

# Pollinating Project - Seed Bombs

# Parent pack



# Seed bombs

Studying seed bombs from native plants are a great way to learn about the important role they play in the environment, how they reproduce and where they can be planted where they are needed most. A seed bomb is made using a few simple materials that can be sourced locally or even in your own backyard, depending on the soil type. All you need is a small ball made of clay, some soil and a few seeds that can be bound up and thrown into the garden, in a few weeks' time you'll have some new natural flora to benefit insects and birds.



## How does it work?

In dry areas, the shape of the ball gives enough shade to conserve moisture. The seeds begin to germinate and the ball breaks apart. The small pile of crumbles provides the kick start required for the plant's root system, but is still heavy enough to anchor the emerging seeds to the ground.

The small leaves of the new plants provide enough shade for the soil to conserve more moisture. Over time the plants will then mature and produce their own seeds and provide further shelter for the second generation seeds to fall to the ground, creating your very own seed bank.

Raising seed directly in the garden is all about timing – ensuring the soil and air temperature is right and moisture is consistent through germination to allow your plants to flourish.

## Equipment

- Some dry compost
- Dry, smashed-up clay (you can use potters clay or dry and crush soil from your backyard)
- Native seeds (you can also use this recipe for vegetable and herb seeds)
- Water to mist

## Method

1. Mix equal parts of dried clay, soil and compost in your hands and add a similar amount of seed
2. Continue to mix, slowly misting with water until the mix comes together around the seed
3. Gently roll into little balls or 'bombs' being careful not to damage the seeds as you roll
4. Set them in a sunny spot to dry.
5. Once they are dry, throw them into a bare patch of dirt in your garden at a patch of dirt and watch them explode in the coming weeks.
6. Once it rains (or you water them), they have everything they need to grow all in the little ball.

The dried seed bomb can sit dormant for as long as the seed is viable, but for best results use them in the same season you've made them.

When the conditions are right, they will germinate.

## What is Germination?

Germination is the amazing process by which a plant grows from a seed and sprouts into a seedling.

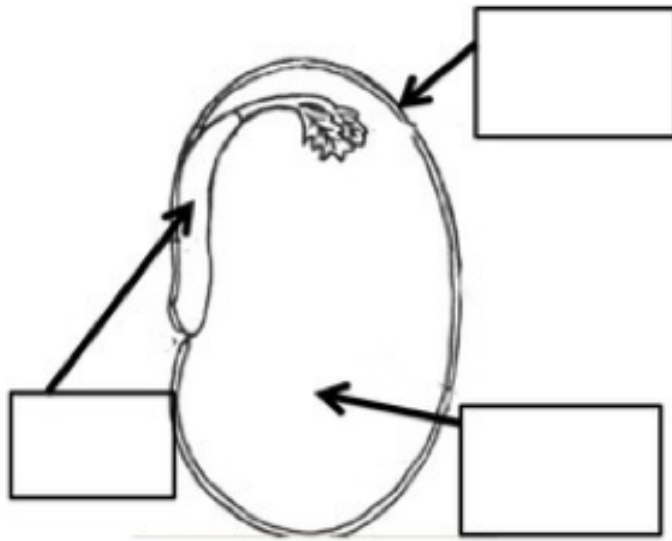
Seeds remain dormant until the conditions are right for germination. All seeds require water, oxygen, and suitable temperatures in order to germinate.

When a seed is exposed to suitable conditions, water and oxygen are taken in through the seed coat. The embryo's cells start to enlarge, then the seed coat breaks open and a root emerges, followed by the shoot that contains the leaves and stem. This first root is generally the tap root that drives down deep into the ground to source water and nutrients for the plant's growth.





Can you guess the different parts of a seed?

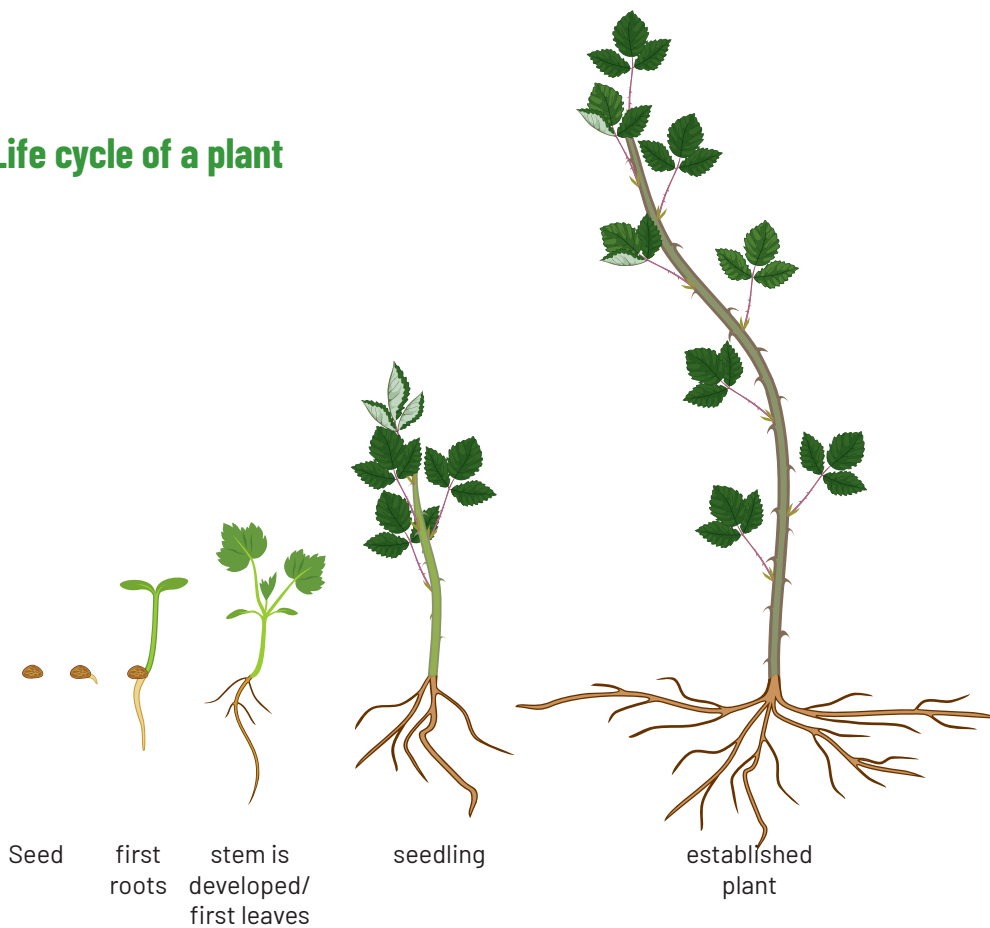


Seed Coat

Embryo

Leaves and Stem

Life cycle of a plant



# Seed Bomb Growth Chart

Track the growth of your sprout/plant by recording the various growth stages in this chart

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Date						
Sketch your seed bomb sprout						
Weather						
Height						
Week						
Length of stem						
Number of buds on stem						
Number of leaves on stem						

## The benefits of native plants

When you are making your seed bombs, we recommend you use native seeds. Native plants formed functioning natural ecosystems long before humans arrived and changed everything. These systems worked together ensuring that the environment functioned perfectly in sync and provided food and habitat for many of the animals that live here.

Over many years humans have removed local native plants and replaced them with grass or different tree species with pretty flowers from other counties that they think might look better. Many of these plants compete with native species for valuable resources such as nutrients, sunlight and water.

Using the right seed in your seed bombs can be a huge help to our local environment and do a lot of good when you explode them onto the ground. Not only can your new plants make an area more beautiful, but they can also help rebuild natural ecosystems and create pretty flowers as a food source for our pollinating insects.

### What is Pollination?

Pollination is a very important part of a plant's life cycle and the flowers they produce do more than look and smell pretty. Insects, birds, bats and the wind take the pollen between flowering plants, which means the plants can continue to reproduce to make seeds and then more plants.

The diagram below shows how:

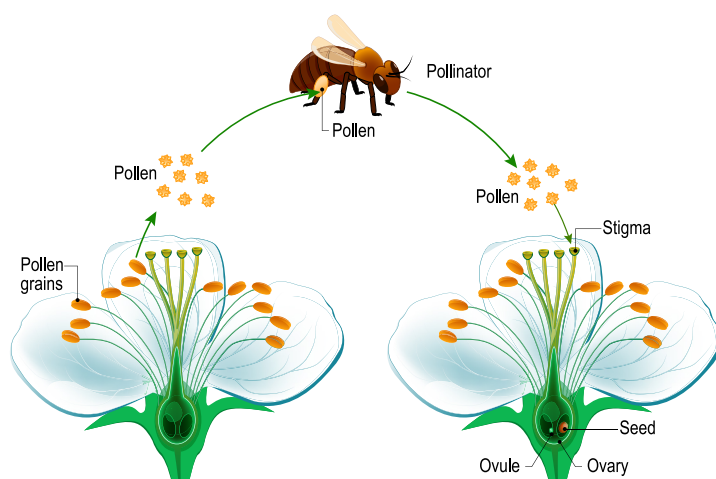
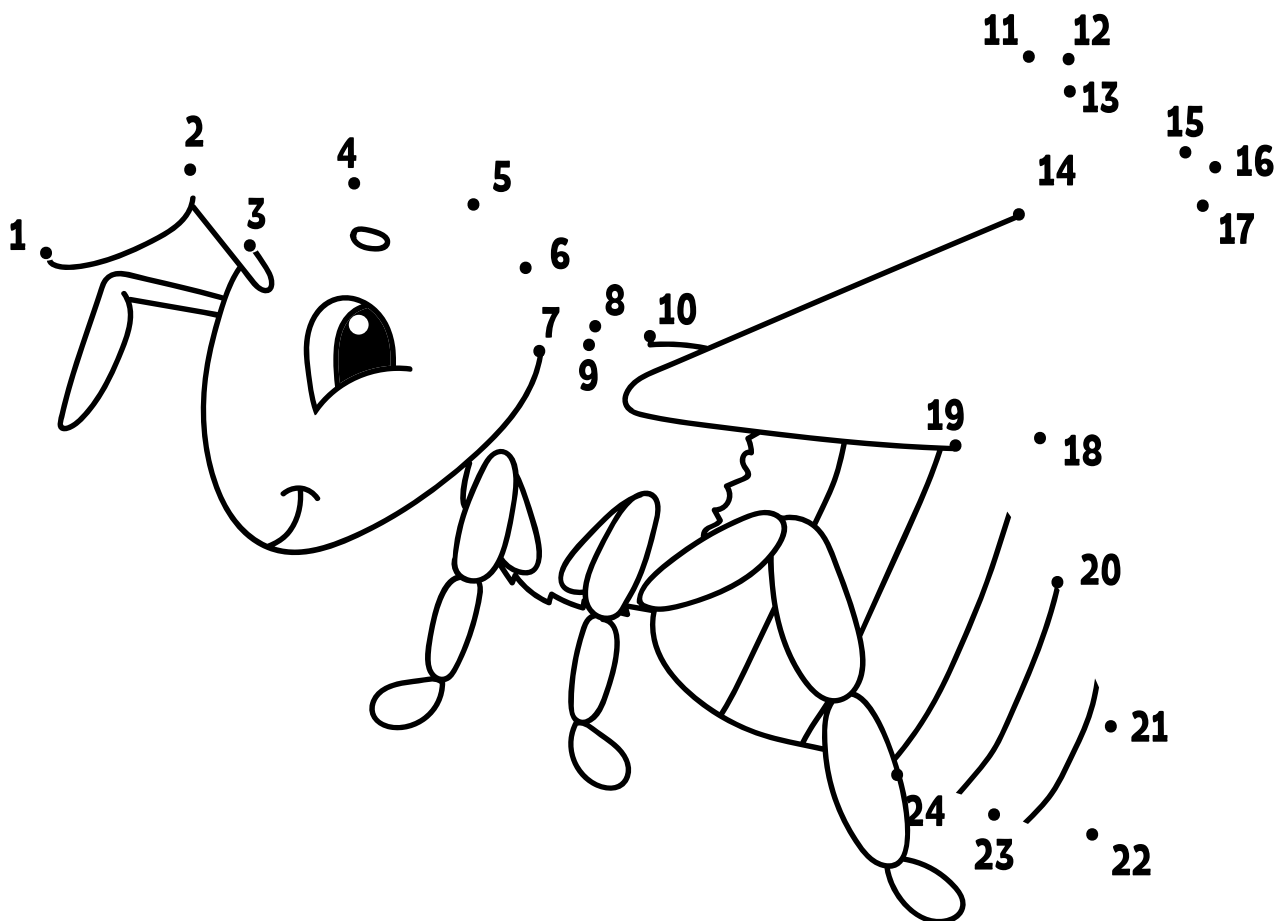
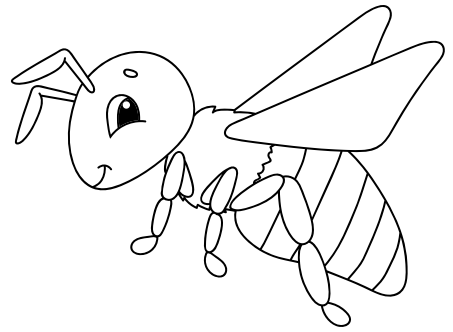


Photo above: A bee that has collected the pollen attached to thousands of tiny hairs on the its body. When it lands on another flower, pollination is complete.

## Connect the dots



## Get to know your Native Bees - Research Project

Check out our Backyard Buddies, Australian Pollinating Week and the Aussie Bee Project websites to help you with your answers.

How many different types of native bees are in Australia?

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Describe the term 'Stingless Bee'

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Explain 3 differences between Introduced European Honeybees and Native Bees.

- 1.
- 2.
- 3.

List 5 native plants that native bees pollinate

- 1.
- 2.
- 3.
- 4.
- 5.

List 5 foods we eat that native bees pollinate

- 1.
- 2.
- 3.
- 4.
- 5.

In Sydney alone there are over 200 native bee species that are hard at work pollinating all of our native plants. Fill out the table below that shows some of the most common native bees in your area and learn their characteristics. For each bee, research its photo, sketch a picture and write three interesting facts. The more you discover, the easier it will be to identify them on your balcony or in your backyard, local park or bushland reserve.



Bee	Sketch	3 facts
1. Stingless Bees		
2. Yellow & Black Carpenter Bees		
3. Green Carpenter Bees		
4. Reed Bees		
5. Blue Banded Bees		
6. Teddy Bear Bees		
7. Leafcutter Bees		
8. Resin Bees		
9. Homalictus Bees		
10. Masked Bees		

## Extension activity

### **Conduct a wild pollinator count!**

The Wild Pollinator Count invites you to count wild pollinator insects in your local environment and help to build the Australian database on wild pollinator activity.

You can participate anywhere in Australia by watching a flowering plant for ten minutes and reporting the insects you observe.

**For more information and to download the tally sheet visit [wildpollinatorcount.com/resources](http://wildpollinatorcount.com/resources)**





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