

Fold in half at the line

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Glue on this side

Plant Reproduction

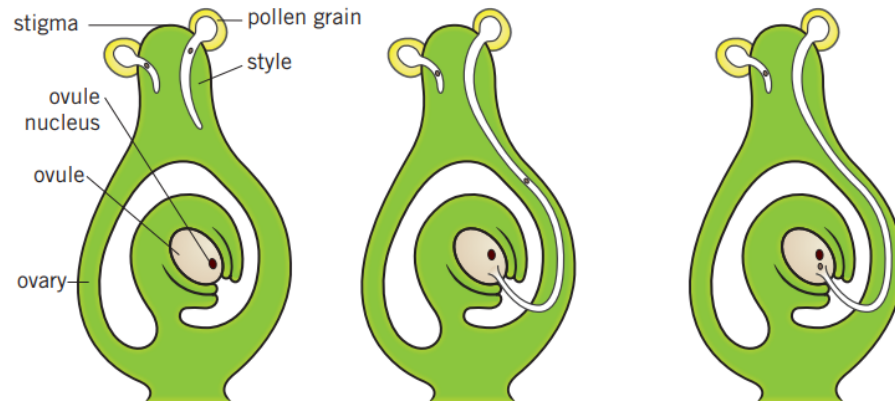
1	I can name and describe the functions of some tissues and organs in the reproductive systems of plants
2	I can name ways that seeds are dispersed
3	I can investigate methods of dispersal mechanisms quantitatively
4	I can describe the events in fertilisation to produce a seed
5	I can explain what is needed for germination

	Keyword	Definition
1	fertilisation	Joining of a nucleus from a male and female sex cell.
2	filament	The part of a flower that holds up the anther.
3	fruit	Structure that the ovary becomes after fertilisation, which contains seeds.
4	germination	The period of time when a seed starts to grow.
5	ovary	The part of a flower that contains ovules.
6	pollen	Contains the plant male sex cells found on the stamens.
7	pollination	Transfer of pollen from the male part of the flower to the female part of the flower on the same or another plant.
8	seed	Structure that contains the embryo of a new plant.
9	seed dispersal	The movement of seeds away from the parent plant.

Pollination and fertilisation

Pollination is the **fertilisation** of the ovule, the point at which the pollen is transferred to the ovule from the anther to the stigma, there are two types of pollination

- Cross pollination is between two different types of plant
- Self pollination happens within the same plant



The tube grows out of the pollen grain and down through the style.

The pollen nucleus moves down the tube.

The pollen nucleus joins with the ovule nucleus. Fertilisation takes place and a seed will form.

Germination is the process in which the **seed** begins to grow, for this to occur the seed needs:

- Water to allow the seed to swell and grow and for the embryo to start growing
- Oxygen for that the cell can start respiring to release energy for germination
- Warmth to allow the chemical reactions to start to occur within the seed

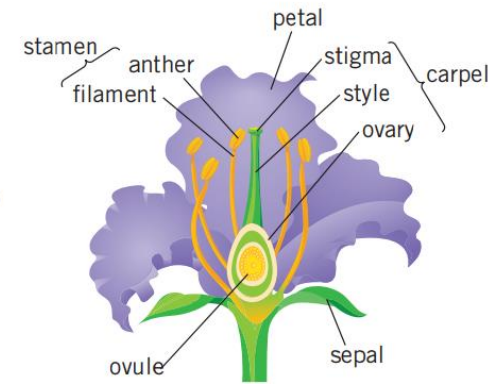
Careers:
Zookeeper
Marine biologist
Plant scientist
Horticulturist
Florist

Future Learning:
At GCSE you learn in more detail about structure & function of plant organs, how organisms interact and factors affecting population sizes.

Stamen

Male part of the flower

- The **anther** produces **pollen**
- The **filament** holds up the anther



Carpel

Female part of the flower

- The **stigma** is sticky to catch grains of pollen
- The **style** holds up the stigma
- The **ovary** contains **ovules**






Prior Knowledge From KS2:

At KS2 you will have covered living things can be grouped in a variety of ways, explored and use classification keys to help group, identify and name a variety of living things in their local and wider environment, and recognise that environments can change and that this can sometimes pose dangers to living things.

Why?

Our actions are affecting wildlife populations, this could affect future resources and food availability for the human race.

Homework Menu Grid

Topic	1 Point	2 Points	4 Points	6 Points	10 Points
 The Flower	Print off or draw a variety of different flowers.	All flowers look slightly different, but they still have features in common. What are these features?	Make a table of the male and female plant parts.	Create 5 multiple choice questions about flowers.	Get a flower, can you dissect all the pieces and label them? Bring this into class or take a picture.
 Pollination	Is pollen a male or female gamete?	Write a sentence to describe the difference between self-pollination and cross-pollination.	Draw a wind pollinated plant and an insect pollinated plant of your choice	Create a comparison table for insect and wind pollinated plants	Create an A4 poster on how flowers are adapted to attract insects.
 Fertilisation	What are the names of the male and female plant gametes?	Write a definition for fertilisation in plants.	Make up a crossword about the main key words from this topic so far.	Create a storyboard to show the main stages in plant fertilisation.	Write a 6 mark exam question and mark scheme on the topic of 'fertilisation' in plants.
 Seed and fruit formation	List as many fruits with seeds as you can.	Which part of the flower which becomes a fruit?	Go onto BBC Bitesize Key Stage 3 Science. Do the Revise, Activity and Test for the topic. Print Screen the page with your test score and the answers then print it or send it to your teacher.	What determines whether something is a 'fruit' or a 'vegetable'. Research and present your findings as a PowerPoint slide.	Interview someone (a friend/family member) about what they know about seed and fruit formation. Can you add to their knowledge using what you have learnt?
 Seed dispersal	What resources do plants compete for? Draw a little diagram to represent each one.	Draw a spider diagram with all the methods of seed dispersal.	Make a set of Quiz-Quiz Trade cards for your class on this topic. You will need 10 different questions, each on a card with the answer on the back.	Pick a method of seed dispersal. Create a short story describing the journey of the seed away from its parent plant.	Using sycamore leaves. Design an investigation into how the mass of the seed effects the speed at which the seed falls. Include a method and any equipment you will use..

