Investigating Seed Dispersal by Wind

Aim: To investigate how effective the drop and roll seed dispersal is.

Equipment:

- Some fruit with seeds, e.g. sycamore fruit
- Metre ruler
- Masking tape
- Electric fan

Method:

Step 1: Decide on a fixed height to drop the fruit from (ensure you are standing on a flat and stable surface)

Step 2: Make a small cross on the floor below your dropping point, with the masking tape

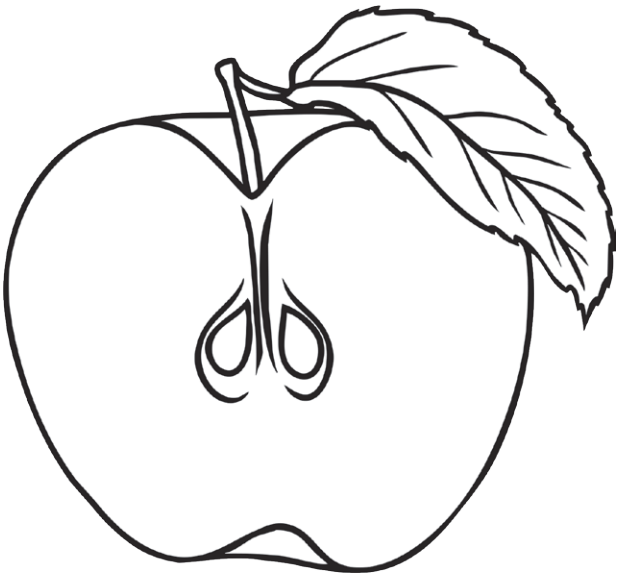
Step 3: Drop your fruit above the cross, at your fixed height, one at a time

Step 4: Use your metre ruler to measure how far from the cross each fruit has travelled

Step 5: Carefully record all your results in a table

Step 6: Repeat the investigation, but this time place the electric fan about half way up the height of your dropping point (on a desk will work well), and pointing to where your fruit will fall. Make sure it is switched on and at the same speed each time

Step 7: Carefully record all your results in a table



Questions:

1. Which conditions caused the seeds to be dispersed furthest?
2. How do you think some fruit and seeds are adapted for wind dispersal?
3. Why was it important to keep the fan switched on at the same speed?
4. Other than collecting repeated results, how could you check if your data is reliable?

Answers:

1. Which conditions caused the seeds to be dispersed furthest?
   It is expected that the seeds will have dispersed further in the windy conditions.

2. How do you think some fruit and seeds are adapted for wind dispersal?
   Some fruits and seeds are lightweight; they have a wing-like structure to help them to be carried in the wind; and a large surface area.

3. Why was it important to keep the fan switched on at the same speed?
   To ensure the investigation is valid (a fair test).

4. Other than collecting repeated results, how could you check if your data is reliable?
   Compare results with another pair / group. Use secondary sources such as the internet or books. Ask another scientist to carry out your investigation and compare the results.

Results table:

Conditions	Distance dispersed (cm)					Average distance (cm)
	Drop 1	Drop 2	Drop 3	Drop 4	Drop 5	
Fan off (not windy)						
Fan on (windy)						