

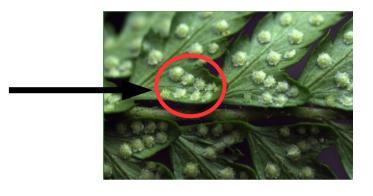
#### Presentation of the reproduction of plants

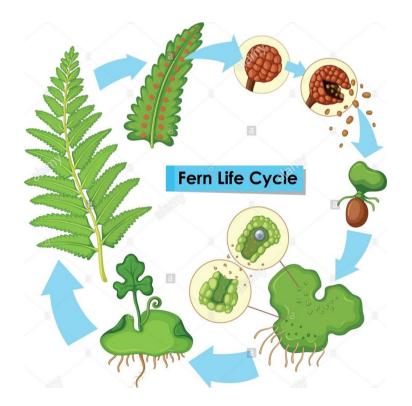
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# Reproduction of ferns





There are sporangia on the underside of fern leaves.

When the sporangia are ripe, they open and release spores.

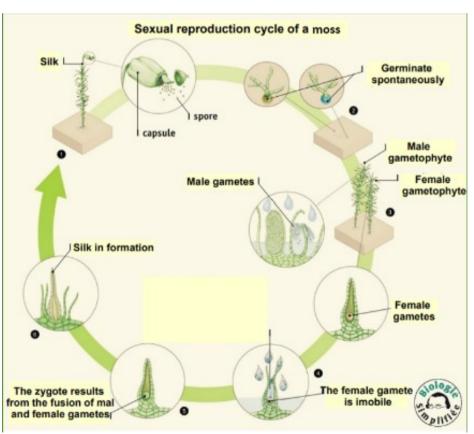
Each spore will germinate on the ground and become a prothallus. The prothallus contains sperms and ovules.

When it rains, sperms swim to the ovules to fertilize them.

After fertilization, the egg will grow into a new fern.



#### Mosses

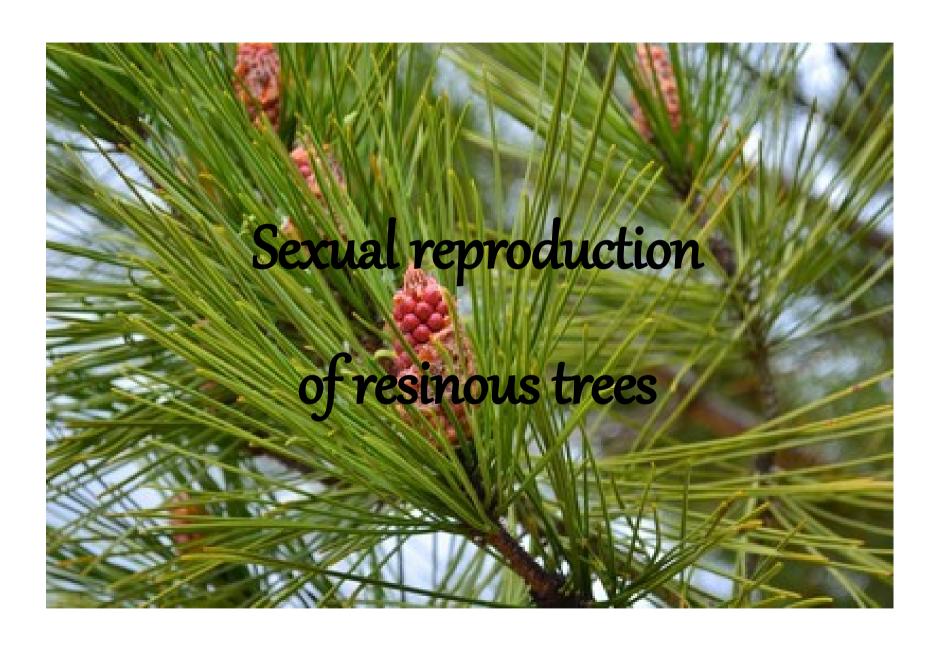


At maturity, the capsule releases spores of two types. The spores fall to the ground and germinate.

Transported by rain or dew water, the male gametophyte pass to the female gametophyte.

Fertilization, that is to say the fusion of gametes, gives birth to a zygote.

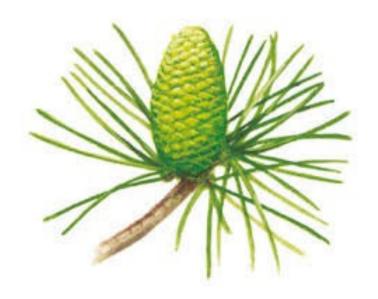
This single cell multiplies to form a new sporophyte

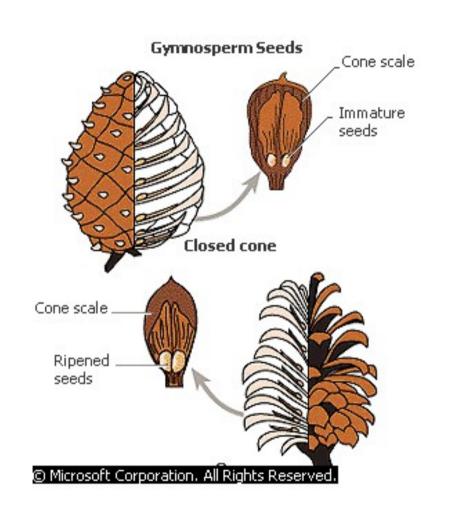


### Definition

• Gymnosperms are woody plants

• The seeds are on scales or arranged in cones





#### An example: the pine

- The female cones are made of scales on which the eggs differ
- The male cones consist of stamens :
  - The pollen grains develop in two pollen sacs
  - The pollen grains are disseminated and carried by the wind



#### Fertilization

• The ovum + the pollen = grain develops

• The female cone dries out and the seeds are disseminated by the

wind





• The embryo will develop and form a new tree



# The sexual reproduction of flowering plants

1. When the seed germinates, it forms a plant.

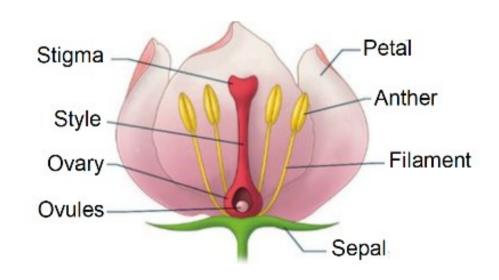


2. The gametes meet thanks to the wind, the humans or the insects which put the pollen on the stigma of the flowers.

#### **Definitions:**

Pollen: the male gametes

Stigma: the female gametes



## The sexual reproduction of flowering plants

- 3. When the pollen arrives in the pollinic tubes, it goes to the ovums. The fertilization will take place.
- 4. When the ovary is fertilized, it becomes a fruit which wraps up the seed.
- 5. The seeds in the fruit, fall with it. When it's on the ground, the seeds are transported by animals which eat them. The cycle starts again!

#### **Definitions:**

Ovums: ovums are in the ovary

Ovary: what contains the ovums





# Definition : Reproduction without fertilization







from bulbs



from tubers



from rhizomes



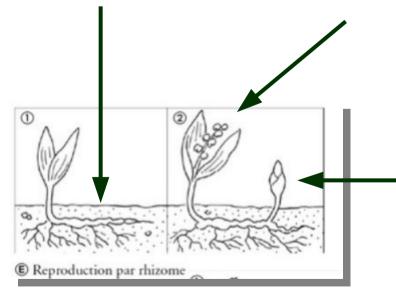
## The lily of the valley

(1)

Reproduces underground, from horizontal creeping stems: rhizomes.

On the rhizomes, buds form which will give flowering shoots.





A new lily of the valley

#### Strawberries



2

Stolons are aerial stems that grow from the mother plant

Get rooted at the nodes



Give new plants

Reproduce naturally from stolons

# Thank you for listening to our

presentation!



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