

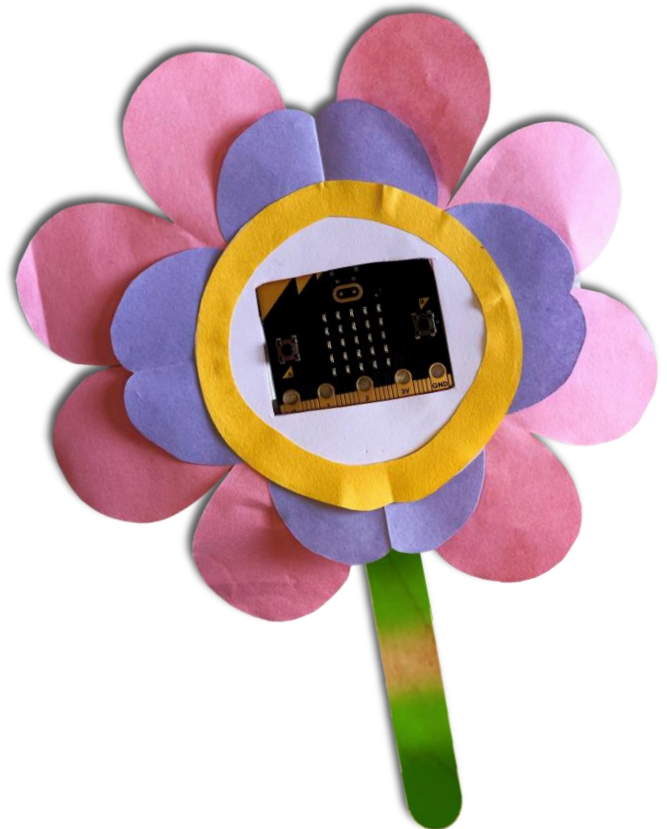
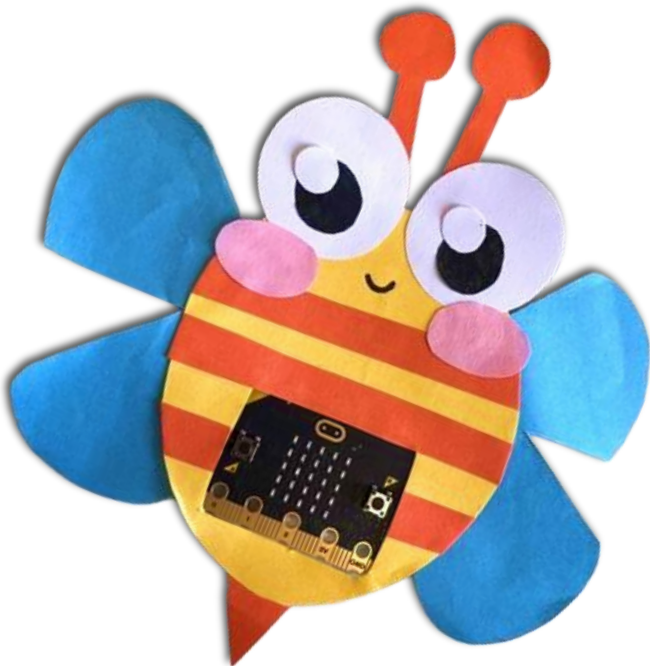
1. Setup
2. Warm up
3. Create
4. Share
5. Reflect
6. Plan

Workshop Guide

MICRO:BIT BEE & FLOWER

COLLECT A BIG STICKER HERE

When you complete the Project!



BEFORE WE START



Read the words below together as a family.



BE POLITE AND SAFE

Use kind words, be patient and respectful of others.



BE FRIENDLY

Make friends, ask questions, and share learning.



BE CURIOUS

Show interest, share ideas, there is no such thing as “bad questions or wrong answers.”



TAKE ACTION

Make decisions, note results, and enjoy the activity.



RECOGNISE EFFORT & ACHIEVEMENT

Cheer your own and other’s successes alike.



Write some kind words or draw pictures.



Write or draw one good thing each of you has done recently.



Write or draw what each of you is most interested in.

1

SETUP



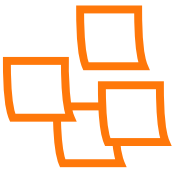
1. Make team with another family
2. Decide which family is doing Bee project, and which is doing Flower

SELECT YOUR ROLE IN YOUR TEAM:



ORGANISER

- Write a simple plan with the team
- Check if the team is on track
- Make sure the team starts and finishes on time



DESIGNER

- Turn ideas into a picture for the team
- Show what the project will look like



CODER

- Build the brain of the project
- Operate the laptop/tablet/phone
- Connect the coding blocks on MakeCode website
- Test the code and fix mistakes



MAKER

- Build the body of the project
- Cut and prepare material
- Partner with the designer on how to decorate it



REVIEWER

- In the end, check and review the project
- Is it working?
- Does it look right?
- Are any steps missing?

Collect the following for this project:

- Micro:bit
- Ice-cream sticks
- Art & craft Items
- Laptop/Tablet
- Coloured craft papers
- Masking tape



DESIGNER TASK



Designers refer to this page once team reaches **Step 3. Create.**

Bee Team: Draw what your pollen symbol looks when you bee collects it.

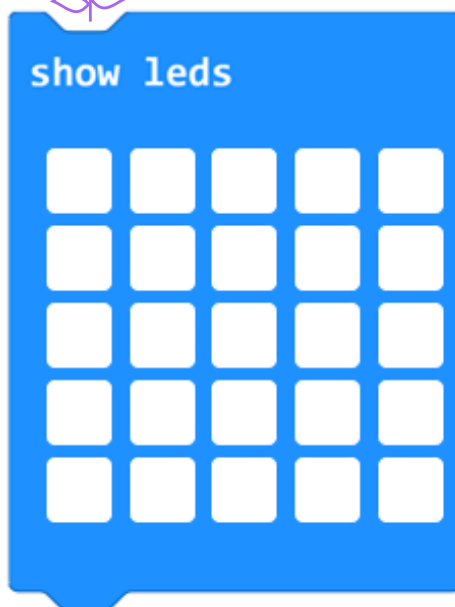
Flower Team: Draw what your Micro:bit flower centre would look like.



POLLEN



FLOWER

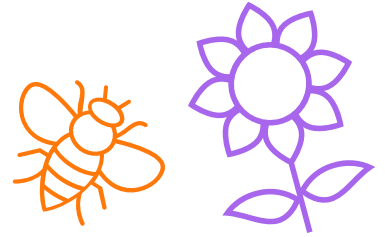


Notes

COLLECT sticker



ORGANISER TASK



LET'S PLAY A GAME!

Before you start coding and crafting, let's play a game – **FIND THE FLOWER!**

THINGS TO DECIDE

01. Tournament Format

- All families work together to draw a big flower on a sheet of paper.
- Mark the centre of the flower.
- Stick the flower up on a wall or on a table
- Each family chooses someone to be the Bee on their team.

02. Gameplay

- The first Bee is blindfolded and gets a sticker.
- The Bee stands 2-3 metres away from the flower.
- The Bee has 30 seconds to try to put the sticker in the centre of the flower
- The Bee's team can help the Bee but **only** by buzzing louder when the Bee gets closer and quieter when the Bee gets farther away
- No talking allowed!
- No peeking allowed!
- Each Bee takes a turn until each team's sticker is on the flower.

03. Winning

- The team whose sticker is closest to the centre of flower WINS!
- The winning team gets a sticker of their choice.

WHY DO THIS FIRST?

It gets everyone active and relaxed, creating a positive, fun atmosphere before starting the project. It builds a warm-up routine, helping families ease into future STEAM activities with confidence.



3

CREATE: Make



MAKER + DESIGNER TASK



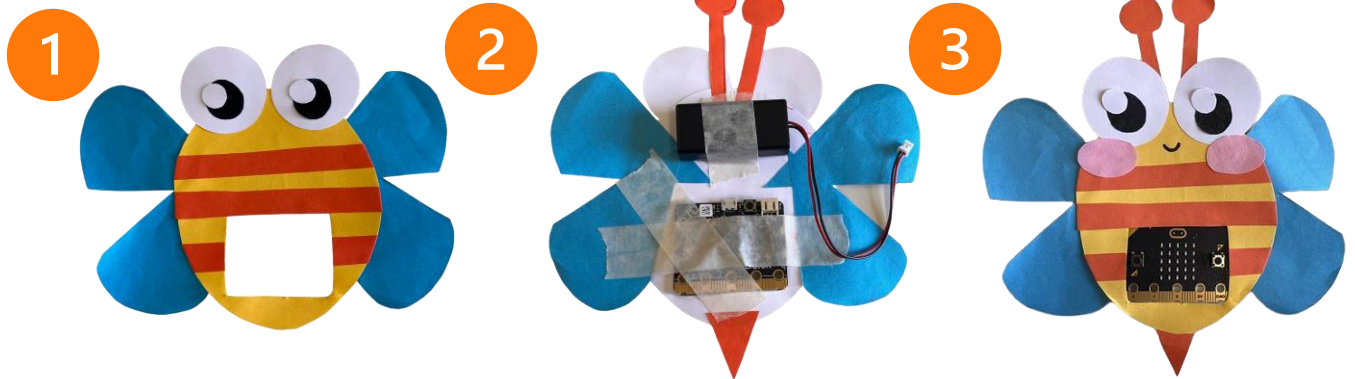
Teams, take out your crafting material!

Choose one craft: Bee or Flower

Craft your Bee or Flower as you wish or you can follow the images below.



BEE TEAM CRAFT



FLOWER TEAM CRAFT



REVIEWER TASK



Reviewer: Make sure the Micro:bit and battery pack are securely attached.





3

CREATE: Code

CODER + DESIGNER TASK



COLLECT sticker



Choose one code: Bee or Flower

Each team picks a radio number between 1 and 255.

Bee and Flower must use the same radio number to be able to connect.

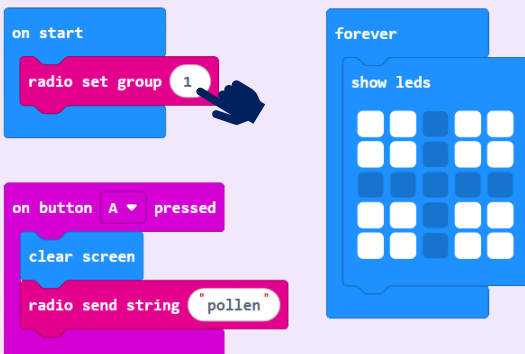


BEE CODE

- Bee Coder**, go to makecode.microbit.org.
- Make a new project and name it Bee. Follow the code shown on right.
- Make sure the “radio set group” number matches with the flower in your team (number between 1-255)
- “P” will flash on your Micro:bit followed by a smiley when your bee receives Pollen.



FLOWER CODE



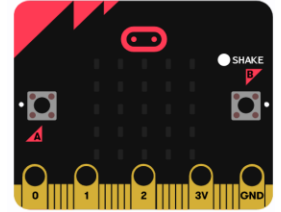
- Flower Coder**, go to makecode.microbit.org.
- Make a new project and name it Flower. Follow the code shown on left.
- Make sure your “radio set group” matches with the bee in your team. (number between 1-255)
- Every time you press button A, bee in your team nearby will receive a pollen.

3

CREATE: Code

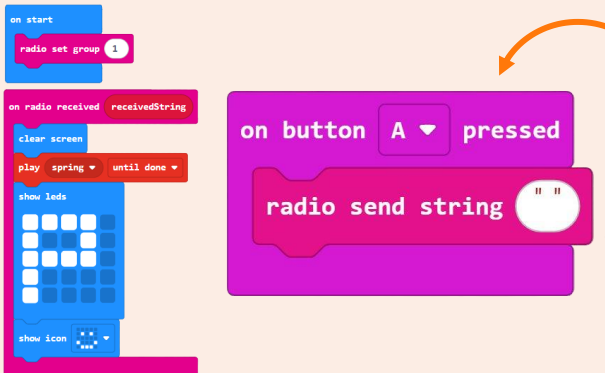


REVIEWER TASK

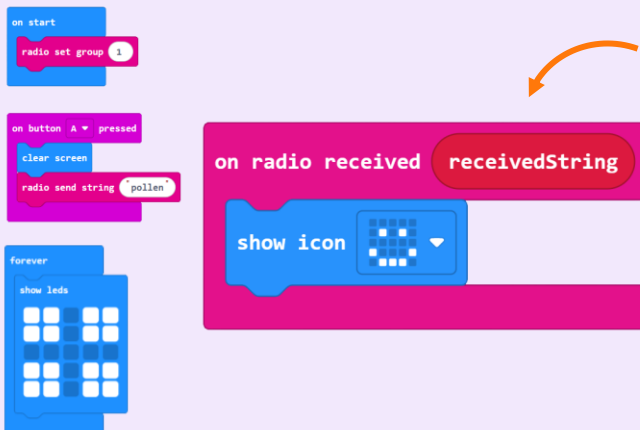


1. Test the Program

a. Reviewer, time to check if your code is functioning.



- Bee reviewer**, add this bit of code (shown on left) into the coding workspace.
- Click on button A on your digital Micro:bit
- Does a second micro:bit pop up on the screen showing the letter P and a smiley icon? It's working!
- Now you can **delete** this code block



- Flower reviewer**, add this bit of code (shown on left) into the coding workspace.
- Click on button A on your digital micro:bit
- Does a second micro:bit pop up on the screen showing a smiley icon? It's working!
- Now you can **delete** this code block.

2. Download

Connect your device and click download, then test the code on the real micro:bit.

Test how far can your Bee can be from the Flower before it stops receiving pollen.





OPTIONAL

ADVANCED: Code



BEE CODE



COLLECT sticker

1

```

on radio received receivedString
  if receivedString = "pollen" then
    change score by 1
    play twinkle in background
    repeat 2 times
      do
        show icon [grid icon]
        pause (ms) 200
        clear screen
        pause (ms) 100
    +
  show number score
  
```

- Bee Coder**, let's build a more advanced code.
- This code helps keep score of the amount of pollen you collect from your Flower.
- Remember to make your radio set group number the same as your Flower's.
- Experiment – try to change sounds, icons etc.
- Try collecting pollen from other team's Flower**– ask their radio set group number and change to that number.

2

```

on button B pressed
  set score to 0
  show string "0"
  
```

3

```

on start
  radio set group 255
  
```





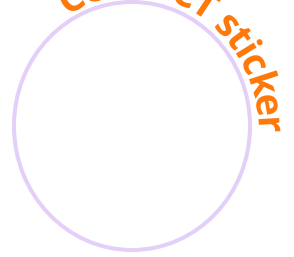
OPTIONAL

ADVANCED: Code

FLOWER CODE



COLLECT sticker



1

```

on button A pressed
  radio send string "pollen"
  play spring in background
  show icon [grid icon]
  pause (ms) 150
  show icon [grid icon]
  pause (ms) 150
  show icon [grid icon]
  
```

- ❑ **Flower Coder**, let's build a more advanced code.
- ❑ This code adds music and icon animation.
- ❑ Keep in mind you have to make your radio set group number the same as your Bee's.
- ❑ Try to change inputs, sounds, icon – experiment!
- ❑ **Try giving pollen to other team's Bee** – ask their radio set group number and change to that number.

2

```

forever
  show leds
  
```

3

```

on start
  radio set group 255
  
```



4

SHARE



CONGRATULATIONS TEAM!

You made your own Bee and Flower!

Play with what you have made!

Look at other team's projects and ask how it went!

5

REFLECT

Discuss with everyone in the room **what you felt and what could you do in the future.**

- Did you have fun? Did you help someone?
- What was your favourite part? Least favourite?
- Learn anything? Feel more confident?
- Think you and your family would like to do more?

6

PLAN

At the end of every MeetUp, families plan the next one by choosing a project to work on and deciding who will do which tasks to organise it.



<https://ourkidscode.ie/run-a-club>

You will find these useful documents on our website:

- Start a club guide
- Running a MeetUp
- Choosing a project
- MeetUp Checklist
- Being a team player
- Forming a family team

Acknowledgements and copyright

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