

Seed Dispersal Activity

Suggested Activity

Location

Park / Outdoors / Area with trees

Prep: On the pre site visit, make sure you know where to find the trees with the greatest amount of seeds. Some years are better for others in seed production so if for example the Ash trees do not have many keys, do not worry—focus on the other trees, such as Sycamore with their helicopters.

Activity time 10 minutes

To be completed whilst learning about trees. Choose a particular tree, for example the Ash and play the game whilst standing at it.

You will need

Information Sheets - Leaf ID and Seed ID

A tree with seeds

Pre-collected seeds - not essential

Learning objectives and curriculum links

- To recognise trees in the park and their seed dispersal techniques;
- To increase healthy living by using our parks;
- To appreciate parks;

The World Around Us—Interdependence

Pupils should be enabled to explore:

- How living things rely on each other within the natural world;

The World Around Us -Place

Pupils should be enabled to explore:

- Ways in which people, plants and animals depend on the features and materials in places and how they adapt to their environment;

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Language and Literacy Talking and listening

Pupils should be enabled to:

- participate in group and class discussions for a variety of curricular purposes; know, understand and use the conventions of group discussion;
- share, respond to and evaluate ideas, arguments and points of view and use evidence or reason to justify opinions, actions or proposals;
- formulate, give and respond to guidance, directions and instructions;

Physical Education - Games - Pupils should be enabled to:

- progress from developing individual skills and partner activities and games to suitable small-sided, adapted and mini-games through both co-operative and then competitive play;
- develop control in running, jumping, changing speed, stopping and starting, with and without small equipment;
- develop an understanding of, and participate in, small-sided, adapted and mini games.

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Seed Dispersal

Plants have different techniques helping them spread their seed. Here are a few examples:

- **Wind dispersal:** Sycamore seeds are adapted to catching the wind, helping them 'fly' from the mother tree. Their spiralling movement gives them their nickname, helicopters. Dandelion clocks are also professional fliers – children help them when blowing them to find out the time.
- **Animal food:** a lot of seeds cleverly hide themselves within fruit, such as acorns and conkers. Squirrels and birds eat these and as they can't digest the seed it pops out the other end surrounded by fertiliser to help it grow!
- **Hitch hikers:** some plants, such as cleavers (goose-grass) have little hooks which attach onto passing animals.
- **Fall and tumble:** some seeds are contained within cases. When they fall to the ground, the case opens and the seed tumbles out, for example the Horse Chestnut's conker! It has 2 techniques, this and being used as animal food so it is sure to be removed from the mother tree when animals hide the seeds and nuts to use throughout winter and don't use them all. They often hide them far enough from the mother tree to allow the seed enough nutrients and sunlight to grow.
- **Deciduous trees**
These are broadleaf trees. The colour of their leaves change in autumn and during the winter months they fall off. They have adapted to this way to survive the cooler months. Examples include Oak, Ash, Sycamore, Hawthorn and Horse Chestnut.
- **Coniferous trees**
They have needles which do fall off, but not all at once. Their needles, although small do catch enough sunlight, which alongside water and carbon dioxide create energy for the tree. This is known as photosynthesis. Examples include Scots Pine, Douglas Fir and Spruce.

Brief seed guide:

- Oak - acorns
- Sycamore - helicopters
- Ash - keys
- Hawthorn - berries

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This game helps children understand the importance of seed dispersal and space.

Choose either an Ash or Sycamore tree with plenty of seeds and space around it (their seeds use wind to disperse). It is a good idea to have pre-collected some seeds for this activity.

Discuss with the children whether they think it is beneficial for seeds to get far away from the Mother Tree (mother tree being the tree that has produced the seeds) or if they think they should remain close by.

Tell the children that they are going to pretend to be seeds, apart from one person who will be the Mother Tree - ask for a volunteer.

Tell the children that they are very small seeds and have dropped to the ground under the mother tree - no wind or animal has carried them away! The children carefully huddle together, being careful not to hurt or push each other, including the mother tree!

As they start to grow tall, they spread their branches (arms) and their roots begin to stretch (legs). Are they comfortable? Surely not! Unfortunately they are too close to the Mother Tree and some will have to be chopped down! (Gasp from children!)

However, if they had a second chance to disperse as seeds, would they survive? Tell the children they have 5 seconds to find a suitable place to start growing somewhere with space, not on concrete though! The wind blows them to a new location.

Once all children have found a suitable spot, ask them to stretch their branches and roots. Phew - now they won't have to be chopped down! Ask them to wave their branches in the wind...they are now doing the crazy tree dance!

Now ask the children if they would like to disperse a real tree seed—they should hopefully all come quickly back to collect their seed. Parklife Officers usually choose Ash seeds and the children can open them out of their protective case, like opening a banana! It is interesting for the children to realise that something so small can grow into something so large! Ask them to open their seed out of its case and find somewhere safe to plant it. They can come back in years to come to see if their seed has grown!

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