

Living things and their habitats

SCIENCE KNOWLEDGE ORGANISER

Year 5/6 Autumn Term 2

Do all living things reproduce and develop in the same way?

What I will learn (sticky knowledge)

- As part of their life cycle plants and animals reproduce.
- Most animals reproduce sexually. This involves two parents where the sperm from the male fertilises the female egg.
- Animals including humans have offspring which grow into adults. In humans and some animals these offspring will be born live, such as babies or kittens, and then grow into adults.
- In other animals, such as chickens or snakes, there may be eggs laid that hatch to young which then grow to adults.
- Some young undergo a further change before becoming adults e.g. caterpillars to butterflies. This is called a metamorphosis.
- Plants reproduce both sexually and asexually. Bulbs, tubers, runners and plantlets are examples of asexual plant reproduction which involves only one parent.
- Gardeners may force plants to reproduce asexually by taking cuttings.
- **Sexual** reproduction occurs through pollination, usually involving wind or insects.

Key Vocabulary	
life cycle	cuttings
reproduce	bulbs
sexual	runners
sperm	asexual
fertilises	offspring
egg	plantlets
live young	metamorphosis



Stage 9 The butterfly now feeds on nectar from flowers, its mouth parts comprising a long probosois to reach the food. It no longer grows, its function being to mate and produce the next generation. Stage 8 The butterfly splits open the skin of the chrysalis and emerges, its crumpled wings gradually expanding as blood is pumped into them. Stage 7 Inside the chrysalis, the caterpillar's body slowly breaks down and is transformed into a butterfly. Stage 6 Here the caterpillar starts the process of metamorphosis, gradually shedding its skin and emerging as a chrysalis or pupa. Stage 5 When it can grow no bigger, the fully grown caterpillar attaches itself to the underside of a leaf or stem.

What I will learn next

- In year 7 you will learn about the reproduction in humans (as an example of a mammal), including the structure and function of the male and female reproductive systems, menstrual cycle (without details of hormones), gametes, fertilisation, gestation and birth, to include the effect of maternal lifestyle on the foetus through the placenta.
- You will learn about the reproduction in plants, including flower structure, wind and insect pollination, fertilisation, seed and fruit formation and dispersal, including quantitative investigation of some dispersal mechanisms.

What I should already know

- You will have understood that animals, including humans, have offspring which grow into adults.
- The part that flowers play in the **life cycle** of flowering plants, including pollination, seed formation and seed dispersal.