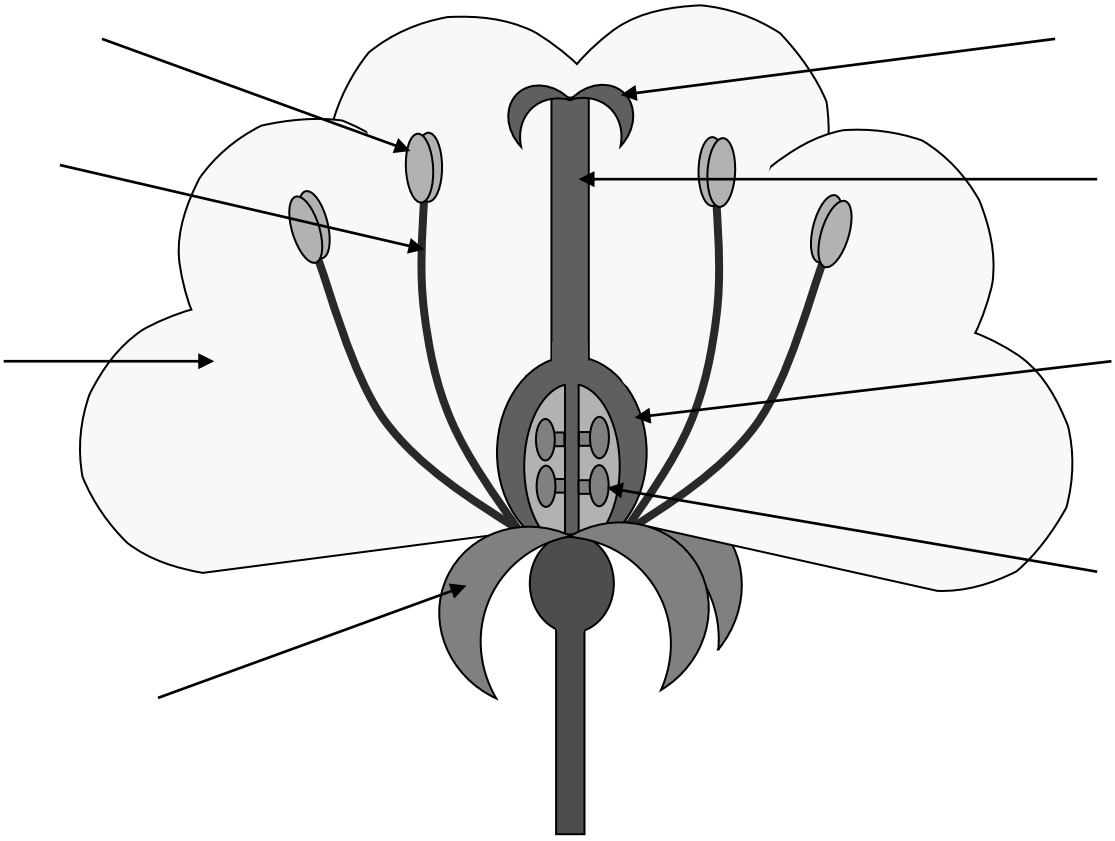
Name:_____

Structure of a flower

Label the diagram below:



Complete the word fill exercise below and table on the next sheet:

The male part of the flower is called the _____consists of the _____ and _____ . The female part of the flower is called the _____ consists of the _____, _____ and _____. The male gamete is made in the _____ and is found inside the _____ grain. The female gamete is found in the _____ and is called an _____.

Name:_____

Flower Part	Function
Petals	
Anther	
Filament	
Stigma	
Style	
Ovary	
Ovules	
Nectary	
Sepals	
Stamen	
Carpel	

Name:_____

Pollination:

What is pollination:

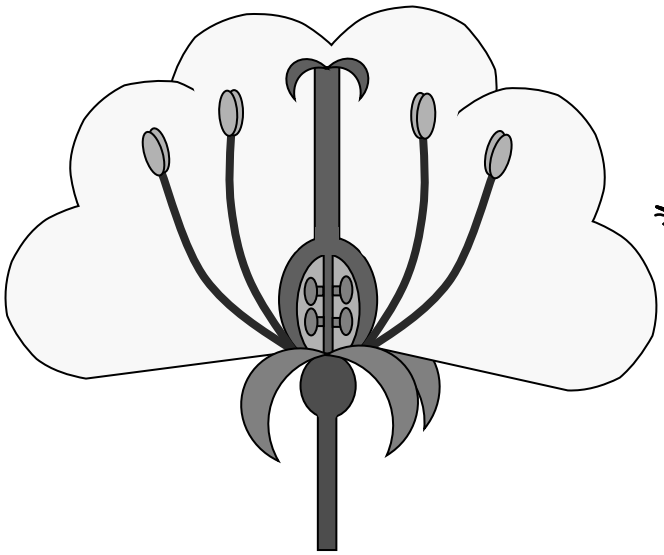
_____

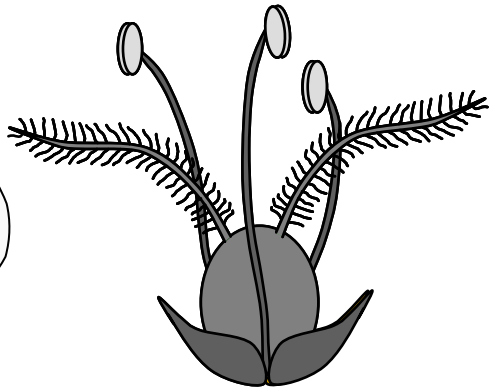
_____

_____

There are two mechanisms for pollination: wind and insect. Flowers are adapted to suit the mechanism by which they are pollinated.

Identify which flower illustrated below is wind-pollinated and which is insect-pollinated:





_____ _____

Name three flowers that are insect-pollinated:

_____

Give an example of a type of plant that is wind-pollinated:

_____

Name:_____

Complete the table below by describing how each part of the flower is adapted for wind or insect-pollination:

Flower part	Insect-pollinated	Wind-pollinated
Petals		
Nectary		
Scent		
Stigma		
Stamen		

Explain the difference between self-pollination and cross-pollination:

_____

_____

_____

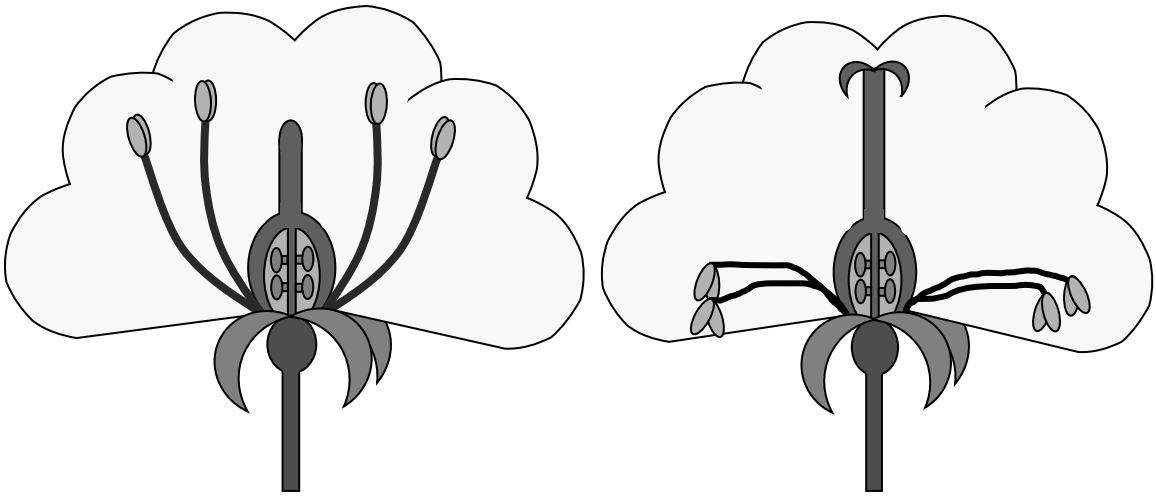
_____

_____

Name:_____

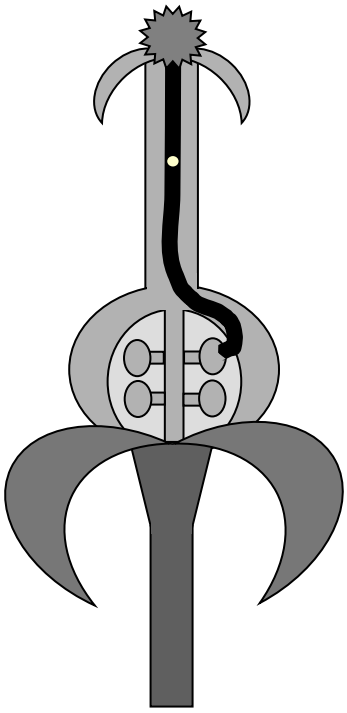
Why is it preferable for a plant to encourage cross-pollination rather than self-pollination?

Explain the methods used by plants to encourage cross-pollination (you can refer to the diagrams in the previous page and below in your answer).



Name:_____

Fertilisation



What stimulates the pollen tube to grow? _____

_____

Why do pollen grains only produce tubes in flowers of their own species?

_____

Explain how the pollen tube grows down through the style:_____

_____

How does the male gamete in flowers differ to the animal male gamete?

_____

When does fertilisation occur?_____

_____

What type of division occurs to produce an embryo plant from the diploid zygote formed after fertilisation?

_____

Name:_____

Seed dispersal

What part of the flower develops into a seed?

_____

How does the seed become dormant?

_____

_____

_____

Why do seeds need to be dispersed away from the parent plant?

_____

_____

_____

_____

What are the four mechanisms for seed dispersal?

_____

_____

Name:_____

For each of the seeds shown state its mechanism for seed dispersal and describe the adaptations that are suited to the mechanism

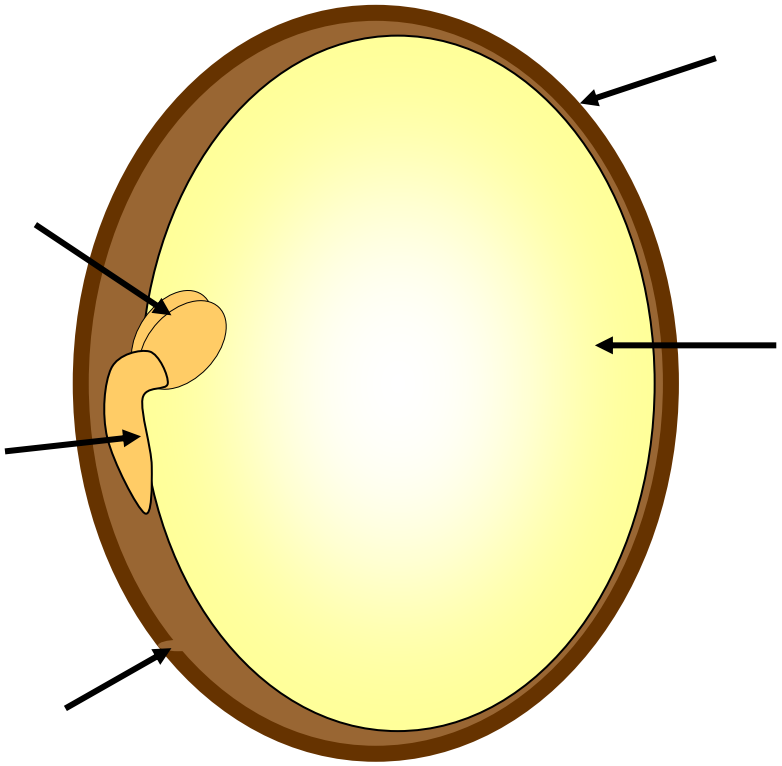
Name of plant	Diagram of seed	Seed dispersal mechanism	Adaptations
Lupin		mechanical	Dries unevenly and splits open with force shooting the seeds outwards
Backberry			
Burdock			
Sycamore			
Coconut			

Key words to help: animal, water, wind, hooks, wings, hollow, light, fruit, bright colour, waterproof case

Name:_____

Seed germination

Label the diagram:



What are the:

a) Cotyledons:_____

b) Plumule:_____

c) Radicle:_____

d) Testa:_____

e) Micropyle:_____

Why is it important for water to enter the seed?_____

_____

_____

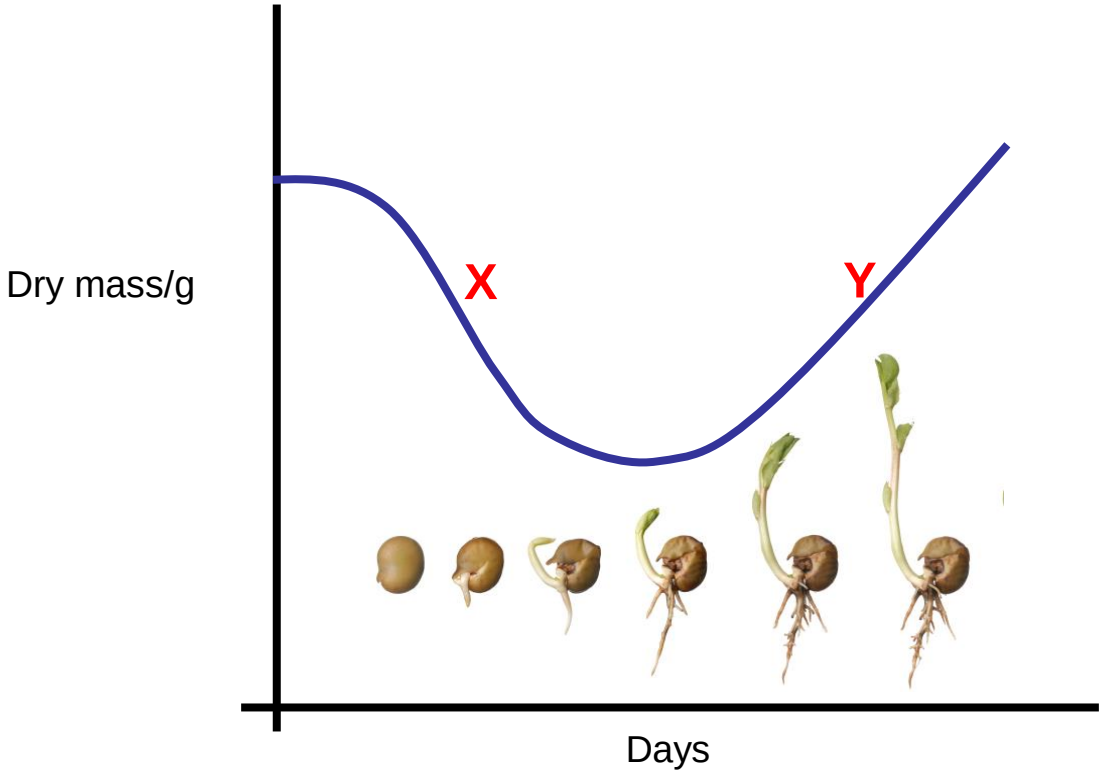
Name:_____

What is meant by the term dry mass?

_____

_____

Explain why the dry mass changes at points X and Y in the graph below:



_____

_____

_____

_____

_____

Name:_____

Summarise the experiment results below to explain what conditions are required for seed germination: