

# Dragonflies

## Unit of Work



### Introduction

Dragonflies are one of the most beautiful and captivating creatures of the insect world. They capture our attention and imagination as they hover weightless mid-air before darting off in a flash of brilliance.

In this five-lesson unit of work, students will investigate several different types of dragonflies and a damselfly. They will learn about their classification, appearance, habitats, life cycle and more.

**Please note:** To complete the lessons, students will need access to the 'Facts for students' in the 'Themed curriculum support resources' section of the For Teachers for students website [www.forteachersforstudents.com.au](http://www.forteachersforstudents.com.au).

### Lesson 1: It's time to classify!

#### Introduction

In this lesson, students will be introduced to the four dragonflies and one damselfly that featured in the Stamp Collecting Month 2017 issue. They will be given the opportunity to use their comprehension and recording skills to discover more information about the dragonflies. They will also use their research skills to discover the full classification of one of the featured dragonflies.

#### Broad learning outcomes

- Students will read, research and record information.
- Students will classify dragonflies and recognise that all living things have a classification.
- Students will be able to fully classify a dragonfly of their choice.

#### Resources

- Interactive whiteboard
- **'Dragonflies – nature's flying machines'** sheet (online or in hardcopy). This sheet features all the dragonflies. There are also individual sheets for each one. These are available with the activity sheets.
- 'Dragonflies – nature's flying machines' themed wall (optional)
- Slips of paper and pencils for recording
- **'Amazing dragonflies'** fact sheet (on [www.forteachersforstudents.com.au](http://www.forteachersforstudents.com.au))



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- Computers with internet access and/or resource centre
- 'About dragonflies' activity sheet (one per student)
- **'Scientific classification'** activity sheet
- YouTube video, 'Sky Hunters, The World of the Dragonfly' (running time: 49:48)  
[https://www.youtube.com/watch?v=knIXTU1R\\_rE](https://www.youtube.com/watch?v=knIXTU1R_rE)

### Assessment options

- Contributions to class discussions
- **'About dragonflies'** activity sheet (to be assessed upon completion of unit)
- **'Scientific classification'** activity sheet
- Information research skills
- Additions to a 'Dragonflies – nature's flying machines' themed wall

### Lesson steps

Display **'Dragonflies – nature's flying machines'** (or the individual dragonfly sheets) on an interactive whiteboard or, alternatively, provide students with hardcopies to view.

What do students know about dragonflies? Have they ever seen one in real life? If so, describe to a partner or the class what they saw. Write down any descriptive words from the discussion on a slip of paper and add to a 'Dragonflies – nature's flying machines' themed wall (optional).

There is an interesting documentary about dragonflies on YouTube – 'Sky Hunters, The World of the Dragonfly'. This runs for approximately 50 minutes and could be used as an introduction to the topic of dragonflies.

Explain to students that all animals/organisms are classified into groups. Why do students think classifying animals is necessary/important? Ask students to share their prior knowledge about classification. Some key words that may arise include 'invertebrates', 'vertebrates', 'mammals', 'insects' and 'reptiles'. Record these and ask students to provide examples for each category. Where do students think dragonflies belong? Students should answer, 'insect'. Ask them to explain why.

Individually, have students read the information on the **'Amazing dragonflies'** fact sheet. On the **'About dragonflies'** activity sheet, students to begin recording key information from the 'Classification' section of the fact sheet. This activity sheet will continue to be used in each lesson throughout the unit.



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Students will then choose one dragonfly to research further. Using the internet and/or time in the resource centre, students will use the **'Scientific classification'** activity sheet to discover and record the full classification of their chosen dragonfly. The terms on the sheet may need to be explained/explored prior to this activity.

### Lesson 2: How do I look?

#### Introduction

In this lesson, students will continue to use their comprehension and recording skills to discover more information about dragonflies. They will focus on the appearance of the featured dragonflies and learn to describe and label their physical attributes.

#### Broad learning outcomes

- Students will read, research and record information.
- Students will view and describe the physical attributes of dragonflies.
- Students will learn the body parts of a dragonfly.

#### Resources

- Interactive whiteboard
- **'Dragonflies – nature's flying machines'** sheet (online or in hardcopy). This sheet features all the dragonflies. There are also individual sheets for each one. These are available with the activity sheets.
- 'Dragonflies – nature's flying machines' themed wall (optional)
- Slips of paper and pencils for recording
- **'Amazing dragonflies'** and the individual dragonfly fact sheets in the 'Facts for students' section (on [www.forteachersforstudents.com.au](http://www.forteachersforstudents.com.au))
- Computers with internet access and/or resource centre
- **'About dragonflies'** activity sheet (started in lesson 1)
- **'Dragonfly anatomy'** activity sheet enlarged to A3 (one per pair)
- Modelling clay or recycled materials
- **'Watercolour dragonfly'** activity sheet
- Watercolours and paint brushes



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### Assessment options

- Contributions to class discussions
- **'About dragonflies'** activity sheet (to be assessed upon completion of unit)
- **'Dragonfly anatomy'** activity sheet
- Labelled anatomy model
- Additions to a 'Dragonflies – nature's flying machines' themed wall (optional)

### Lesson steps

Review Lesson 1 by asking students to discuss something interesting that they discovered about dragonflies.

Display the dragonflies on an interactive whiteboard again (or provide hardcopies). Ask students to observe their appearance. Consider their colour, shape, body parts, etc. On an interactive whiteboard, display more images of dragonflies (Google images has many fascinating photos – teachers should review sites beforehand). Students to then record descriptive words to add to the 'Dragonflies – nature's flying machines' themed wall (optional).

Individually, have students read the **'Amazing dragonflies'** fact sheet, as well as the individual dragonfly fact sheets, then record key information they have found in the 'Appearance' section of the **'About dragonflies'** activity sheet.

In pairs, students to then complete the **'Dragonfly anatomy'** activity sheet, to label the body parts of a dragonfly. Students may need some research time to help them complete this task.

Once finished, students will make a simple, labelled model of a dragonfly from modelling clay or recycled materials. The model should include all the parts from the **'Dragonfly anatomy'** activity sheet.

### Extension options

- Students can use watercolours to replicate one of the featured dragonflies on the **'Watercolour dragonfly'** activity sheet.
- As a class or in small groups, read out some physical characteristics of each of the featured dragonflies in a 'Who am I?' quiz, so the students can try and guess the name. For example "I have a red head", "I have a red abdomen", "I can grow to 3.5 centimetres long", "I have a wingspan of 6 centimetres" ... "Who am I?" (the Scarlet Percher).



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### Lesson 3: Let's chat habitat!

#### Introduction

In this lesson, students will learn about the habitat of the dragonfly. Using research skills, they will discover what dragonflies need in their environment and will be able to identify where they are found on a map of Australia.

#### Broad learning outcomes

- Students will read, research and record information.
- Students will learn what dragonflies need in their habitat.
- On a map of Australia, students will locate areas where particular dragonflies are found.

#### Resources

- Interactive whiteboard
- **'Amazing dragonflies'** and the individual dragonfly fact sheets in the 'Facts for students' section (on [www.forteachersforstudents.com.au](http://www.forteachersforstudents.com.au))
- Laminated pictures of various habitats (rainforest, desert, ocean etc.)
- **'About dragonflies'** activity sheet (started in Lesson 1)
- Paper for sketches
- Crayons, colour pencils, oil pastels and/or textas
- Computers with internet access and/or resource centre
- **'Where do we live?'** activity sheet (one per student)
- **'Where do we live? Solutions'** sheet

#### Assessment options

- Contributions to class discussions
- **'About dragonflies'** activity sheet (to be assessed upon completion of unit)
- **'Where do we live?'** activity sheet

#### Lesson steps

Write the word 'Habitat' on the board and ask students what they think of when they see this word. Record ideas. Suggested questions to ask students may include: What is a habitat? What should a habitat have? Do you have a habitat? Are all habitats the same? Why not?



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As a class or in small groups, look at the laminated habitat pictures. Discuss each and make notes if you wish. What sort of habitat is it? What features does it have? What sort of life does it support? Discuss, or if done in small groups, have the students report back to the class.

Individually, have students read the **'Amazing dragonflies'** fact sheet and the individual dragonfly fact sheets, then record key information they have found in the 'Habitat' section of the **'About dragonflies'** activity sheet.

Now, ask students what they think a perfect habitat for a dragonfly may be, getting them to explain what features make it 'perfect'. Ask students to visualise this 'perfect habitat' and to sketch it using crayons, coloured pencils, oil pastels and/or textas.

Then, with their completed sketches, give students research time to discover more about the habitat of a dragonfly, labelling their sketches and noting key attributes of a perfect dragonfly habitat. Ask students to share their sketches and findings with the class.

### Extension options

- In small groups, students can work together to turn their sketches into a dragonfly habitat diorama or model.
- Students to refer to the fact sheets about the individual dragonflies and complete the **'Where do we live?'** activity sheet.

## Lesson 4: Life cycle – from an egg to wings

### Introduction

In this lesson, students will discover the life cycle of the dragonfly and what kind of metamorphosis it undertakes. They will research and use their comprehension skills to learn about the stages of a dragonfly's life cycle and show evidence of their learning through visual representation.

### Broad learning outcomes

- Students will read, research and record information.
- Students will recognise the difference between incomplete and complete metamorphosis.
- Students will define each stage in the life cycle of a dragonfly.



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### Resources

- Interactive whiteboard/access to internet
- YouTube video, 'Metamorphosis' (running time: 2:20)  
<https://www.youtube.com/watch?v=Ka3q7bj45x0>
- YouTube video, 'Dragonfly lifecycle' (running time: 3:31)  
[https://www.youtube.com/watch?v=Ezq\\_JWd1Sd8](https://www.youtube.com/watch?v=Ezq_JWd1Sd8)
- **'Amazing dragonflies'** fact sheet in the 'Facts for students' section (on [www.forteachersforstudents.com.au](http://www.forteachersforstudents.com.au))
- Computers with internet access and/or resource centre
- **'About dragonflies'** activity sheet (started in Lesson 1)
- **'The life cycle of a dragonfly'** activity sheet (one per student)
- Modelling clay (optional)

### Assessment options

- Contributions to class discussions
- **'About dragonflies'** activity sheet (to be assessed upon completion of unit)
- **'The life cycle of a dragonfly'** activity sheet and/or the modelling clay representation

### Lesson steps

Write the words 'Life cycle' on the board and ask students what they know about life cycles in order to establish their prior knowledge. Record ideas on the board.

Explain that the life cycle of a dragonfly consists of only three stages: egg, larva and adult. The change/transformation is called 'metamorphosis'. 'Metamorphosis' has two types; 'complete' or 'incomplete' (depending on the organism). Students to view the 'Metamorphosis' video, which illustrates the difference.  
(<https://www.youtube.com/watch?v=Ka3q7bj45x0>).

After viewing the video, ask students whether the metamorphosis of dragonflies is complete or incomplete. They are to discuss with a partner and then report back to the class, explaining their answer.

Individually, have students read the **'Amazing dragonflies'** fact sheet then record key information they have found in the 'Life cycle' section of the **'About dragonflies'** activity sheet. They can also view the 'Dragonfly life cycle' video  
([https://www.youtube.com/watch?v=Ezq\\_JWd1Sd8](https://www.youtube.com/watch?v=Ezq_JWd1Sd8)).



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Students to then complete **'The life cycle of a dragonfly'** activity sheet to show their understanding of the three stages. Once finished, students can do one or more of the following:

- make and label the stages of the cycle using modelling clay
- create a short clay animation showing the change from one stage to the next
- use props and devise a role play of the life cycle
- compile videos or photographs of the life cycle, adding music, sound and visual effects to illustrate the process in a creative manner.

### Extension option

- Students to create a narrative titled 'My life – from an egg to wings' from the perspective of a dragonfly. This can be a written or visual piece.

## Lesson 5: What else can I discover?

### Introduction

In this lesson, students will reflect on their learning throughout the unit of work. They will devise questions to independently research, and then will record and report under the headings, 'reproduction', 'behaviour' and 'diet'.

### Broad learning outcomes

- Students will reflect on their learning.
- Students will read, research and record information.
- Students will present their research.

### Resources

- Interactive whiteboard/access to internet
- **'Dragonflies – nature's flying machines'** sheet (online or in hardcopy). This sheet features all the dragonflies. There are also individual sheets for each one. These are available with the activity sheets.
- Computers with internet access and/or resource centre
- **'Amazing dragonflies'** and the individual dragonfly fact sheets in the 'Facts for students' section (on [www.forteachersforstudents.com.au](http://www.forteachersforstudents.com.au))
- **'About dragonflies'** activity sheet (started in Lesson 1)





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### Assessment options

- Contributions to class discussions
- **'About dragonflies'** activity sheet
- Information research skills
- Presentations

### Lesson steps

Display **'Dragonflies – nature's flying machines'** (or the individual dragonfly sheets) on an interactive whiteboard or, alternatively, provide students with hardcopies to view. Ask students to reflect quietly on everything that they have learnt throughout the unit of work. Review Lessons 1 to 4 by asking students to discuss something interesting that they have learnt with a partner.

Explain that the four key topics of the unit were 'classification', 'appearance', 'habitat' and 'life cycle'. Is there anything else they would like to find out about dragonflies? What topics do they think need further investigation? Ask students to record questions about dragonflies under the headings of, 'reproduction', 'behaviour' and 'diet', as these topics have not been expanded on in the unit. Ask students to compose 1 or 2 questions about each of these topics (as well as any other topics they are interested in).

Provide students with time to reread the fact sheets and time on the internet and/or in the resource centre to research their questions. During this research, along with answering their questions, students are to complete the **'About dragonflies'** activity sheet. This completed activity sheet can be used for summative assessment.

Students to present their research findings to the class.

