



Stewardship

Working Together to protect God's World
and to serve the Common Good

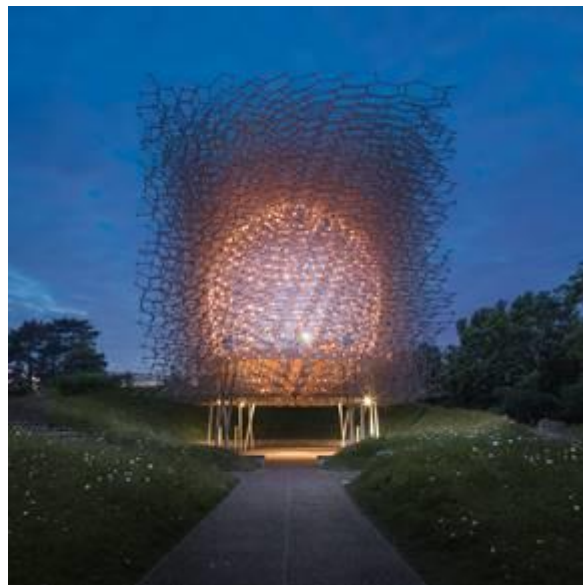
Introduction

One of the prompts and inspiration-generators for this year's theme was during the planting of bee-friendly flowers and shrubs in our garden after visiting Kew Gardens last summer. At Kew we experienced 'The Hive', Wolfgang Buttress' amazing interactive, huge art installation. It is brilliantly set in a wildflower meadow and linked to the bee hives on site, producing a sound & light alignment experience. I was convinced and

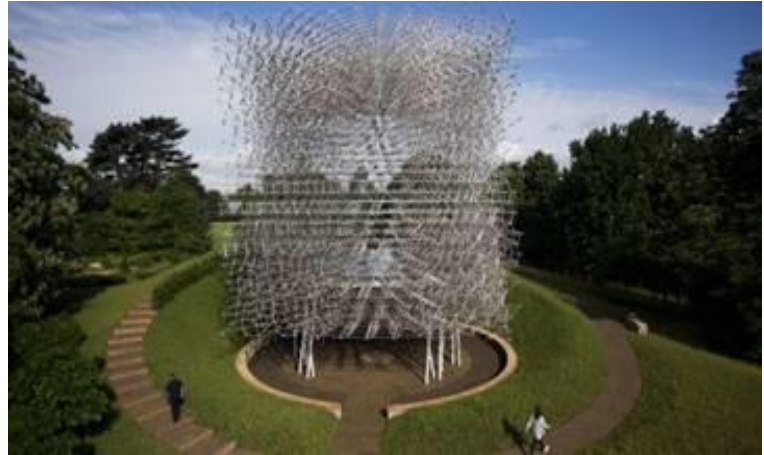



convicted that if each of our 160 schools planted just one bee/insect friendly plant, we would immediately have a positive effect on our environment across six local authority areas! If the idea grew and even one child or family copied in each school, the potential impact is enormous. Ideally, if our schools planted even more, and encouraged our staff and children and linked churches to do the same..... just imagine!

Some of the Education Team joined me for a visit to The Hive at Kew at the start of the Autumn term, when we began pooling possible ideas to encourage you. We shared some of these at the Area Briefings last term, and know that a number of schools have already begun responding. One of the differences this year is that there will necessarily need to be some engagement and activity in the months leading up to the Leavers' Services, but will also appeal to other year groups. We are asking your parishes to also participate, and if possible, to link up with you in creative ways to respond to our common call to stewardship.



Would you please take lots of photos (especially of the 'before and after' style) so we can use both at the Leavers' Services in the Summer, but also in our wider publicity and press releases. Photos of children planting, and creating the A1 canvases for the Bee Trails will be especially welcome.



I'm grateful to Sue who has produced this really useful and inspiring resource booklet. To assist in quick referencing where the ideas and activities are suggested, look for the bee icon 

Thank you in advance for joining us on this impactful journey.

Best wishes

Jeff

Jeff Williams

Director of Education

Getting started

Children in schools today have one of the most important jobs ever created – looking after the world in which they live.

This year the Diocesan Education Team has chosen stewardship of God's world as a focus for its work with schools and as the theme for the leavers popular services in the Summer term. Schools are encouraged to serve the public good by working collaboratively on conservation projects in their schools and parishes.

There are many ways that children can get involved in stewardship – from buying fairtrade goods to gardening, from litter picking to planting wild flowers. They can research pollution of outer space, raise money for endangered species or simply nurture one pollinator plant on their bedroom windowsill.

Many pupils will already know about the work of Sir David Attenborough. The world famous ecologist has urged people to take action to save the 'future of humanity'. He recently wrote that 'never before have we been so aware of what we are doing to our planet – and never before have we had such power to do something about it. Surely we have a responsibility to care for the planet on which we live? The future of humanity, and indeed of all life on Earth, now depends on us doing so.'



The term 'Steward' is a biblical word. It refers to a manager, someone who is responsible for the property of another. In the beginning of Genesis, God creates everything and puts Adam in the garden to take care of His world. Many Christians believe that people were created to protect and care for the world that God created.

This is the fundamental principle of biblical stewardship - God owns everything, human beings are managers acting on his behalf.

Schools are encouraged to reflect on this in their teaching and learning of ecology and conservation.

Stewards for the public good

In line with the Church of England's Vision for Education, diocesan schools are asked to contribute to the common good. Getting involved in ecology projects in parishes can have a demonstrable effect on the lives of communities.

Schools may like to explore 24th psalm with children which says: *The earth is the LORD's, and everything in it, the world, and all who live in it.*



The Story of the Talents
children's Bible lesson from
Matthew 25:14-30

This is also the message of the parable of the talents. God has entrusted authority over the Earth to people.

In Colossians 3:23-24 Paul writes:

Whatever you do, work at it with all your heart, as working for the Lord, not for men.

As Church schools in the 21st century, staff and children are asked to embrace the view of stewardship as serving the public good. It connects people's actions to what God is doing in the world today.

Schools are encouraged to explore with children, their responsibility to care for God's creation, and to understand how this is an expression of God's love for people. This booklet is designed to help schools work with their churches and parishes to get involved in ecology projects and to consider making some curriculum decisions around the concept of stewardship. This work also feeds into the requirements of the new Ofsted draft framework 2019 and the Siams Inspection schedule 2018.

- ***the curriculum extends beyond the academic, technical or vocational and provides for learners' broader development, enabling them to develop and discover their interests and talents***
- ***the curriculum and the provider's wider work support learners to develop their character – including their resilience, confidence and independence – and help them know how to keep physically and mentally healthy***
(Ofsted)

- *There is a demonstrable culture of aspiring to be the best you can be: the person God created you to be. Pupils say how the school's Christian vision and associated values help them to make positive choices about how they live and behave.*
- *Pupils say how the school's Christian vision and associated values supports them in their learning.*
- *Leaders ensure that there are opportunities across the school curriculum to explore many 'big questions' about life and to discuss and develop pupils' understanding of disadvantage, deprivation and the exploitation of the natural world. Leaders demonstrate how social action projects reflect the school's Christian vision.*

Leavers' Services 2019

The popular Leavers' Services, held every year at our cathedrals, will centre around the theme of stewardship. Following our successful Ewe Matter and Charity Chair Heroes projects over the last two years, this year the education team has chosen the bee community as an example of working collaboratively and responsibly for the greater good.



Schools are asked to work with their churches and parishes to sow bee friendly plants in their school grounds local communities. Schools will be asked to bring some of those plants to the cathedrals for a grand planting during this year's leavers services.

Workshops centred on conservation, ecology and bees will be offered to children on these special days.



Schools are also asked to create a special art canvas depicting a bee or bees. This should be approximately an A1 size (4xA3) so it can form part of an art exhibition at the cathedrals, or become part of a bee trail around one of our cities or town.

This booklet will give you lots of information and ideas to support this work.

So Why Bees?

Bumblebees play a vitally important role in our eco system. They are among the most loved and familiar of garden insects. Sadly these charismatic creatures are under threat and struggling to survive. In the modern world of paved gardens, intensive agriculture and changing climate, bees are finding themselves hungry and homeless.



Through pollination, honey bees are responsible for one out of every three bites of food we take. However the perilous effects of pests and pesticides are ravaging bee colonies across the world.

Bees are in danger of disappearing from our environment. With the expansion of human development, wild bees have been losing their natural habitats as the land transitions into industrial agriculture. Additionally, warming climate conditions have caused major shifts in plant communities, and therefore the behavior and survival of bees.

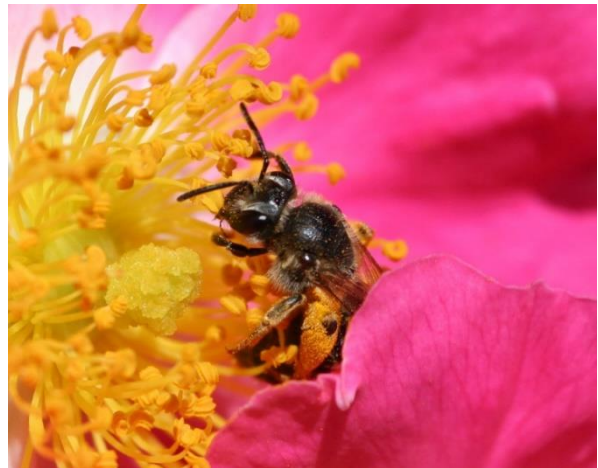
In the last 80 years an astonishing 97% of Britain's wildflower habitat has disappeared from the countryside. This has left bumblebees with little to feed on and led to their numbers declining. As well as loss of meadows, many hedgerows have been removed to create larger, more manageable fields – removing nesting and hibernating places for bumblebees.

Pollinators are also essential for the reproduction of many wild plants and play a key part in maintaining healthy and biodiverse ecosystems, including birds and mammals that rely on insects for food. Animals that perform pollinating duties, such as bats, are also at risk from numerous environmental pressures.

The dwindling population of wild bees and other pollinators is of great concern, both for nature conservation and for our ability to feed a growing human population.

The Impact of Bumblebee Decline

It is well-known that bumblebees are great pollinators, and therefore have a key role in producing much of the food that we eat. Through the pollination of many commercial crops such as tomatoes, peas, apples and strawberries, insects are estimated to contribute over £600 million per annum to the UK economy (2015). If bumblebee and other insect pollinator declines continue, the extremely high cost of pollinating these plants by other means could significantly increase the cost of fruit and vegetables (hand-pollinating British crops has been estimated to cost £1.8 billion annually).



Bumblebees also help pollinate many wildflowers, allowing them to reproduce. Without this pollination many of these plants would not produce seeds, resulting in declines in both abundance and distribution for a range of species. As these plants are often the basis of complex food chains, it is easy to imagine how other wildlife such as other insects, birds and mammals would all suffer if bees disappeared

How can children help protect God's bees?



Plant a bee-friendly garden.

By planting a school or community bee garden, children can do their part to help the bees by adding to the shrinking inventory of flower-rich habitat in your parish. In return, the bees will pollinate the plants, providing a bountiful harvest of flowers, fruits, seeds and



vegetables as well as the joy for the children of watching them up close. Solitary bees would appreciate it if you include sand, mud, and patches of bare ground for them to nest in. And be sure to plant a mix of pollinator plants and wildflowers, so that you'll have flowers blooming throughout the spring, summer, and Autumn. Here are some helpful tips to keep in mind as you grow your bee garden:



Rethink grassed areas

Replace part or all of any lawn grass with flowering plants, which provide food and habitat for honey bees, bumble bees, solitary bees, butterflies and other pollinators.



Select single flower tops for your bee garden

Sow plants with single flower heads such as daisies and marigolds, rather than double flower tops such as double impatiens. Double headed flowers look showy but produce much less nectar and make it much more difficult for bees to access pollen.



Plan for blooms season-round

Plant at least three different types of flowers in your bee garden to ensure blooms through as many seasons as possible. This will provide bees and other pollinators with a constant source of food. For example:

- Crocus, hyacinth, borage, calendula, and wild lilac provide enticing spring blooms in a bee garden.
- Bees feast on bee balm, cosmos, Echinacea and hostas in the summer.
- For Autumn, zinnias, sedum, asters, witch hazel and goldenrod are late bloomers that will tempt foragers.

Look what can happen!

Children from St. Alban's C of E Primary School in Havant have inspired hundreds of people across the country to sign up to their 'Pollinator Promise.' Fellow pupils, parents, businesses and politicians and nursing homes have put aside a one metre square plot solely to grow plants which feed and provide shelter for bees and other vital pollinating insects.

A project that began with planting an insect friendly flower bed at the school entrance has generated a hive of activity at the school. Children began planting a wide variety of flowers and pollinator-friendly herbs, growing fruit and vegetables, and looking at how the school pond attracted hoverflies and frogs. Caring for God's world in a practical and effective way, reflected the school's Christian vision to be ***'Inspired to make a difference in God's world with excellence and love.'***

The school started making curriculum decisions around the ecology work. Children developed their Maths skills by calculating area in the garden and amount of materials needed to plant flower beds and tubs. Science knowledge was enhanced through the learning that took place around plants and conservation.

Showing true 'courageous advocacy', the children from St. Alban's wanted to spread care for God's insects throughout the UK so they developed their IT skills to help create a website about their work.

The school's 'Polli Promise' began after the children took part in the [Polli:Nation project](#) – a UK-wide Heritage Lottery funded biodiversity and education project, developed by [Learning through Landscapes](#), that helps schools make changes to their grounds and locality to support pollinator species.

Since its inception the pupil-led campaign (led by a group of pupils known as 'The Hive) has grown steadily, with the catchy slogan – *"Metre by metre let people know, metre by metre let pollinators grow!"* – inspiring parents, friends, local businesses and community groups to join them in their efforts to support pollinator species. The pupils have also provided advice on how to create a pollinator-friendly outdoor space for staff from biopharmaceutical company Pfizer, who have an office near to the school, and have received a visit from Havant MP Alan Mak, who signed up to commit to the Pollinator Promise and dedicated a space for the project at Langstone Technology Park, where his constituency office is based.

Catie and Alex explaining about Pollinator Promise to Alan Mak, MP for Havant.



Teacher Julie Newman said: 'Helping our threatened wildlife through *polli promise* has deepened our relationship with nature, compelling us to try to bring about positive action in 'every one of every age. By working together to spread the message that small changes can make a big difference, our young conservationists have been empowered to inspire others that we can make this world a better place, for both pollinators and people.'

in 2017, the pupils were awarded the Defra Bees' Needs Champion award in recognition of their inspirational conservation work. the certificates were presented by Defra minister Lord Gardiner at the annual bees' needs champions awards at Kew Gardens. The school has since won a second Defra award.



St Alban's pupil Sam signed up for Polli Promise in his first year of school, when he was 4 years old. He was the first ever Polli Patch creator!

A year later, Sam's patch is green and in full bloom – and providing food for a variety of pollinator species.



How to get involved



Some 260 schools across the UK have already taken part in the annual Open Air Laboratories (OPAL) [Polli:Nation survey](#), which investigates the friendliness of school grounds, parks and gardens for providing food, nesting and shelter for pollinating insects. The project is being evaluated by researchers at [Stirling University](#), and early results seem to indicate that enhancements are already benefitting a range of pollinating species. Resources for schools remain on the website.



To make a pollinator promise and pledge to support pollinators in your local green space you can contact St Alban's pupils directly at pollination1@st-albans.hants.sch.uk for more information.

Make sure to encourage friends, family and colleagues to do the same, and don't forget to spread the word online. Share your before and after pictures of your pollinator-friendly plots on Facebook, Twitter and Instagram using [#PolliPromise](#).

At the end of this brochure is a list of bee-friendly plants that are easy to grow and cheap to purchase

Bees aren't only just interested in perennials! In fact, bees get most of their nectar from trees. When a tree blooms, it provides bees with hundreds if not thousands of blossoms to feed from.

Trees are not only a great food source for bees but they are also essential to a bees habitat. Tree leaves and resin provide nesting material for bees, while their natural wood cavities make excellent shelters. With deforestation and development on the rise, you can help bolster bee habitats by caring for trees and joining tree-planting parties in your area



Create a Bee Bath.

A fun activity that can also help save the bees is creating a bee bath. Fill a shallow bird bath or a small dish or bowl with clean water, and arrange pebbles and stones



inside so that they poke out of the water. Bees will land on the stones and pebbles to drink the water as they take a break from foraging and pollinating



Build homes for solitary and bumble bees.

With the exception of honeybees, most bees are solitary creatures. Some 70% of bees live underground, while 30% live in holes inside of trees or hollow stems. Since many solitary and bumble bees build their nests in undisturbed land, schools can keep an untouched plot of land for them in their grounds. “Bee houses and hotels” allow solitary bees like mason bees to take up residence and pollinate your garden. You can also learn how to build your own bee condo and create a better space for solitary bees. Next time you visit Salisbury, check out their bee cathedral in the cathedral café!



Instructions for a Simple DIY Bee House

The beauty of home-made bee houses is that schools can use re-cycled or waste wood and logs and make them fairly cheaply. Fill a wooden box (open on one side) with blocks of wood or small logs into which drill small holes. A variety of solitary bees will use these tunnels as nest sites. The box should be a minimum of 20cm deep, and ideally needs an overhang at the top to keep rain off. A drawer from an old wooden chest of drawers can be adapted for this purpose.



How to Make a Bee Post or Bee Block

An even simpler alternative is to make a bee post – drill a variety of holes up to 10mm in diameter into the side of a thick piece of untreated timber, and fix to a sunny wall or fence. (See photograph). Children should smooth down the entrances to them thoroughly so there are no sharp splinters, as these will put the bees off. New fence posts from garden centres are unsuitable because they have been treated with chemicals, but lengths of very old fence posts are ideal.



Again this **should be kept in a dry, cool place in winter** and brought out in March. If left outside to endure winter rains these small posts can soon get saturated, even with a roof, and this can mean high mortality for the bee larvae as they succumb to fungus moulds.



Bamboo Tubes can also be used


Start a honeybee hive.

Schools and churches can directly impact the health of the local ecosystem by starting a honeybee hive. Having your own beehive can help children learn about bee biology, bee ecosystems, and improve the environment. Plus, there is the added benefits of bee products such as raw honey and beeswax. Contact your local beekeeping club for more information.

Support a local beekeeper.

If schools and churches are quite ready for a hive of your own, children can help save the bees by supporting a beekeeper in your area. Keepers work hard to nurture their bees and better the local community for bees and humans alike. The easiest way to do this is to buy locally-made honey and beeswax products. Many beekeepers use products from their hives to create soaps, lotions, and beeswax candles. Plus, local honey is not only delicious- it may be made by bees that visited plants in the school!

Bee Creative

Two years ago schools decorated wonderful fibreglass sheep for the  diocesan school leavers services. Last year children brought chairs created for their everyday heroes. This year, schools are asked to bring a selection of pollinator plants and an A1 canvas (which can be purchased for around £10) with a picture reflecting the work of bees.

This is a 'scratch and sniff bee'. It's body has been painted using acrylic paint mixed with fairtrade coffee to create a variety of brown/black tones. This project gives schools the opportunity to talk about conservation work going on in fairtrade organisations. The joy of the picture is that when the bee is scratched an aroma of coffee exudes from the painting.





Beehive print

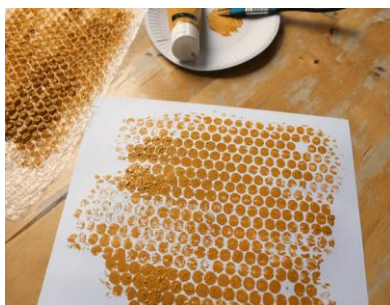
Set out some yellow, gold or brown paint on a paper plate or shallow tray. Acrylic paint adheres better to the bubble wrap, but watercolour paint is an alternative.



Paint a sheet of bubble wrap using a paint brush. Then flip the bubble wrap over onto a piece of card. Press it down so all parts of the bubble wrap touch the surface of your card.

Then peel away the bubble wrap to reveal a honeycomb print.

You can use the printed honeycomb as the backdrop for your bee picture.



Websites for other artwork around bees are below:

<https://www.artforkidshub.com/how-to-draw-a-bee>

<https://www.cbc.ca/arts/aganetha-dyck-reveals-how-she-works-with-bees-to-create-strange->

<https://feltmagnet.com/crafts/bumblebee-art-and-crafts>



<https://www.youtube.com/watch?v=Ho4aUHY6fss>

Bee Friendly Plants

Cosmos is an annual flower easily raised from seed. It's also one of the very best for the bee. Grow it in groups, making the collection of pollen easier for the bees, who won't have to fly as far to find their food. Cosmos grows 2-5ft tall, the majority reaching about 2ft. Plant out after all danger of frost has passed, and deadhead to keep them flowering continuously through the summer. These open, flat flowers will delight you as well as giving the bees a feast.

Aster or Michaelmass Daisies. This is easy to grow, colourful and late summer to autumn flowering. They provide food late in the season, important if honeybees are to be well fed to get through the winter months.

Sunflowers are a great choice, available in many heights and colours to suit your garden space. Choose yellow or orange over red, which bees don't like.

Calendulas or **marigolds** are great for bees, especially the original single flowered pot marigold. Dead head regularly for a longer flowering period.

Primulas is native primrose. Primulas of all kinds, even the 'drumstick' ones, are great early food for bees. Cowslips are also good members of this extensive family of perennial plants.

Rudbekia are an extensive group of cone flowers from the aster family. A wide variety of heights, mostly available in yellows and oranges, will brighten your border and feed bees. All are easy to grow from seed.

Scabious or **cornflowers** are another relation in the aster family. They are mostly blue flowered and bees adore them. Dead-headed regularly, they'll flower all summer long.

Lavender There are plenty of lavenders to choose from, all needing plenty of sun and well-drained soil, but they reward children with plenty of fragrant flowers for cutting and drying. Watch them get smothered in bees when they come into flower.

Hellebores or the 'Christmas rose', a lovely flower to have in your garden from

late winter to early spring. This plant will tolerate some shade and moist conditions, though not wet. When bees emerge from hibernation they need food fast. This one gives them a snack when there's little else around.

Clematis The majority of clematis will provide pollen. These plants are hungry and thirsty, so add good compost to the planting hole. They also like their roots in the cool and heads in the sun, so once planted I place a pile of stones or gravel around their roots, keeping them cool and conserving moisture.

Crocus (bulb) Early flowering, plenty to choose from, and planted in the autumn to flower year after year.

Mint, especially water mint, is loved by bees. It's great in your cooking, too. Easy to grow but plant it in a container or prevent its escape around the garden by burying a bucket (with holes in the bottom for drainage) and plant your mint into that.

Rosemary likes well drained soil and full sun. It flowers around April/May. A great culinary herb, bees will take advantage of the pollen as long as you prune it correctly.



Thyme It is best to plant wild thyme (*thymus serpyllum*) which attracts a lot of bee visitors and tends to flower more profusely. But they are all worth growing.

Hebe This extensive group of shrubs have wonderful flowers for bees. Plenty of pollen, all on one flower and plenty of flowers on one shrub. They vary in height, are mostly blue or pink and tolerate most soils.

Borage, otherwise known as the bee herb, is blue flowered, simple to grow and in fact one type grows wild in the UK. Easy, prolific and the bees love it.

Echinacea Now available in a variety of colours, all of which will attract bees.

Mignotette. are sweetly scented and will attract and feed your bees.

Thrift, or **Sea Pink** is a great plant for a rock garden, trough or wall. Holding its bright pink flowers well above the grass-like foliage, it will cheer your garden and make the bees come back for more!

Sedums are also excellent plants for rock gardens and walls and great for bees.

Sweet Williams are fantastic flowers for bees. An old cottage garden favourite, bees are attracted to the pink or white flowers and love the perfume! They are members of the same family as are Pinks and Carnations, all of which are good for the bees.

Monarda (Bergamot) This is the herb that flavours Earl Grey tea, but the bees love its flowers for pollen and nectar. Its folk name in the UK is bee balm. It likes a moist but not wet soil and can cope with a bit of shade. Share it with the bees! Bergamot tea is a herbal treat in itself. Just pour boiling water on the leaves and allow about ten minutes before drinking.

Cornflower Easy to grow, cheap and cheerful, cornflowers are another cottage garden favourite. Their blue flowers act like a bee magnet.

Poppies All poppies are attractive to bees, and are laden with pollen in nice open flowers. Very easy to grow, especially the annual kinds, and easy to save seeds to sow next year.

Verbena Bonariensis is a tall, delicate looking perennial with purple/mauve flowers that add a tropical feel to your borders. This is easy to grow from seed and sown early enough will flower in its first year. One not to do without!

Snapdragons Plenty of choice in heights and colours. Children will love watching a bee enter and leave a snapdragon. Their weight pulls the lower part of the petal down so they can get inside for their food, and you can hear them buzzing while they are in there. Lovely to watch.

Ageratum Easy to grow, with heads of blue flowers and another member of the compositae family, so lots of food on one flower head.

Echinops (globe thistle) This lovely blue thistle is very ornamental, even when not in flower. Bees and butterflies love the flowers which provide plenty of nectar. Easy to grow from seed and will come back year after year.

Bee Reading

Winnie The Pooh Saves The Honey Bees

A new story of a much loved bear who is 'saving the bees'. It also has lots of activities from planting to baking to arts and crafts to educate children about the importance of bees.

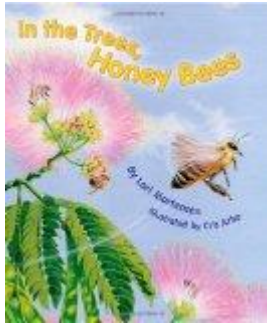


The Bumblebee Queen

April Pulley Sayre  Illustrated by Patricia J. Wynne

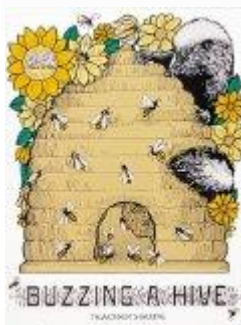
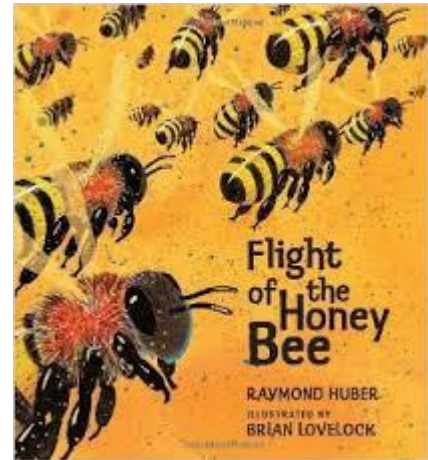
The Bumblebee Queen by April Pulley Sayre

Follow the life of the bumblebee queen through the year as she creates colonies of hundreds of bees in the space of her life of only one year.



Flight of the Honey Bee by Raymond Huber & Brian Lovelock

A beautifully illustrated story for children about a bee in search of the last flowers in Autumn.



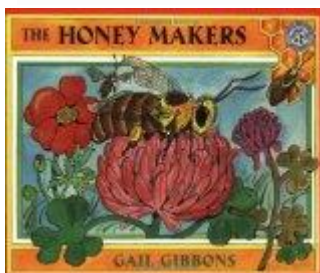
Buzzing a Hive: Teachers Guide by Jean C Echols

Drama, games and art projects to do with young children with a focus on bees.

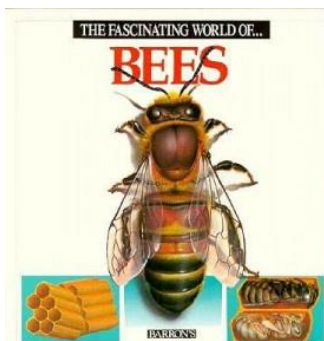
In the Trees Honey Bees by Lori Mortensen

A close up views of the queen, the cells and bee eggs of a wild hive which is enthralling for all ages.

The Honey Hunters by Francesca Martin



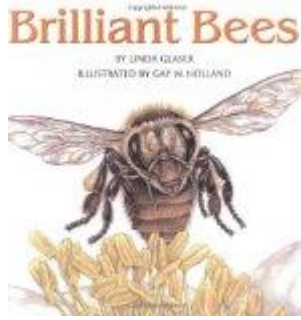
Based on an African folktale, the joyful hunt of a young boy and animals following the honeyguide to the honeycomb.



The Fascinating World of Bees by Angels Julivert

An excellent introduction to natural science with beautiful illustrations and insights into the complexity of the bees world.

Brilliant Bees by Linda Glaser



Poetic text which is easy to read with bold illustrations of bees.

The Book of Bees: Piotr Socha

Fascinating book on How do bees communicate? What does a beekeeper do? Did you know that Napoleon loved bees? Who survived being stung by 2,443 bees? This book answers all these questions and many more, tracking the history of bees from the time of the dinosaurs to their current plight.



Please contact the Education Team on 02392 899662 if you require any further information or support with these project.

Schools are encouraged to inform the team if they would like to showcase their ecology work in the diocesan education newsletter.



**Produced by the Portsmouth and Winchester Diocesan
Education Team**

