Disclaimers

This unit covers the human life cycle and puberty is clearly an important stage of development. Children cannot be withdrawn from science lessons that cover statutory content of the national curriculum. However, it is essential that you consult your school's policies for Science and Sex and Relationships Education prior to teaching this lesson to ensure that the content of the lesson matches those policies.

This resource is designed to support teaching about biological attributes. You should consider whether this content is appropriate for all children in your class, especially children who have DSD/are intersex, or who are transgender. This resource is editable to ensure that you can adapt it to meet the needs of children in your setting. However, if editing resources, it is your responsibility to ensure that the content of the relevant Programme of Study is fully retained.

Key Vocabulary Overview	
fertilisation	male and female sex cells fusing together to create new life
embryo	offspring in the early stages of development after fertilisation
foetus	a baby who is still growing in the womb
sperm cell	human male sex cells developed in the testes
egg cells	human female sex cells developed in the ovaries
reproduction	the process of producing offspring
sexual reproduction	produces offspring non-identical to biological parents and requires male and female sex cells
stamen	the male reproductive organ of a flower
pistil	the female reproductive organ of a flower

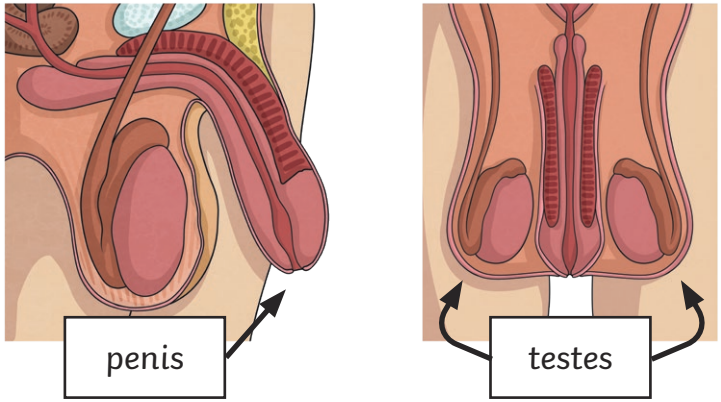
anther	part of the stamen that produces pollen
filament	part of the stamen that supports the anther
stigma	part of the pistil that catches pollen on its sticky surface
style	part of the pistil that connects the stigma to the ovary
ovary	part of a plant's pistil that contains the ovules
ovule	the female sex cell found in the ovary of plants
pollen	a fine, powdery substance that contains a plant's male sex cells
pollination	when pollen is moved from the male anther to the female stigma
pollinator	animal that transfers pollen

clone	a cell or entire living thing that was produced asexually and is nearly identical to the original cell or parent
runner	stem-like branch of a plant that can grow into a new clone plant
tuber	part of a plant's stem from which a new clone plant can grow
bulb	underground part of a plant that can grow into a new clone plant
asexual reproduction	produces offspring that are nearly identical to the parent
cutting	part of a plant that has been cut off to grow a new clone plant
parent plant	a plant from which cuttings can be taken
independent variable	the one thing you change in an investigation
dependent variable	what you measure (or observe) in an investigation

controlled variables	what you keep the same in an investigation
compost	a nutrient-rich material used to help plants grow
data	information collected to answer a question
line graph	a method of representing continuous data
prediction	what you think might happen in an investigation based on what you already know

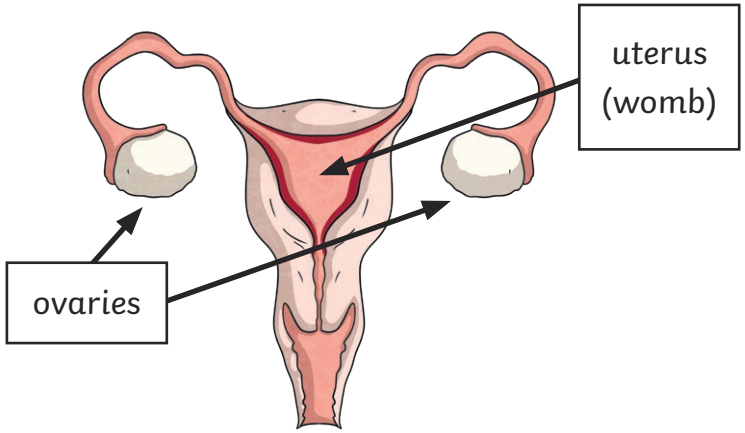
Male Reproductive System

Sperm cells are male sex cells that are produced inside the testicles (testes).



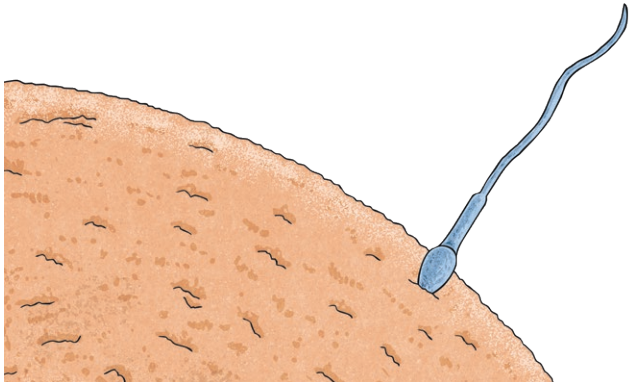
Female Reproductive System

Egg cells are female sex cells that develop in the ovaries.



Fertilisation

Fertilisation occurs when one **sperm cell** fuses with an **egg cell**.



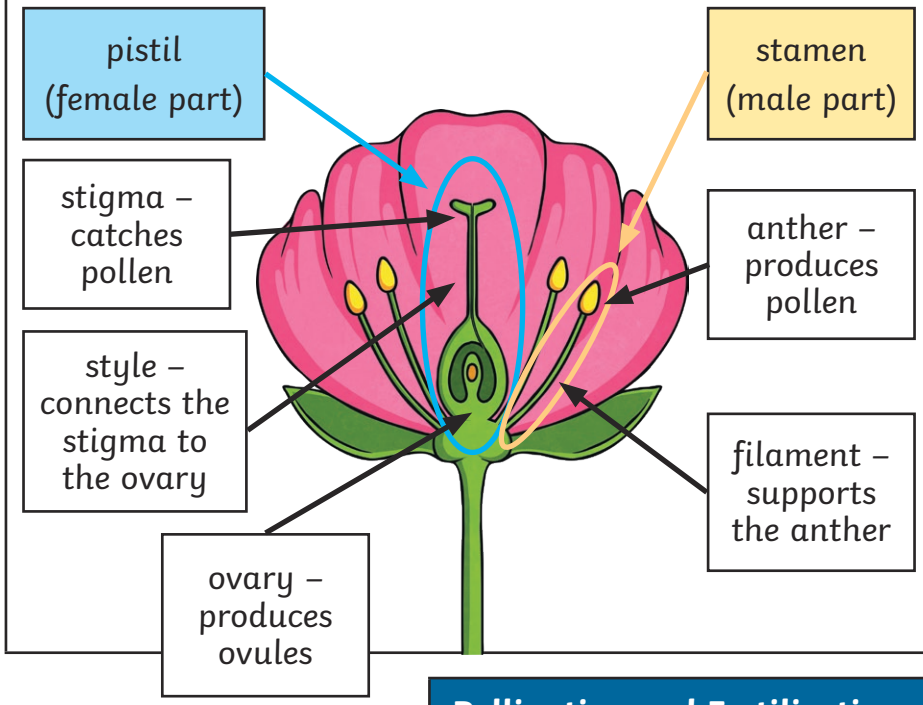
Asexual Reproduction

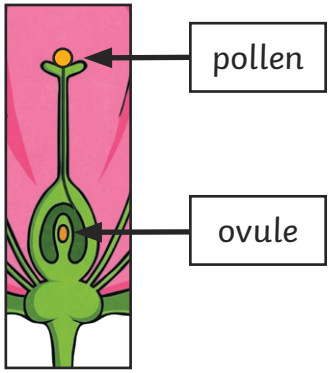
Asexual reproduction involves no mixing of genetic material, as there is only one biological parent. Offspring produced by **asexual reproduction** are, therefore, nearly identical to the parent. These offspring are sometimes called **clones**.

Asexual Reproduction in Animals

Some animals can **reproduce asexually**. Some bees, wasps, ants and sea stars are examples of animals that can produce **clones**.

Reproduction in Plants





Pollination and Fertilisation

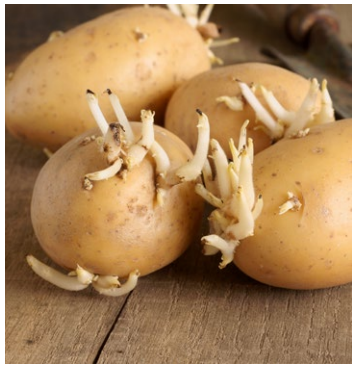
Many plants rely on wind or **pollinators** for **pollination**.

Fertilisation occurs when a male sex cell from **pollen** travels down the **style** and fuses with a female **ovule** inside the **ovary**.

Asexual Reproduction in Plants

Many types of plant can **reproduce asexually** by producing **bulbs**, **tubers** or **runners**.

onion **bulb**



potato **tubers**

spider plant **runners**

Cuttings

Plants can also be created **asexually** using **cuttings**. These can come from leaves, roots, stems or flowers/petals.

A **cutting** needs to be given the right conditions to encourage it to develop roots and grow.