

Lesson 5: Animal life cycles

Children will learn to: recognize that all animals have life cycles; understand similarities and differences in animal life cycles; identify and describe the life cycles of two animals

Main outcome: Children create the life cycle of an animal of their choice

Cognitive skills: predicting, comparing, sequencing, identifying, matching, reasoning

Main language: *What happens first, next ...? It becomes ... / changes into ... / First, next, after that, then, finally ...*

Main vocabulary: *young, adult, life cycle, simple, metamorphosis, stage, egg, hatch, born, alive, frogspawn, larva, pupa, chrysalis, gills, lungs, tadpole, frog, butterfly, tail, shrink, skin, twig, jelly, female, big, little, tiny, leaf, water*

Materials: Worksheet 1: The life cycle of a frog (copy for each child); Worksheet 2: Butterfly life cycle wheel (copy for each child); scissors, paper fasteners (one for each child), photos or computer images of butterfly, frog and different stages of their life cycles (optional)

Revision activity

- Ask *What's a herbivore / carnivore / omnivore? (an animal that eats ... plants / meat or fish / plants, meat and fish) Can you give me examples?* and listen to the children's response.
- Play a game with the whole class. Say the name of an animal or plant and explain that children should respond by saying a sentence about how it fits into a food chain, e.g. *Grass! Grass is eaten by zebras! / Seals! Seals are eaten by polar bears!*

Introduction and setting objectives

- Say, for example, *All animals have life cycles. They are born live from their mothers (mammals) or they hatch from eggs (e.g. fish, birds, reptiles). First they are young and then they grow into adults. Animals that have a simple life cycle are similar to their parents when they are born, only smaller. Elicit or give an example of animals that have a simple life cycle, e.g. polar bears, elephants, crocodiles, parrots, whales, you!*
- Explain that some animals have a more complicated life cycle and as they grow into adults they change completely. Explain that the word we use to describe this is *metamorphosis*. Ask the children if they can think of any animals they know that change or undergo metamorphosis as part of their life cycle and listen to their suggestions, e.g. frog, butterfly, ladybird.
- Say *In this lesson we're going to learn about the life cycles of two animals that change or undergo metamorphosis as part of their life cycle: the frog and the butterfly. We're also going to prepare and write about the life cycle of an animal for our e-zines (or magazines).*

Suggested lesson procedure

Activity 1

- Show the children a photo or computer image of a frog if available. Ask the children what they know about the life cycle of a frog and listen to their ideas. Ask, for example, *What happens first / next ...? It changes into a ...* Use this as an opportunity to introduce or remind children of vocabulary, e.g. *lay eggs, frogspawn, hatch, tadpole, gills, lungs, shrink.*
- Teach children actions to go with each stage of the life cycle of a frog, e.g. *You're tiny eggs* (curl up very small); *Now you change into frogspawn with tiny heads and tails* (stay curled up small, wiggle your head and use the palm of your hand to suggest a tail); *Now you change into little tadpoles* (put your hands by your sides to be gills and mime swimming in the water); *Now you change into big tadpoles* (make yourself bigger and repeat as previously); *Now you change into big tadpoles with legs* (mime using your arms as legs and continue to swim); *Now you change into a frog* (mime jumping about as a frog).
- Say *Let's act out the life cycle of a frog!* Give the instructions for each stage and children act out the life cycle.

- Repeat, and this time pause after children do each action and ask *What are you? We're tiny eggs!*, etc. before continuing.

Activity 2

- Give a copy of Worksheet 1 to each child.
- Ask individual children to take turns to describe each stage of the life cycle of the frog using the pictures.

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- Ask children to work individually and label the stages of the life cycle.
- Children compare and check their answers in pairs.
- Check the answers with the whole class by getting children to name the stages in the life cycle.

Key:

1. tiny eggs; 2. frogspawn with tiny heads and tails; 3. little tadpole; 4. big tadpole; 5. big tadpole with legs; 6. frog

Activity 3

- Read the descriptions A-F in turn. Children listen and identify the stages (but they don't write yet). Check understanding and clarify meaning (e.g. *jelly, lungs*) as you do this.
- Ask the children to work individually and read and number the descriptions according to the stages in the life cycle.
- Children compare their answers in pairs.
- Check the answers by asking individual children to take turns to read the descriptions and identify the stages. Use these to remind children of the metamorphosis frogs undergo during their life cycle.

Key:

1. C; 2. F; 3. D; 4. A; 5. E; 6. B

Activity 4

- Say *Let's make a wheel to show the life cycle of a butterfly!* and show the children the butterfly life cycle wheel you have prepared.
- Repeat the procedure you followed for the life cycle of the frog at the start of Activity 1. Show the children a photo or computer image of a butterfly if available. Ask what they know about the life cycle of a butterfly and listen to their ideas. Ask *What happens first / next ...? It changes into a ...* Use this as an opportunity to introduce or remind children of vocabulary, e.g. *hatch, caterpillar, chrysalis* (or *pupa*).
- Give a copy of Worksheet 2 and a paper fastener to each child. Make sure children also have scissors available.
- Explain and demonstrate that children should cut out the two circles and the 'window' in the first circle. They should then put the circles on top of each other and attach them in the centre with the paper fastener.

Give the children time to do this and be ready to help as necessary.

- When the children are ready, say *Show me the eggs! Show me the chrysalis!*, etc. and children move the 'window' on their wheel to the stage in the life cycle you name.

- Say sentences to describe the life cycle of the butterfly as follows: 1) *The female butterfly lays many eggs on or under a leaf.* 2) *The eggs hatch into tiny caterpillars after 12-15 days.* 3) *The tiny caterpillars eat the leaves around them and grow into big caterpillars.* 4) *The caterpillars stop eating and attach themselves to a twig. They lose their outer skin and change into a chrysalis (or pupa).* 5) *Two weeks later the chrysalis opens and a butterfly appears.* Children listen and respond by turning the 'window' on their wheels to each stage as you speak.

- At the end ask *What do the frog and the butterfly have in common? (They both change or undergo metamorphosis during their life cycle).*

Activity 5

- Divide the class into their project groups, and within each group into pairs. Explain that you want the pairs to prepare the life cycle of an animal for their e-zine (or magazine). They can *either* prepare the life cycle of a butterfly *or* a frog *or* another animal of their choice, e.g. a ladybird. Ask children to decide on the animal each pair will do in their groups.

- Ask children to research and check information about the life cycle of the animal they choose using computers and the internet. Explain that they should then draw and label the life cycle of the animal and write sentences to describe each stage.

- Give out pieces of paper (one to each child). Children work with their partner and plan, research, draw and write about the life cycle of the animal they choose or use computers to do this. Monitor and be ready to help as necessary. The animal life cycles can be completed either as homework or in a follow-up lesson as necessary.

Learning review

- Briefly review learning by asking the children *What have we done today? What have you learnt? How did you learn about the life cycle of the frog and the butterfly? What did you enjoy most / find most interesting / difficult?*

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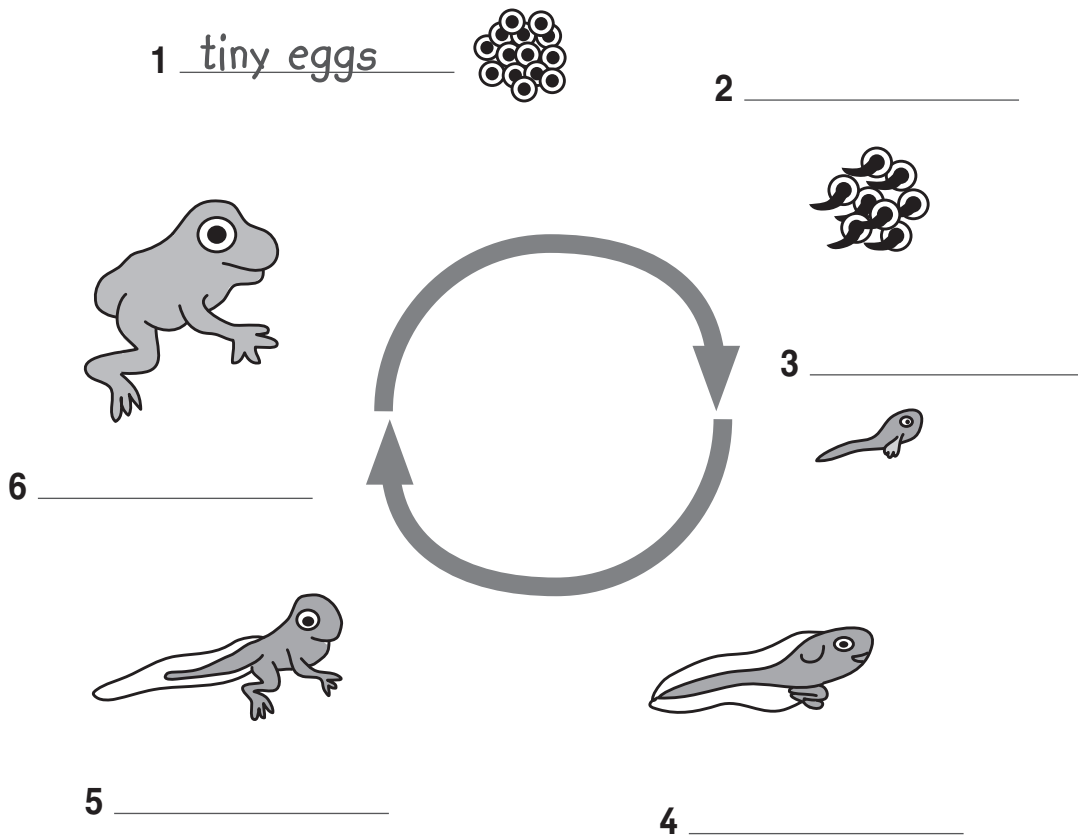
Optional extra

Copy the description of the life cycle of the butterfly in Activity 4, separating the sentences and leaving space between each one. Make photocopies of the description (one for each pair) and cut the sentences into strips. Divide the class into pairs. Give one set of jumbled sentence strips to each pair. Children work with their partner and order the description of the life cycle of the butterfly. Check the answers by asking individual children to take turns to read the description. If you like, children can also copy the description into their notebooks as a record.

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1. Label the life cycle.

big tadpole frog ~~tiny eggs~~ frogspawn with tiny heads and tails
big tadpole with legs little tadpole



2. Read and number the stages.

<p>A <input type="checkbox"/></p> <p>The tadpoles grow bigger. Their gills and tails begin to shrink.</p>	<p>B <input type="checkbox"/></p> <p>The tadpoles lose their tails and turn into frogs. The frogs live on land and in water. The following spring they lay their own eggs.</p>	<p>C <input type="checkbox"/></p> <p>The female frog lays thousands of tiny eggs in the water. The eggs are covered with jelly and called frogspawn.</p>
<p>D <input type="checkbox"/></p> <p>The little tadpoles feed and grow in the water. They use their tails to swim and they have gills to breathe.</p>	<p>E <input type="checkbox"/></p> <p>The tadpoles grow legs and their tails get smaller. Their eyes and mouth get bigger and they also develop lungs to breathe.</p>	<p>F <input type="checkbox"/></p> <p>After about ten days, tiny heads and tiny tails grow inside the frogspawn. The tadpoles are ready to hatch.</p>

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