

# River Lifecycles



River Lifecycles encourages children to learn about the similarities and differences between the lifecycles of different river animals, and why having a healthy river ecosystem is vital to supporting life.

## Learning outcomes:

The children will learn about:

- The life cycles of different species in the river including fish, invertebrates, birds, and mammals.
- Why some animals life cycles and habitat requirements make them very sensitive to changes in the river.

## Resources:

- Lifecycles Worksheets (see end of document)
- Scissors

## Activities

### 1. Life stages cut out

(Activity to do in pairs or individually)

Cut out the life stages of each species, one at a time, and put them in the correct order.

Discuss the similarities and differences between the different animal lifecycles. Discuss what would happen if the river became blocked and the animals could not move up or downstream, how would that affect the species differently?



## 2. Design a river creature and write about it's lifecycle

Prompt Questions:

- What are the different stages of the creature's lifecycle called?
- Does it change appearance over the creature's lifecycle?
- How long does the creature live?
- What habitat does the creature live in?
- How is the creature adapted to it's habitat?

### Curriculum links

These activities link to the following parts of the Science National Curriculum:

#### Key Stage 1:

- Animals including Humans
- Living Things and their Habitats

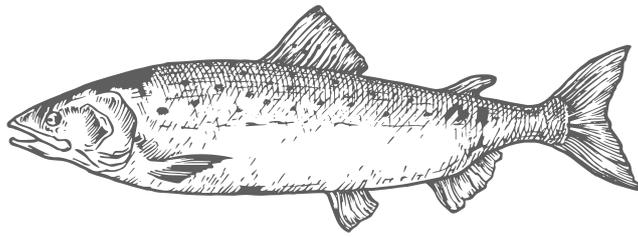
#### Key Stage 2:

- Animals including Humans
- Living Things and their Habitats

### Key Questions:

- What are key elements of the lifecycles of different species? e.g. laying eggs, giving birth to live young.
- Can you identify any specific conditions needed for each animal to complete it's lifecycle e.g. a certain temperature, season, or amount of moonlight, moving up or downstream
- How would each lifecycle potentially be impacted by human activity or climate change?

# Atlantic Salmon



**Eggs** - Adult salmon lay their eggs (spawn) upstream in gravel nests called Redds.

**Parr** - Over the Autumn, the fry become more camouflaged and become darker, developing stripes and spots along their sides.

**Adult Salmon** - Adult Salmon spend most of their lives at sea, usually 2-3 years, before they return to the rivers to lay their eggs (spawn).

**Fry** - Once the alevins have become active and can swim freely they are known as fry. Fry are small and silvery.

**Smolt** - As parr prepare to leave the rivers and head towards the ocean, they lose their camouflage and take on a shiny, silver appearance, becoming smolts.

**Alevin** - When the tiny fish hatch from the eggs they are known as alevins.

# European Otter



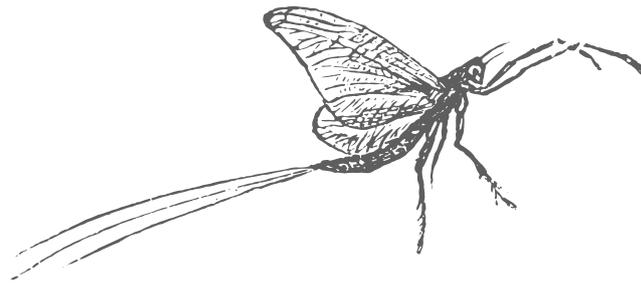
**Newborn Pups** - Baby otters are called pups or cubs. Most pups are born between May and August. When they are born, they have short, grey fur and their eyes are closed.

**Adult Otter** - At two years old the otters have matured and can now begin to reproduce, starting the lifecycle again.

**Juvenile** - Just after turning 1 year old, the otter pups will leave the holt and find a new territory on the river.

**10-12 weeks old pups-** At 10-12 weeks, pups will begin to leave the holt and will begin to explore the water to practice their swimming.

# Mayfly



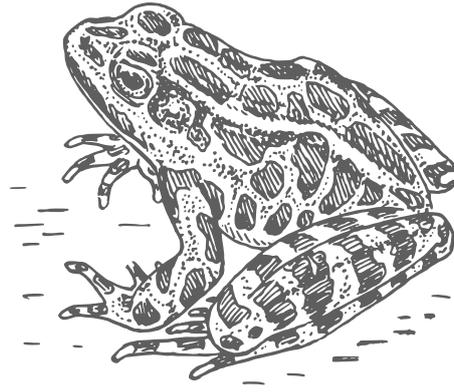
**Spinner** - The Duns shed their dull skin and become shiny, they are now known as a spinner. Mayfly may only live as a spinner for as little as one day, dying after they mate.

**Nymph** - The eggs hatch into nymphs, which is the larval stage of the mayfly. They will stay on the riverbed as nymphs for up to two years.

**Eggs** - Female mayfly lay their eggs on the surface of the water. The eggs sink to the bottom of the river.

**Dun** - When the nymphs emerge from the water, they have dull skin and are known as a Dun.

## Common Frog



**Tadpole** - After 1-3 weeks, the eggs hatch into tadpoles. Young tadpoles have a long tail and gills which they use to breathe underwater. Tadpoles always live in the water and do not go on land.

**Eggs** - Female frogs lay their eggs in big clumps called frogspawn. The eggs are surrounded by a protective layer of transparent jelly.

**Frog** - Frogs can take up to four years to fully mature. Frogs often return to the same stream or pond to breed.

**Froglet**- Over a period of 14 weeks, tadpoles grow legs, grow a cover over their gills and their tails shrink. They develop lungs and at this point can survive on land.

# Design a river creature

Name of species:

Where does it live?

What is its lifecycle?

