



RHS Amazing Seeds Activity

Learning Objectives:

Pupils will:

- Decide if seeds are dead or alive
- Discover what is inside a seed
- Look at how plants have adapted to survive as seeds
- Experiment with wind, seed dispersal

Pre-session preparation:

STEM Ambassador to communicate with **teacher** to:

1. Help the STEM Ambassador understand a little about the class
 - Discuss student ability/learning context to ensure their presentation and delivery is at the appropriate level
 - Understand local context so that the STEM Ambassador's presentation is embedded in pupil's knowledge
2. Help the teacher to prepare for the session on Amazing Plants
 - Share the Amazing Seeds Overview and Detailed Session Plan with the teacher so they are aware of the content
 - Encourage the teacher to take the class outside before the STEM session, looking at plants and trees in their local area. They could take photographs and compare the differences. They could use an app like PlantNet to identify the names of the plants and trees. Or use the spotter guides, available in resources on the Campaign for School Gardening website: [home / RHS Campaign for School Gardening](https://www.rhs.org.uk/schoolgardening). It would be great if the class has already looked at a range of seeds from tiny to as large as possible (poppy seeds to coconuts, and include flower, trees and grass seed). Pine cones and bean/pea pods could be included.
 - Tell the teacher they need to provide scissors for each student, a few rolls of sticky tape and a box of paperclips (unless you plan to provide these items). Ensure the teacher has done this prior to the session starting.
 - Ask the teacher how best to display the slides and whether they'd like the slides emailed to them or bought on a data stick.
 - Let the teacher know that they and any other classroom support adults will need to join in with the Amazing Seeds activity to help with organising groups and getting the pupils to talk to each other.

Preparation needed by the STEM Ambassador

- Collect a range of seeds, stones, leaves, twigs ready for use during the STEM session. Enough for the size of class (for 30 children, probably 60 items). They can be repeated items as they will be split between groups. Some ideas of things you might buy could include a pack of fresh parsley or mint, coriander / fennel / cumin seeds, cardamom pods, garden bulbs, fresh flowers. Or / And you could collect small stones, twigs and leaves from an outdoor space. Other options include apple / orange pips and avocado /plum stones.
- Grow marrowfat peas as detailed in activity 1.2
- Optional: If you are able to, collect some seeds to show to the class eg a coconut, avocado, broad bean
- Print enough copies of the Seed spinner template (need 1 A4 sheet per 2 children plus a few spares). If you can't print them, please ask the teacher to do it or email London-hub@stem.org.uk and we'll post them out to you (please give 5 working days notice before your session)
- Adjust slide no 1 to include your details
- Check that you can get the videos in the presentation to play (you may need to enable editing and then make it a trusted document)

Overview notes – this overview states the activity and the corresponding PowerPoint Slide and /or handout you will need. For detailed steps of each section please refer to the corresponding Individual Activity Sheet listed in the 'What?' column.

Time	Slide no.	What?	Activity description	You will need
(2 mins)	(Welcome title slide)	Sheet 1.0 Introduction starter Introduction to Amazing Seeds!	Ambassador gives a description of their job, and why they like plants.	Add in personal details to PPT slide 1
Section one Looking at Seeds - Dead or Alive?				
5 mins	2 & 3	Sheet 1.1 Lets look at seeds	Whole class Odd one out group discussion	PPT slides 2 &/or 3 1.1 Odd one out worksheets one &/or two

15 mins	[4 – 7]	Sheet 1.2 Dead or alive?	What does it mean to be alive? Are plants alive? Small group discussion	Use PPT slide 4
	4			
	5	Are seeds alive?	Sorting it out Small group Practical Sorting activity into dead and alive	A selection of seeds and objects (sticks, stones, seeds including pea seeds, dead leaves etc) for groups to look at and sort (brought in by the Ambassador or the class teacher will need to organise this)
	6 & 7	What's inside a seed?	Small groups practical	
Section Two Seed dispersal				
20 minutes	8 & 9	Sheet 2.0 Seeds leave home in different ways	Whole class video and discussion of how seeds disperse	Maple Seeds Falling - YouTube PPT slides 8/9
		Sheet 2.1 Make a seed spinner	Experimentation with winged seeds Individual practical Each pupil makes a paper seed spinner	Note safety instructions on sheet 2.1 Make a seed spinner Super seed spinner / RHS Campaign for School Gardening Res-A-Make-a-seed-spinner-2018 (rhs.org.uk)
3 mins	10	Sheet 2.2 What have we found out?	Recount knowledge and check learning	PPT / Refer to sheet 2.2 Plenary and follow up for notes
	11 & 12	Introducing a follow up experiment	Some seed cases explode and fire their seeds a long distance. Seeds in a pea pod, like the peas looked at earlier, do this. That's something to be followed up with the teacher at a later time!	https://www.youtube.com/watch?v=luaZHxQXeJc <u>sweet peas exploding</u>

