

SCIENCE learning springboards

Pappus

Living things and their habitats – seed dispersal

Explore methods of seed dispersal and use the *Pappus* Plant ID sheets

Aim: Pupils understand the methods of seed dispersal

Our top 15 *Pappus* Plants ID sheets cover aspects of seed dispersal and include images of each plant including its method of seed dispersal.

Dispersal mechanisms:

- **Wind:** dandelion, willow, ash, hazel, lime, grass
- **Water:** willow, horse chestnut, grass
- **Animal:** bramble, ivy, scots pine, dog rose, dandelion, dogrose, elder, grass, horse chestnut, elder, oak, poppy, hazel, Scots pine (conifer)
- **Human:** poppy, grass, dandelion

Use the Plant ID sheets to decide which plant has the most interesting way of dispersing its seeds – and which is the most effective, for example: dandelion has a very clever strategy of dodging lawnmowers, while others like bramble rely on animal faeces (effectively, added fertiliser) to help it grow. Hazel provides high energy for a squirrel's winter larder so can disperse widely.

You may need to look beyond the school grounds for plants such as burdock (*Arctium lappa*) to collect burrs or sticky weed / sticky buds (*Galium aparine*) to cover dispersal by hooks on animal fur – both plants are illustrated on this page.

'Exploding' seeds are tricky to see in action, so do visit the Explorify website (Wellcome Foundation) where there are some great slow-motion video clips showing exploding seeds and 'super-seeds', and many other excellent resources besides. You need to register but it is free to use.

You could also demonstrate seed dispersal using easily found materials:

- flying seeds from junk models or paper shapes
- explosive seeds with balloons to demonstrate seed dispersal – connect this with some maths to record the distances the seeds travel in the playground
- sticky seeds from gloves and Velcro (or PE Velcro ball catchers)
- parachute seeds from paper models thrown from the top of a play structure or steps – again, measure the distance travelled.



Resources:

Aim to collect examples of all these during their seasons of dispersal, so you have samples of ready when you are teaching this unit of work.

Timing:

Timing the teaching of the unit is also key, as ideally you need to choose to do this in summer when the dandelions may still be abundant and available for the pupils to collect and enjoy, or early autumn when the elder and bramble will be starting to fruit, and winged seeds will start to be available too.

More springboards:

- Creative Arts Learning Springboard: Seed dispersal dance activities
- Science Learning Springboard: Sticky seedy socks
- Science Learning Springboard: Pinecone hygrometer

Key vocabulary:

Achene, apomictic (apomixis), burr, capsule, drupe, nut, pappus, samara (winged seed)

Success criteria:

- ✓ I can explain a range of methods that plants have evolved over time to disperse their seeds
- ✓ I can use scientific skills to gather data and information to support my knowledge and understanding of seed dispersal



Explorify Wellcome Foundation

www.pappusproject.eu

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