)
Fly	(,)	Left 2	(,)
Spider	(,)	Right 6, Down 3	(,)
Locust	(,)	Left 1, Up 5	(6, 9)

- Use a ruler to draw your own 10 x 10 coordinate grid. Ask someone at home to plot 6 minibeasts for you. Write down the coordinates then translate each bug so that they all end up at (5, 0) Write down the translation instructions for each.

Literacy Challenge



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Marvellous Minibeasts

Task 1: Put the following minibeasts into alphabetical order.

spider	ladybird	grasshopper	wasp	bee	moth	snail
fly	beetle	earwig	cricket	worm	dragonfly	slug



Task 2: Nonsense Rhymes. Use the word banks provided or choose words of your own to write a short nonsense poem for each of the following minibeasts...

E.g.,

bee	sea	ski	leek	pea
-----	-----	-----	------	-----

Have you ever seen a bee swimming in the sea
 Learning how to water ski
 Drinking soup of leek and pea?



fly	pie	sky	goodbye	eye
-----	-----	-----	---------	-----

1. Have you ever seen a fly...



slug	bug	hug	mug	plug
------	-----	-----	-----	------

2. Have you ever seen a slug...



ladybird	crossword	bird	word	heard
----------	-----------	------	------	-------

3. Have you ever seen a ladybird...

Task 3: How many minibeasts can you find in this jumble of letters? There are at least 7. Write them down.

f a w b e n s p b s e l o r i l t e t m y l e d u g e e r

Ideas adapted from www.teachitprimary.co.uk Images from www.clipart-library.com



Health & Wellbeing Challenge

Minibeast Wellbeing Journey

Click here to watch James, from The Woodland Classroom Trust, as he guides us through a bug hunting wellbeing journey: <https://www.youtube.com/watch?v=lzj7iIzk6Gg>

What has bug hunting got to do with wellbeing? Well, it makes us slow down and take more notice of our surroundings. It helps us to pay attention. When we slow down and take notice, we start to see lots of details we didn't notice before. There might be some little flowers which have made their home in a gap between some rocks, some ants which have made a new nest, the tracks of an animal. There's so much to see when we start to take our time and actually look.

Hunting for bugs (and other creatures) also helps us to understand them and have '**empathy**' for them. **Empathy** = the ability to understand the feelings of another living being, whether that's a minibeast, a cat, a dog or another person.

Task 1: Find a wild place near you and take some time to just look and watch the variety of living things present. You may wish to choose a place in your garden – maybe it is dark and damp with logs and stones – what kind of minibeast would you expect to find there? You might want to choose a sunnier spot where there is grass or soil – will the variety of living things be different there? Try to empathise with any minibeasts you see.

Task 2: Now using a piece of string (about 1m long), lay it down in a 'winding path', all the way from one side of your wild space to the other. Now you, as a bug, are going to go on an adventure. Think about: **1.** Why are you making the journey? **2.** What do the features you see now become? Is the rock now a mountain? Is the small puddle now a loch or river? Is the moss on a stone now a deep, dark forest? Try to empathise with your bug as they make the journey. Are you worried about the predators which might be lurking in the loch or forest? Are you going to visit family or are you returning home after a trip elsewhere – you might feel happy and excited to see familiar faces and surroundings. You decide.

Try to record your story. You could write it down or you could draw it as a series of pictures. You could make a map of the area that your bug has travelled, or you could make a video about it. You might want to speak into a voice recorder - the choice is yours. Try to identify 3 feelings that you felt when you empathised with your minibeast. Did you feel happy, sad, scared, worried, excited etc. When you have finished, share your story with someone at home.

It is important to have empathy with other living creatures, no matter how small they are. This also teaches us to slow down, to pay attention and to notice what is going on all around us. This in turn can help us feel calm and more relaxed.

Adapted from <https://woodlandclassroom.com/>



Social Studies Challenge



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Saving Our Butterflies

Butterflies are minibeasts and they are some of our most beautiful garden visitors. They have important roles to play in plant pollination and the food chain.

Butterflies are highly sensitive indicators of the health of the environment, and we know that sadly, many species are declining rapidly.

"Right now, we are facing a man-made disaster of global scale. The twin challenges of climate change and biodiversity loss are pushing much of the natural world to the brink – including many of our most treasured species. In the UK, the majority of our butterfly and moth species are in worrying decline.

*These beautiful and fascinating creatures are not just important in their own right, but are also indicators of a healthy environment for all wildlife. **Butterfly Conservation** is committed to delivering the biggest possible impact for nature, playing a leading role within the conservation sector, with our new, ambitious strategy."* **Chris Packham**

Click here to find out more: <https://www.youtube.com/watch?v=ETniTACCEbM>

By counting and identifying the butterflies that visit their gardens throughout the year, some people are sharing essential data that could help us understand how butterflies are faring in gardens across the UK.

Garden Butterfly Survey sightings and information about people's gardens is helping to provide better, evidence-based advice on how to manage gardens to benefit butterflies throughout their life-cycle from egg to adult.

Click here to find out more about counting butterflies: <https://gardenbutterflysurvey.org/>

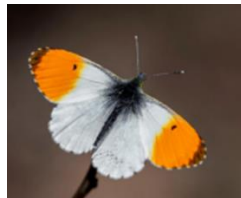
How many of these butterflies have you seen?



Small White



Large White



Orange tip



Peacock



Small Tortoiseshell

Task: Talk to an adult at home about what you could do to make your garden / outside space or local community butterfly friendly.

Information and images from <https://butterfly-conservation.org/>

Expressive Arts Challenge



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Flight of the Bumblebee

Nikolai Rimsky-Korsakov - Born: March 18, 1844, Died: June 21, 1908



Nikolai Rimsky-Korsakov was a Russian composer. As a child he often listened to folk songs, church music, and operas. He was a talented piano player. As a young man, Nikolai taught at St. Petersburg Conservatory, which is now called “Rimsky-Korsakov Conservatory.” He was well respected by his students. He also became part of a group of five famous Russian composers called “**The Mighty Handful**,” or “**The Mighty Five**.”

Throughout his life, Nikolai wrote operas, choral music, chamber music and works for his piano. One of his most famous pieces is “**Flight of the Bumblebee**,” which is a song about a prince who disguises himself as a bee.

A Buzzing Prince

Rimsky-Korsakov was very good at using the instruments of the orchestra to create pictures and stories. In “**Flight of the Bumblebee**” he used the string family to create a musical “bumblebee.” But, this is no ordinary insect—this bee is really a prince! The music comes from Rimsky-Korsakov’s opera **The Tale of Tsar Saltan**. In the story, a magic swan turns the prince into a bumblebee so that he can visit Tsar Saltan without being seen.

Task: As you listen to the music, can you imagine a bumblebee buzzing around the Tsar and then quickly flying away so it doesn’t get caught?

Click here to hear ‘Flight of the Bumblebee’: <https://www.youtube.com/watch?v=X14kC-sEH0I>

Flight of the Bumblebee

Various instruments play the music in this piece. Can you tell what they are? **Hint:** listen for a violin, a flute and groups of strings. Think about how the composer makes the bee “buzz?” One way that Rimsky-Korsakov makes it sound as if the bee is flying around buzzing is by using a chromatic note pattern. This means that the notes played are very close to one another in pitch. If you have a piano, you can play a chromatic scale by pressing both the white keys and the black keys in ascending (going up) or descending (going down) order.

Extension: Click here to explore the instruments of the orchestra and test your knowledge: <https://insidetheorchestra.org/virtual-school-programs-hub/online-musical-games/>

Information from www.classicsforkids.com Image from www.clipart-library.com

