



The Dragonfly Life Cycle

Understand types of life cycles and stages of development.

Curriculum Links: Science (Life & Living, Communicating Scientifically)
English (Reading)

Outcomes: Students will understand:

- living things grow and reproduce offspring that have many characteristics of the parent
- groups of living things have similar types of life cycles
- information can be located directly and ideas inferred from the words and graphics of a text
- ways to represent diagrammatic data.

Preparation:

Prepare an overhead or multiple copies of Life Cycle diagram and multiple copies of relevant work sheets.

Class Activities:

Lesson 1

1. Read the "Life Cycle of a Dragonfly" sheet to or with the students.
2. Discuss insect life cycles with class. Explain that there are three types of insect life cycle:
 - i. Complete metamorphosis (e.g. butterfly)
 - ii. Incomplete metamorphosis (e.g. dragonfly)
 - iii. No metamorphosis (e.g. ant). N.B. Metamorphosis means "change".
3. Distribute Life Cycle Diagrams or show on overhead or smart board.
4. Have students identify the aspects of the nymph which are:
 - i. the same as the adult (six jointed legs - three parts to body etc)
 - ii. those things which are different (e.g. live in water, breathes through tail)
 - iii. those things which are similar (e.g. wings starting to grow)
5. Distribute worksheet of Dragonfly nymph and sheet of labels.
6. Follow instructions on label sheet for Early Childhood or Middle Childhood activity.
7. Assess for accuracy and neatness of presentation. For Middle Childhood, assess that students follow the given protocols for labelling diagrams (refer to lesson on microscopic drawing in this section).

Lesson 2

Early Childhood - Students complete multiple choice questions. **Middle Childhood** - Students complete comprehension questions.

Extension:

Students research further information on dragonflies - description, habitat, features (e.g. eyes), food, feeding style (e.g. predator), dangers and anything else relevant. State resources used.

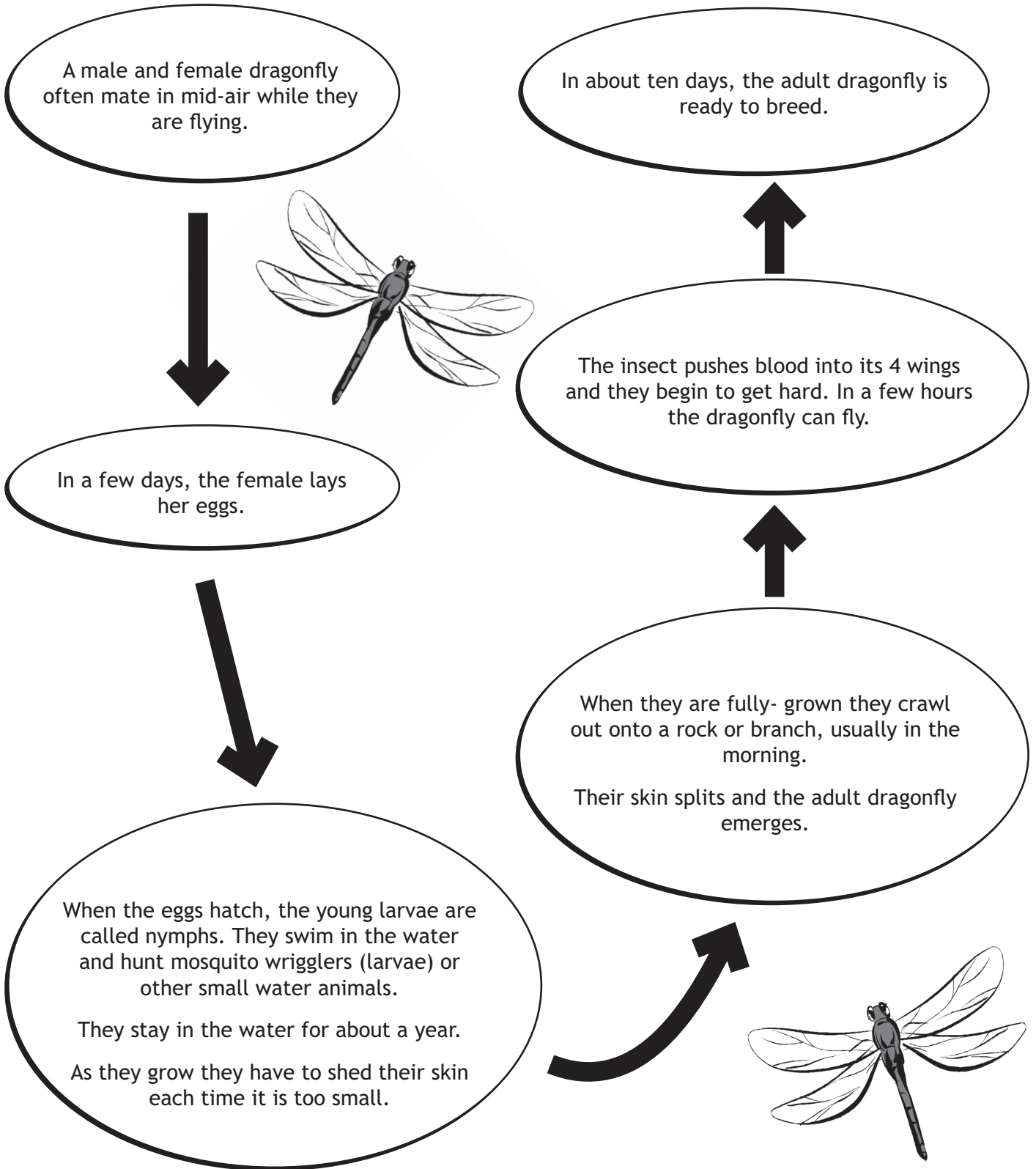
Draw a diagram (labelled) of an adult dragonfly. State resource used.

Build a '3D' model (*Discovering Minibeasts* by Mark and Olga Fox).



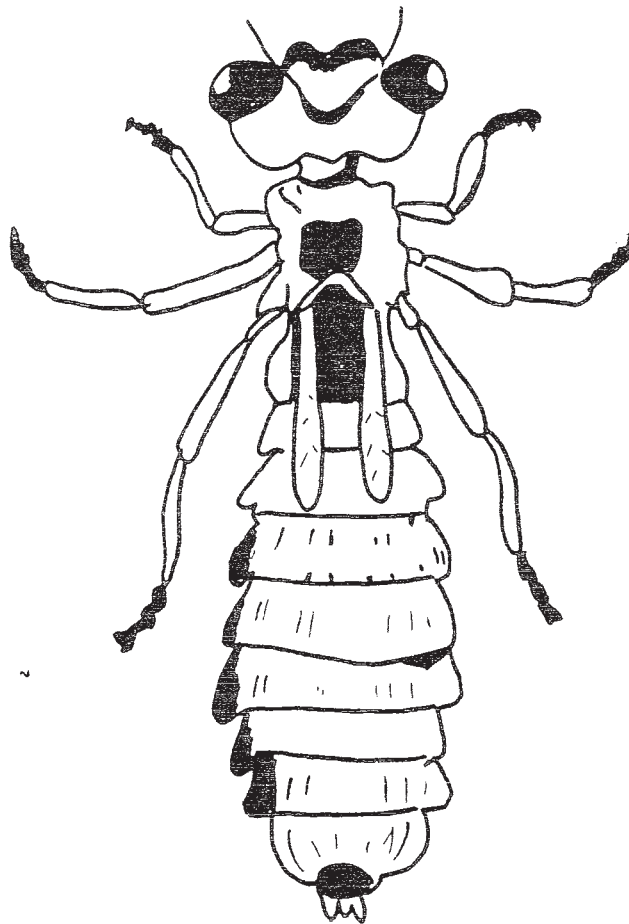


Life Cycle of a Dragonfly





Dragonfly Nymph





Dragonfly Nymph

Labels

A dragonfly nymph hatches from an egg and lives in the water about one year.

Nymphs have very strong jaws for hunting small aquatic animals.

The nymph uses its legs like paddles to move through the water.

Large eyes on the side of its head gives the nymph excellent vision.

Like all insects, a dragonfly larva has six legs.

Wings can be seen developing on the nymph's back.

Like all insects, the dragonfly nymph has three parts to its body.

Each leg has three sections.

The nymph's skin does not grow, so it has to shed its skin and grow a new one.

The nymph has a tube on its tail for breathing air.

Early Childhood.

Cut out each label and paste neatly close to the part mentioned. The two general items can fill spaces in the corners.

Middle Childhood.

Copy these labels neatly. Remember labels are printed, horizontally. Use pencil and faint guidelines. Rule horizontal or vertical lines to the relevant body part (don't cross label lines). The two general labels fill corner spaces.

When you are happy with your layout, fine line labels and erase guidelines.



The Dragonfly Nymph

Early Childhood

Multiple Choice Questions:

Select the correct answer from the alternative answers given.

Circle the correct answers.

Dragonfly larvae have good eyesight so that they can:

- a) see the sides of their head
- b) see out of the water
- c) hunt animals like mosquito wrigglers
- d) see well when flying

Every insect has:

- a) six legs on each side of its body
- b) a tube on its tail for breathing
- c) three pairs of legs and three body parts
- d) excellent vision

A dragonfly larva moves by:

- a) running on the surface of the water
- b) paddling with its legs
- c) wriggling its tail
- d) squirting air out of the tube in its tail

Make up four possible answers for this question. One answer must be correct.

As dragonfly larvae grow, they:

- a) _____
- b) _____
- c) _____
- d) _____



Dragonfly Life Cycle

Middle Childhood

Answer the following questions. Use full sentences where appropriate.

What do dragonfly nymphs eat?

How many wings does a dragonfly have?

Which takes longest to occur? (Circle the correct answer)

- a) egg to larva.
- b) larva to adult.
- c) adult to egg.

Answer either true or false for each statement:

- a) _____ A male and female dragonfly mate in the water.
- b) _____ Dragonfly nymphs live in the water.
- c) _____ Dragonfly adults eat bees.
- d) _____ Dragonfly nymphs are excellent flyers

Why would the dragonfly nymph usually crawl out of the water in the morning and not in the afternoon?

Draw a dragonfly. Use an illustration to guide you and try to include as much detail as you can. Use a sharp pencil. A dragonfly's tail is often brightly coloured.

Colour your's blue. Use the back of this sheet.



Dragonfly Nymph

Answer sheet

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