















Living Things and Their Habitats: Making New Plants 1

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| Aim: To describe the life process of reproduction in some plants and animals by exploring sexual reproduction in plants. I can describe how some plants reproduce. | Success Criteria: I can explain the difference between sexual and asexual reproduction. I can identify the function of the parts of a flower. I can describe ways that plants are pollinated in order to reproduce. | Resources: Lesson Pack  REGENT STUDIES Focused education on life's walk! www.regentstudies.com |
| | Key/New Words: Sexual, asexual, reproduction, gamete, cell, pollen, ovule, fusion, fertilisation, pollination. | Preparation: Parts of a Flower Information Cards - cut out and stuck up around the classroom Parts of a Flower Activity Sheet - 1 per child Pollination Activity Sheet - 1 per child |

Prior Learning: It will be helpful if children have learnt about the parts of a flower and the processes of pollination and fertilisation in Year 3.

Learning Sequence

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|  | Reproduction: Briefly explain sexual and asexual reproduction using the information and the pictures on the Lesson Presentation . Explain sexual reproduction in more detail, referring to the Lesson Presentation . |  |
|  | Parts of a Flower: Children recap what they learnt in Year 3 about the parts of a flower and their function. Children move around the classroom to find the Parts of a Flower Information Cards . Children use the information they find to complete the boxes on the differentiated Parts of a Flower Game Activity Sheet . <i>Look for children who can identify and explain the function of the different parts of a flower.</i>  Add information to the sheet with the names of the parts of the flower already filled in.  Complete the sheet by adding the names of the parts of the flower and information about their functions. |  |
|  | Insect or Wind? Use the Lesson Presentation to recap pollination. Address any misconceptions. Discuss the fact that plants can be pollinated by insects or by the wind. Children sort the pictures and explanations on the differentiated Pollination Activity Sheet . <i>Look for children who can describe the different ways plants reproduce through the processes of pollination and fertilisation.</i>  Sort the full statements.  Sort the statements, including some with gaps to fill in.  Sort the statements, including some blank ones to complete. |  |
|  | Sexual or Asexual: Children sort the statements on the Lesson Presentation according to whether they describe sexual or asexual reproduction. <i>Look for children who can identify whether each statement describes sexual or asexual reproduction.</i> |  |

Taskit

Photographit: Children use a camera to photograph flowers around school or the local area. Sort them into wind or insect pollinated, based on the features they see.

Observeit: Grow tomatoes or sunflowers to watch pollination and fertilisation in action. Look out for insects going into the flowers, then later in the year look at the seeds that have formed in the flower head or inside the fruits.



Science

Living Things and Their Habitats



Making New Plants 1





Aim

- I can describe how some plants reproduce.

Success Criteria

- I can explain the difference between sexual and asexual reproduction.
- I can identify the function of the parts of a flower.
- I can describe ways that plants are pollinated in order to reproduce.



Reproduction

All living things need to make more of themselves so that their species does not die out.

Reproduction is the process by which new living things are made.

There are two types of reproduction: sexual and asexual.

Sexual reproduction requires two parents to make one offspring.



Asexual reproduction needs only one parent, which creates offspring that are exact copies of the parent.





Reproduction

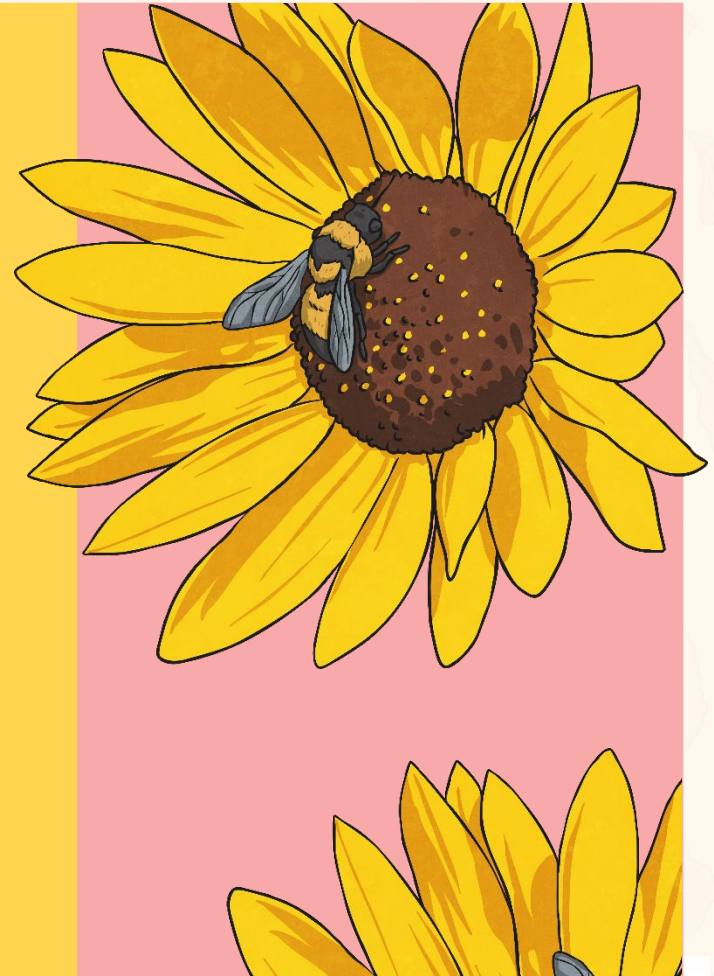
In this lesson, you will learn more about sexual reproduction in plants.

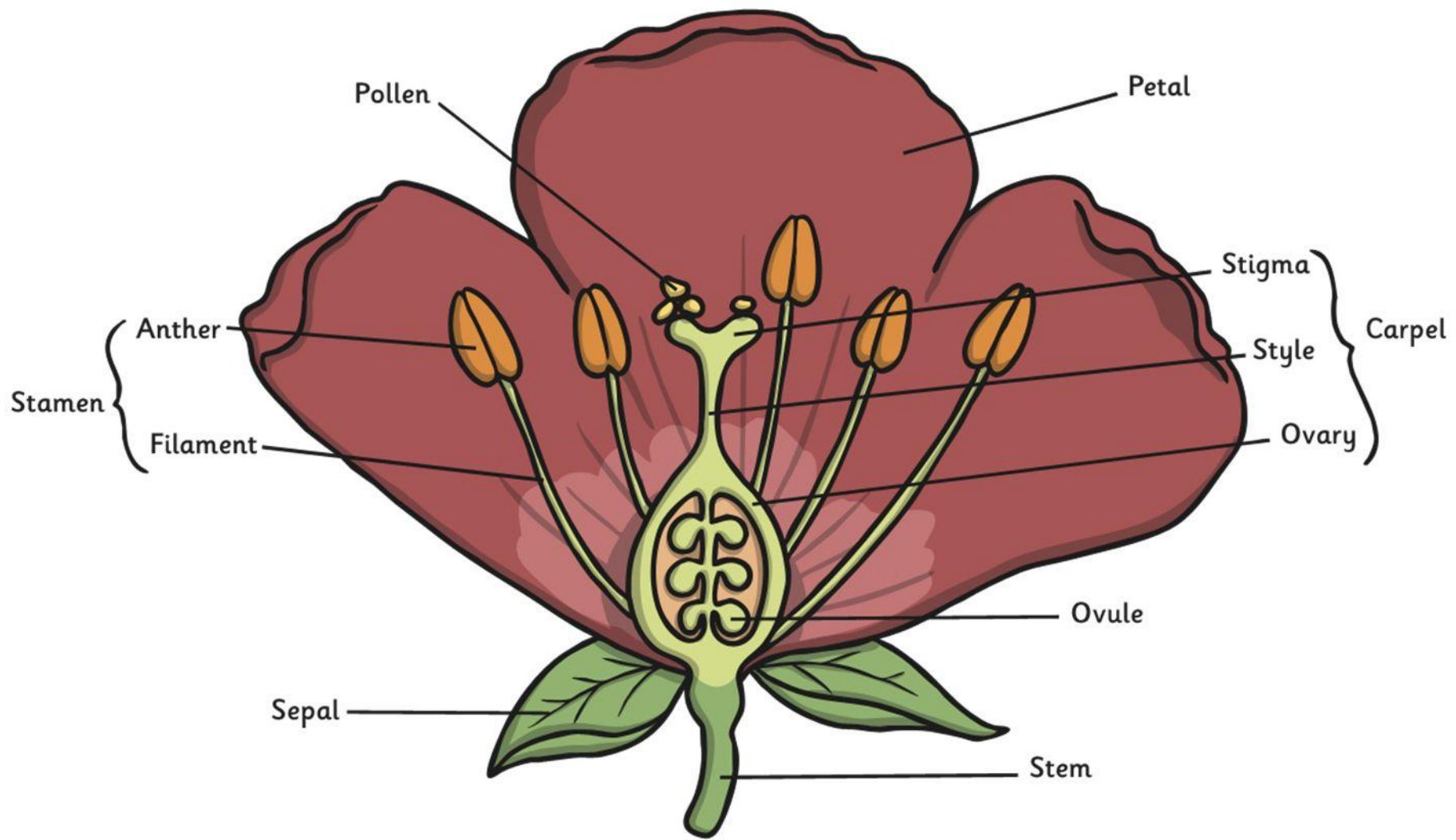
Living things that use sexual reproduction have sex cells called gametes. These are split into male gametes and female gametes. In some living things, the male and female are separate, but in other living things one organism contains both male and female gametes.

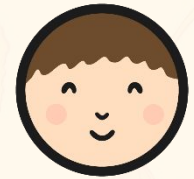
In plants, the male gametes are contained in the pollen and the female gametes are called ovules.

Sexual reproduction happens when a male gamete and a female gamete join. This is called fertilisation.

Sexual reproduction produces offspring that are similar to both parents, but not identical to either.







Insect or Wind?

Work with a partner to sort the pictures of flowers and the explanations on the Pollination Activity Sheet into the correct column.

Pollination

Some plants are pollinated by the wind, and some plants are pollinated by insects. Cut out the pictures and statements and place them in the correct column according to whether they are about insect pollination or wind pollination.

| flowers pollinated by the wind | flowers pollinated by insects |
|--------------------------------|-------------------------------|
| | |

Pollination

Brightly coloured so they look attractive.

Contain tasty nectar.

Have large petals for insects to land on.







Have long, dangling catkins that get blown around easily.

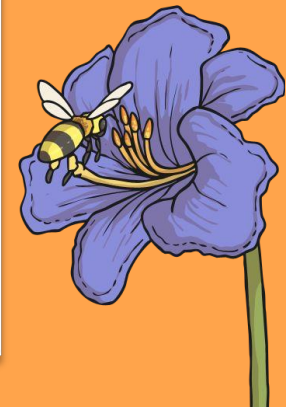
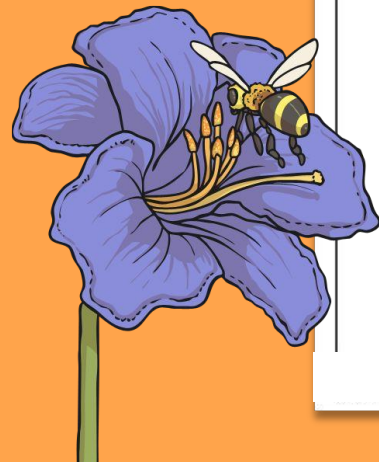
Have feathery stigmas to catch pollen.

Pollen is sticky, so it sticks to the insect.

Pollen grains are very small so they can be carried by the wind.

Stigma hangs outside the flower so it can catch pollen grains.

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|  dog rose |  wheat |  sunflower |
|  cherry |  plum |  sunflower |





Sexual or Asexual?



Some of these statements describe sexual reproduction, and some of them describe asexual reproduction. Can you decide which are which?

offspring are similar to their parents, but not identical

requires just one parent

needs two parents

produces identical offspring

sexual

asexual



Aim



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