Seed Bombs

Year 4  –  Science
Year 5  –  Science

(Science; Yr 4, ACSSU072)
Living things have life cycles

(Science; Yr 5, ACSSU043)
Living things have structural features and adaptations that help them to survive in their environment

(Science; Yr 5, ACSHE083)
Scientific knowledge is used to solve problems and inform personal and community decisions

Cross-curriculum priority
Sustainability
Seed Bombs

Taking care of the needs of seeds — and the growth of green!

The concept of seed bombs (or seed balls if you’d prefer) sprouted up with the ‘guerrilla gardening’ movement. Guerrilla gardeners make bright gardens on unused land such as tiny, neglected urban spaces. You have to understand the basic needs of plants to make seed bombs, so it’s a perfect hands-on science activity for younger students. Extensions can be connected to the design of civic and urban spaces.

**Equipment:**
Seeds of robust, local, seasonal plants

**Duration:**
45 minutes

**Location:**
The art classroom or outdoors

**Notes:**
Going Green

Ask the class if anyone knows what a 'seed bomb' is.

- Explain that the idea for seed bombs came about when people were looking for a way to get plants to grow in neglected and hard-to-get-to spaces.

- A seed bomb is a little package of soil, nutrients and seeds.

- There is a group of people who identify as 'guerrilla gardeners' which means to garden and care for neglected land spaces without permission or legal rights to the land. The word 'guerrilla' is a play on secret warfare. Except these guys and gals only throw plant seeds, not grenades. Guerrilla gardeners turn unused places like vacant lots, freeway edges, roundabouts and alleys full of rubbish into bright, colourful flower and/or edible gardens.

- Some do this for beauty, others for food and others to provide much-needed habitat and food for wild animals and insects such as bees.

- Guerrilla gardening has grown as a movement and is accepted (or deliberately ignored) by many city councils in Australia. Several cities now allow people to grow flowers and food on nature strips and other
Making Seed Bombs

Ask students to tell you what a seed needs in order to start growing. Answers include:

◇ soil (a place to put its roots)
◇ water (to soften the seed coat and let the germination process begin)
◇ sunlight (to feed the plant’s leaves as it grows)
◇ some sort of food or fertiliser to help the baby plant get started, especially if the soil is bare.

● Show students the materials you have gathered for the seed bombs.
● Show them a finished seed bomb and walk through the seed bomb ‘recipe/procedure together (see page 6).
● It’s time for students to make their seed bombs, perhaps at several table stations.
● Remind them that they should not roll or press their seed bombs too tightly. They should fall apart in the first heavy rain shower – like a bath bomb! (Try watering with a watering can to see how this works!)
Green Guerrilla Projects

If students are really keen to plant, focus on neglected areas within the school-yard and use local native seeds. Here are a few extension project ideas:

- Students research local seed varieties and the best time of year to plant them. They should be looking for some robust (strong) species, but ensure these plants aren’t on your state or territory’s prohibited or invasive weeds lists (see Resources).

- You may like to investigate native plant species from the local microclimate – check out The One with the Old Boot for inspiration.

- Students use climate data and rain charts for the area to choose the best time of year to drop their seed bombs. The One with the Tractor and its accompanying resources could be a good lead-in here.

- Students conduct a city surveying project where they investigate potentially overlooked places appropriate for (safely) dropping their seed bombs. They could use personal experience, as well as print and digital maps (such as Google Earth) to help them explore the local environment and suggest a list of places. They could create a map overlay on tracing paper on a printout of the neighbourhood with their proposed bombsites or consider pre-existing guerrilla gardens.

- Students develop a list of criteria for assessing the suitability of each site, asking:
  - Is there soil (even if it’s under gravel or rubbish)?
  - Is there enough sunlight or is this place in shade most of the day?
  - Is there too much sunlight or will the plants suffer in the heat?
  - Could rain reach the seeds?
  - Will this place be washed out in a flood or by a high tide?
  - Is it safe to plant here (e.g. plants will not block traffic sight lines)?
  - Is this public space?
  - Will we be interrupting conservation efforts? (Don’t plant in nature conservation areas or grasslands reserves.)
  - What other criteria do students determine that take into account the environmental, practical, social and community environment?

Resources


- Garden Girl TV – How to make seed balls (video): [https://youtu.be/hSoimEQK7w](https://youtu.be/hSoimEQK7w)


- Guerrilla Gardening – Seed Bombs recipes page: [http://www.guerrillagardening.org/ggseedbombs.html](http://www.guerrillagardening.org/ggseedbombs.html)


- Ron Finley – The Gangsta Gardener: [http://ronfinley.com](http://ronfinley.com)
Seed Bombs – two ways

From Alice: Some say that seed bombs were developed by Masanobu Fukuoka, an enormously influential farmer from Japan. Students could research Fukuoka’s ‘One Straw Revolution’ and what it means to farm on tired or degraded land. Fukuoka has been a huge inspiration for community farming practices in Australia.

Recipe 1

What
- 5 parts dry clay
- 1 part compost
- 1 part seeds
- enough water to form balls

How
- Mix the dry ingredients in a bucket, then add water until it is just sticky enough to roll balls.
- Roll into balls the size of large marbles.
- Don’t squeeze them too tightly!
- Place balls on a tray to dry out overnight.

Recipe 2

What
- 4 parts dry clay
- 1 part coconut fibre
- 1 part compost
- 1 part seeds
- 1 part water

How
- Mix the dry ingredients in a bucket, then add the water and mix with your hands.
- Roll into balls the size of large marbles.
- Don’t squeeze them too tightly!
- Place balls on a tray to dry out overnight.