



KNOWLEDGE ORGANISER

SCIENCE: OUR CHANGING WORLD

YEAR SIX

KEY KNOWLEDGE:

QUESTION 1: How do animals behave at different times of the year?

ANSWER

	Autumn/Winter	Spring	Summer
Mammals	Squirrels collecting nuts and burying them for winter eating. Hedgehogs preparing for hibernation.	Mating rituals begin, e.g. deer, squirrel, hedgehog, hare. First lambs appear. Rabbits on verges, adults, babies – their droppings.	Young mammals seen, sometimes being fed by adults. Squirrels in trees, squabbling, building nests, raiding bird tables.
Amphibians	Frogs, toads and newts preparing for hibernation in muddy pools or bottom of ponds.	First signs of toads, frogs and spawn in still water. Newt nymphs found when pond-dipping.	Tiny frog and toadlets seen in pond and in damp undergrowth. Adults feeding on slugs and snails.
Insects	Bees feeding on sunny days and preparing for hibernation.	First sight of early flying insects in garden. Dragonfly and Damselfly nymphs in pond. Butterflies lay eggs and early caterpillars seen on leaves. Aphids and ladybirds appear.	New adults flying. Mating takes place and cycle repeats before the end of summer. Feeding on flowering plants increases – particularly on sunny days.
Birds	Signs of migration – swallows, swifts, sea birds, peregrine falcons, ospreys. Birds eating berries and final fruits to help them survive winter. On warmer days in winter, birds foraging. Bird table and feeders much busier.	Bright coloured plumage on male birds. Return of winter migrants. Courtship behaviour. Bird song increases in early morning. Nest building and egg laying.	Birds with food in their mouths. Feeding young. Fledglings seen in garden, with short or no tail, still being fed by parents. Young with juvenile plumage.

QUESTION 2: How can you observe closely the lifecycle of animals?

ANSWER

We can make detailed observations of the life cycle of an animal in a controlled environment, identifying similarities and differences between the stages. In doing this we can identify physical and developmental changes that take place over a period of time. We might also consider and describe the potential impact of various threats, including adverse weather conditions, predators and removal of habitat, on population. This will enable us to make comparisons with other animals.

QUESTION 3: How do bird numbers in the UK change throughout the year?

ANSWER

Some species of resident birds migrate in Spring and / or in Autumn. Often in winter birds from other populations in Europe boost populations in Britain and Ireland. These movements are often related to severe periods of weather or a shortage of food. From late summer, migrant starlings from as far away as Scandinavia, the Baltic States and Russia join our resident birds. By mid-winter the population can be huge with up to half a million roosting in some areas. A few resident birds go as far as Iberia to winter.



Starling Migrations



QUESTION 4: What happens to invertebrates during their lifecycle?

ANSWER

Invertebrates are animals without backbones. Invertebrates include jellyfish, snails, slugs, crabs, shrimp, worms and Insects. Once such insect is the Butterfly, its lifecycle is shown below.

