



The Ark

Will Fredd
theatre

BEE!

A MUSICAL

At-Home Activities Part 1

Introduction

BEES! is a musical from WillFredd Theatre in association with The Ark, created especially for children. The musical tells the story of a honeybee named Mel who loses her colony and tries to find her way in the world without it. Through fun songs, catchy rhymes, and a story about an amazing adventure, the audience learns about a diversity of bee species along with Mel, and even discovers how important bees are to human beings.

These activities and the show itself are aimed at children aged 6+ and work with the themes of the show. These activities have been selected and adapted from our full classroom activity pack which links to aspects of the primary school curriculum. If you would like further activities you can download the full document for free [here](#).

These ideas aim to remind us that, just as the bees, “*we’re all here for a short time*” and have the potential to make a great impact on our environment.

Background Buzz

Did you know that there are over 20,000 different types of bees? They all have different life histories, and three are the focus of the *BEES!* show:

- A honeybee (*Apis mellifera* – “Mel”)
- A bumblebee (*Bombus lucorum* – “Luke”)
- A solitary bee (*Nomada marshamella* – “Marsha”).

As unique as each species is, all play an active role in the growth of flowers and plants. Bees affect our food supply and the food chain, and are a significant part of our everyday lives without realising it. They are intelligent and referred to as ‘engineers of nature’ (Tales from the Hive, 2007).



The ideas in this activity pack will lead to a discovery of how “*the bees need the flowers and the flowers need the bees*”. The activities explore the roles and responsibilities humans and bees take in the environment.

In 2015, Ireland released the All-Ireland Pollinator Plan, one of only a few countries in Europe to publish a strategy to address pollinator decline and protect pollination. We have released a Junior version of this plan so that children can become involved in this unique movement to become pollinator-friendly.

The Junior Pollinator Plan is full of important information about bees, pollination and how they are essential for us to grow food, as well as for other animals. The plan suggests ways that children can help bees, which you can also adopt at home. You can download the plan in English [here](#), or in Irish [here](#).

Activity 1: A-Bee-C

Preparation:

Write a list from A to Z down the left side of a large piece of paper.

Activity:

- Write down a word beginning with each letter of the alphabet about bees. Answers can range from different species of bees, types of plants they pollinate, descriptive words that have to do with bees, etc. Be creative! If you watch *BEES! A Musical*, you'll hear some of these words, and you can also refer to the All Ireland Junior Pollinator plan to learn more.
- If you like, you can work with a family member until you have completed the entire list from A-Z and then review your answers afterwards.

Adaptation:

- If you have enough people at home, you can make this into a competition. You can compete individually or divide into pairs etc. Time yourselves – who can complete the activity the fastest? Who can complete the list from A-Z?

Discussion:

- What do you already know about bees?
- What would you like to find out?

Useful Information:

- There are over 20,000 different species of bees, and these can be either social or solitary bees.
- Bees are pollinators which means they help encourage the reproduction of plants naturally. Some plants cannot produce seeds to create the next generation without bees.
- Honeybees and Bumblebees are social bees and live in colonies.
- Solitary bees lay their eggs and then leave the young to emerge and grow on their own.
- Bees sting when faced by danger. Honeybees are some of the only bees which die after they sting a predator.

Activity 2: Bee Aware of Danger

This activity aims to explore the decline of bees.

- Below is an overview of the five main reasons for the decline of bees in Ireland.
- Look at each of the pictures and read the information that goes along with it.



HUNGER

There aren't enough flowers on some farms or in cities and bees need the food to last from early spring to late autumn and sometimes run out of nectar. Try planting more wildflowers to help the bees get more food.

HOMELESSNESS

Bees nests are disappearing because of where farms are located. Some farms are even being used for factories and bees are being pushed out of natural homes like trees. Try building your own nest for bees near a farm or field.



SICKNESS

A very dangerous bug called the Varroa Mite is causing the bees to become very sick. They attach onto the bee and are difficult to see. Try capturing them with a comb or with powdered sugar!

POISONING

More and more farmers are using chemicals on plants to fight unwanted bugs, but this is harming the bees. Try supporting organic farms in your area!



CHANGING ENVIRONMENT

Extreme weather is causing plants to grow early and leaving the bees with less nectar when they are ready to collect it. Try planting flowers, herbs, and crops that will do well in Irish weather!

Information taken from National Biodiversity Data Centre, 2015 [here](#).

- Prepare a newscast sharing this information. You can present this for members of your family. If you like, you can all work together on each image, or you can work on different images individually and present them to each other.
- If you are working individually, you can take the role of the news reporter. Try creating different reports in different roles: reporters, farmers, meteorologists, beekeepers or scientists. If you are working together, different people can take different roles.

Activity 3: A Honey Bee Machine

This activity aims to explore how a honey bee colony functions to create space and honey in the hive.

Discussion:

- What are the various jobs in the hive? Tasks include: collecting food (to feed all the bees in the colony), to make space, and to start a new colony.
- There are three types of honey bees: the worker bees (infertile females), the queen bee (fertile females), and the drones (males).
- There are about 40-50,000 bees per colony and only 100 or so are males. The rest are females, and most are workers.
- Once the bees bring in the nectar from the flowers, they regurgitate it 70-80 times to reduce water and make honey. They then seal it into the comb with wax and prepare the space for the queen to lay eggs.
- For each kilo of honey, the bees make approximately 56 grams of wax.

Here's a video clip about the way the bees work in the hive:

<https://www.youtube.com/watch?v=FtKqic69xVo> (2:00-5:35)

Family Activity:

- Form a small group with members of your family and work together to take the role of a worker bee in a hive.
- Everyone should choose one sound and one gesture or repeatable movement that represents their worker bee. Take some time to decide and then practice this.
- One by one, everyone should make a "machine" together and add to this sound and gesture so that they build upon what the other person is doing.
- Continue until everyone has a role repeating their own sound and gesture to create one honey bee machine.

- You can encourage each other to speed up and slow down.

Discussion:

- How do the bees work together?
- What did you notice another person doing?
- How did you add to this?
- In the video clip, what do the bees do when they feel they have run out of space?

This activity can be repeated to create varying other types of machines or functioning groups such as a flower machine, a bumblebee machine, a pollination machine, a jarring machine for producing honey, a machine that includes humans, etc.

Possible Future Activities

Some options for additional bee-friendly activities to do are:

- Plant flowers that are able to grow in the Spring so that you can observe and evaluate it. Suggestions for this include crocus, primrose, lily-of-the-valley, blackcurrant, or flowering currant. After some time of growth, evaluate the progress of the plant. When choosing your plant, remember: Bees notice bright colours such as blue and yellow best!

You can see a list of recommended plants at:

<https://www.rhs.org.uk/science/conservation-biodiversity>

Maybe you could make a bumblebee nest...

Take a look at this link from the Bumblebee Conservation Trust for ideas:

<http://bumblebeeconservation.org/about-bees/habitats/bumblebee-nest>



We would love to hear how you get on with these at-home activities. Please let us know by emailing boxoffice@ark.ie or tagging us on social media **@TheArkDublin** using the hashtag **#TheArkAtHome**. If you've taken any nice pictures or videos while enjoying these activities, we'd love for you to share them with us!

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