Age 7+

Royal Botanic Gardens Kew

Seed dispersal investigation

Have you ever wondered why seeds come in different shapes, sizes, colours and textures? At Kew's Millennium Seed Bank at Wakehurst, scientists investigate seeds on a daily basis. This vital research helps to protect seeds from the world's most threatened plants. Think like a scientist and explore the clever ways that seeds in your local environment have adapted to increase their chance of survival.

Materials:

- Collecting bag or basket
- Selection of seeds and seed pods of varied shapes and sizes
- Pen or pencil for recording
- Magnifying glass (optional)

1 Go for a walk in your local woodland or park, or visit Kew Gardens and/or Wakehurst. Search for a wide variety of seeds and seed pods and place them in your collecting bag or basket. As you walk, discuss what you already know about seeds:

What is the function of a seed?

What do seeds need to germinate (start growing)?

Why is it important for seeds to travel away (disperse) from the parent plant?

☆ **Top tip:** Some seeds might not be visible, for instance if they are surrounded by soft fruit or a seed pod.

2 At home, carefully examine the seeds you have collected, using a magnifying glass if you have one.

Think about each seed's size, shape, weight, colour and texture.

Are there any other distinctive features, such as a spiky case, a fluffy stalk or nibble marks?

Use the section below to record your observations.

Seed observations:

Draw and label a diagram or note down some adjectives to describe your seed.

3 The appearance and structure of a seed and its case can hint at how it is dispersed.

With an adult, discuss the different ways that plants spread their seeds to new places to grow.

☆ **Hint:** The five main types of seed dispersal are gravity, wind, water, animals and force.

Continued on page 2

Age 7+

Royal Botanic Gardens Kew

Seed dispersal investigation

4 Look closely at some of the seeds you have collected. What kind of dispersal method do you think each one uses and why?

Record your predictions in the section to the right.

Seed	Seed dispersal method predictions	Why do you think this?

Did you know?

Banksia brownii is native to Western Australia and can be found in the Davies Exploration House at Kew Gardens. In the wild, seed dispersal is triggered by heat, a clever adaption to bushfires.

5 Choose two seeds and test if your predicted seed dispersal method is correct. You could try dropping your seed from a height to test if it flies or lands with a thud. Or roll it against a woolly jumper to see if it hooks on.

Record your findings in the section to the right.

Seed	Seed dispersal method predictions	Results

6 Now it's time to get creative and design a new seed!

Think carefully about the appearance and structure of your imaginary seed. Will it be bright in colour to attract animals? Or fluffy, to float in the wind? Will it have a protective case or pod?

Draw a picture in the section to the right and explain how you think the seed would be dispersed.

Share your photos @kewgardens.

Draw a picture of your imaginary seed here:

How would the seed be dispersed?

Taking it forwards:

Why is it important for scientists to conserve and study seeds?

☆ **Top tip:** Visit kew.org/wakehurst/whats-at-wakehurst/millennium-seed-bank to find out more about seed conservation.

UK Association for Science and Discovery Centres

SCIENCE MUSEUM GROUP