

# Me and my smile: A minibeast investigation – Science

Theme

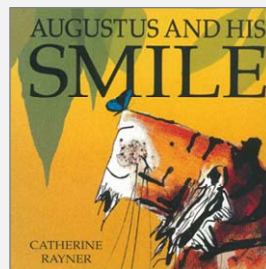
## Happy and healthy

Year

## Pre-primary

Featured text

## *Augustus and his Smile*



*Augustus and his  
Smile* by  
Catherine Rayner.  
Reproduced with  
the permission of  
Koala Books.

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The term Aboriginal refers to Aboriginal and Torres Strait  
Islander people.



## About this resource

A *minibeast investigation* is a series of lessons about investigating minibeasts that live in the schoolyard, inspired by the picture book *Augustus and His Smile* by Catherine Rayner. Children develop investigation skills through instructive play, using their senses, comparing characteristics of minibeasts and helping to collect and sort information. A *minibeast investigation* is connected to an integrated program called *Me and my smile*.

Lessons include:

- using the picture book *Augustus and His Smile* to inspire an investigation around the question ‘What minibeasts would Augustus find in our school yard?’.
- using the digital learning object *Garden detective: explore an Australian garden* to engage children in the investigation process.
- creating a ‘Being a good observer’ code of conduct to establish rules for working with living things
- exploring the concepts of same and different by comparing the common features of minibeasts
- hunting for minibeasts in the schoolyard
- using oral recount prompts to assist children to provide an oral recount of the investigation process.

| Phase/s of Learning   |                                   |   |                               |                              |
|---|-----------------------------------|---|-------------------------------|------------------------------|
| Early Childhood   | Middle Childhood                  | Early Adolescence                           | Late Adolescence              |                              |
| PP  |                                   |   |                               |                              |
| Learning Area   |                                   |   |                               |                              |
| Science   |                                   |   |                               |                              |
| Values  |                                   |   |                               |                              |
| Pursuit of knowledge & commitment to achievement of potential | Self acceptance & respect of self | Respect & concern for others & their rights | Social & civic responsibility | Environmental responsibility |
| X   |                                   | X   |                               | X                            |

The resource includes:

- learning/teaching activities and monitoring linked to the *Early Childhood (K-3) Syllabus* scope and sequence
- focus questions to support teachers in addressing the *Early Childhood (K-3) Syllabus* scope and sequence statements
- flash cards required for the activities.

## Pre-primary

**Advice to teachers****The learning, teaching, assessment cycle**

The learning, teaching, assessment cycle begins with what the children know and can do. Therefore it is recommended that teachers gather quality information about the abilities of their children before beginning any program of work. This information will guide teachers in using their professional judgement to decide on when to introduce content based on children's prior learning and achievement.

The following resources are recommended to assist teachers in providing a differentiated curriculum for children in their classes and can be found via the Department portal:

- *Early Childhood (K-3) Syllabus* scope and sequence documents provide advice on what to teach children at each year level in all eight learning areas. Some pre-primary children may be ready to learn and be taught content for Year 1.
- *Literacy and Numeracy Resources* (Resource ID: DETK103602) are practical resources that have been developed to support teachers to improve the literacy and numeracy skills of children.
- *Literacy Net and Numeracy Net* can be used to track the development of children and assist teachers in making judgements about what to teach.
- *First Steps Literacy* and *First Steps Numeracy* materials help teachers to be more strategic about what to teach, how to teach it, when to teach it and, more importantly, why.
- *ESL/ESD Progress Map* describes progress made in Standard Australian English by children for whom English is a second language or second dialect and enables teachers to monitor the development of children's knowledge, skills and understandings in acquiring Standard Australian English.

**Supporting Aboriginal children**

Aboriginal children generally enter the school learning environment with a rich cultural background and as proficient communicators in their home language. While some children may have little or no understanding of English, others may understand and use an English dialect (Aboriginal English). Aboriginal children are more likely to thrive in a classroom in which their cultural background and home language is acknowledged and respected.

Immersion in oral language in intended teaching and play contexts enhances the ability of Aboriginal children to learn in Standard Australian English (SAE). Continually rephrasing and restating and providing visual cues in the form of photographs, illustrations and demonstrations increase the likelihood of children understanding and participating in explanations, discussions and conversations in SAE.

Aboriginal children may need support in asking and responding to direct questions because they are more familiar with indirect ways of sharing information. Providing explanations using vocabulary that may be unfamiliar to the children before asking direct questions is one strategy that can be used to ensure that every child has the opportunity to respond and experience success (eg *This is the title. The title tells us the name of the story. What is this?*) Aboriginal children are more likely to respond to questions if they understand why they are being asked them (eg *I want to know what you know, I do not know a lot about 'home talk' so I need you to tell me*).

For further information about Aboriginal English and implications for the teaching of Aboriginal children, teachers are advised to refer to:

*Two-way English: Towards more user-friendly education for speakers of Aboriginal English* available through the Department of Education, Western Australia.

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## Resources used in the program

### Books

Rayner, C 2006, *Augustus and His Smile*, Koala Books, Mascot, New South Wales.

### Digital

Learning objects developed by The Le@rning Federation available via the DET Portal in DET Resources Online:

Garden detective: explore an Australian garden, Years P-2, Curriculum Corporation 2004.  
The Le@rning Federation digital content (Resource ID: L1118).

**Teachers should use their professional judgement to decide how much of the content to address with any particular class.**

Pre-primary



## Teaching focus

The teaching focus for *A minibeast investigation* consists of scope and sequence statements from the pre-primary year level of the *Early Childhood (K-3) Syllabus*. Teachers will continue to make professional judgements about when to introduce content based on children’s prior learning and achievement.

| Science  |  |
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| INVESTIGATING  | LIFE AND LIVING  |
| <p><b>Planning: Preparing for an investigation</b></p> <ul style="list-style-type: none"> <li>to develop investigation skills through instructive play and experiential learning</li> </ul> <p><b>Conducting: Collect and record information relevant to the investigation</b></p> <ul style="list-style-type: none"> <li>use the senses to gain information</li> <li>follow simple instructions</li> </ul> <p><b>Processing Data: Processing and translating information to find patterns and draw conclusions</b></p> <ul style="list-style-type: none"> <li>with teachers, help to collect and sort information into simple categories (eg using T-chart to sort, Y-chart for feelings)</li> <li>how to share information with others</li> <li>to share observations using firsthand experiences</li> </ul> <p><b>Evaluating: Reflecting on an investigation, evaluating the process and generating further ideas</b></p> <ul style="list-style-type: none"> <li>share thoughts and feelings about discoveries</li> </ul> | <p><b>Interdependence of living things</b></p> <p><b>Plants and animals need special care</b></p> <ul style="list-style-type: none"> <li>ways to care for plants and animals (eg watering plants, caring for pets)</li> </ul> <p><b>Structure and Function</b></p> <p><b>Living things have different features</b></p> <ul style="list-style-type: none"> <li>common features such as the eyes, nose, legs and body coverings can vary for different living things (eg an elephant’s nose is much larger than a human’s nose)</li> </ul> |



## What will I do in my classroom?

This section contains a series of detailed learning and teaching activities and supporting resources with a Science focus.

| Science   |  |  |  |
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| Teaching focus<br>Links to Scope and<br>Sequence  | Activities and Monitoring  | Focus Questions  | Resources  |
| <p><b>English: Reading – Contextual Understandings</b></p> <ul style="list-style-type: none"> <li>readers draw inferences from illustrations and make connections between themselves and texts</li> </ul> | <p><b>Augustus finds a friend: A minibeast investigation</b><br/>Whole class</p> <ul style="list-style-type: none"> <li>Show children the cover of <i>Augustus and His Smile</i>. Focus on the butterfly on Augustus’ nose. Ask children to identify the animal. Encourage the children to share experiences they have had with butterflies.</li> <li>Begin reading the book. Stop reading when Augustus creeps under the cluster of bushes. Discuss the animal that Augustus finds.</li> <li>Display the Minibeast cards which feature the beetle and butterfly. Write the heading ‘Minibeasts’ on the board. Explain to the children that minibeasts are very small animals such as butterflies and beetles that can live around our homes and yards.</li> <li>Write the question, ‘What minibeasts would Augustus find in our schoolyard?’ on a large sheet of paper.</li> <li>Ask the children to suggest what kind of minibeasts they think Augustus would find if he went searching for his smile in the schoolyard. Focus the children’s thinking on small invertebrates such as insects.</li> <li>Record the children’s predictions about what minibeasts they think Augustus would find in the schoolyard underneath the question.</li> </ul> | <p>What is the name of the animal on Augustus’ nose?<br/>Are butterflies big or small?<br/>How do butterflies move?<br/>Where have you seen butterflies before?<br/>Can you think of any other minibeasts?<br/>What kind of minibeasts do you think Augustus would find in our schoolyard?<br/>How could we find out what minibeasts live in our schoolyard?</p> | <p><i>Augustus and His Smile</i><br/>Minibeast cards<br/>Marker<br/>Large sheet of paper</p> |

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|  | <ul style="list-style-type: none"> <li>Explain to the children that the class will be conducting an investigation based on this question. Encourage the children to suggest what the class could do to find the answer to the question.</li> </ul>  |   |   |
| <b>Life and Living</b>   |   |   |   |
| <p><b>Interdependence of living things - Plants and animals need special care</b></p> <ul style="list-style-type: none"> <li>ways to care for plants and animals (<i>eg watering plants, caring for pets</i>)</li> </ul> | <p style="text-align: center;"><b>A good observer</b><br/>Whole class</p> <ul style="list-style-type: none"> <li>Explain to the children that before they hunt for minibeasts the class needs a 'Being a good observer' code of conduct. Discuss the reasons why it is important to have rules when working with living things.</li> <li>Display a blank A3 sheet of paper. Negotiate with children and record their suggestions for being a good observer on the chart (<i>eg search carefully, wears gloves, put things back where you found them, be gentle, be careful not to get bites and stings</i>).</li> <li>Encourage the children to add pictures and colour to the 'Being a good observer' chart throughout the day and display it in the class.</li> </ul>   | <p>Why do we need rules when we work with living things?<br/>What are some rules we could have when hunting for minibeasts?<br/>Why do we need to be gentle when hunting for minibeasts?<br/>Why should we wear gloves?</p>   | <p>Large sheet of paper<br/>Marker<br/>Coloured pencils</p> |
| <b>Investigating</b>   |   |   |   |
| <p><b>Planning: Preparing for an investigation</b></p> <ul style="list-style-type: none"> <li>to develop investigation skills through instructive play and experiential learning</li> </ul>                              | <p style="text-align: center;"><b>Garden detective</b><br/>Small group</p> <ul style="list-style-type: none"> <li>Load the game <i>Garden detective: explore an Australian garden</i>. This resource can be found using DET Resources Online.</li> <li>Explain to the children that before they go out to hunt for minibeasts in the schoolyard they can practice looking for them in <i>Garden detective</i>.</li> <li>When the children are playing the game focus on where the minibeast are hiding. Encourage the children to use their observation skills to describe the insects they find.</li> <li>Encourage closer examination by asking questions about the appearance and characteristics of the minibeast.</li> <li>When the children have collected four minibeasts, they will be asked to return the minibeasts to the spot they found them.</li> </ul> | <p>What colour is it?<br/>What shape is it?<br/>How big is it compared to the drawing pin?<br/>Where did you find it?<br/>Why do you think minibeasts would like to live there?<br/>Why is it important to place the minibeasts back where you find them?<br/>Does it have wings?</p> | <p>Computer<br/>Internet Access</p>                         |

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|  | Encourage the children to suggest why that might be important.  |   |   |
| <b>Life and Living</b>   |   |   |   |
| <p><b>Structure and Function – Living things have different features</b></p> <ul style="list-style-type: none"> <li>• common features such as the eyes, nose, legs and body covering can vary for different living things (<i>eg an elephant's nose is much larger than a human's nose</i>)</li> </ul> | <p style="text-align: center;"><b>Sorting minibeasts</b><br/>Small group</p> <ul style="list-style-type: none"> <li>• Supply the children in the group with the Minibeast cards.</li> <li>• Encourage the children to identify and name the minibeasts featured on the cards. Identify the spider and discuss the possible dangers of this minibeast.</li> <li>• Invite the children to share any personal experiences they may have had with the featured minibeasts.</li> <li>• Place two hoops on the table. Choose a sorting criteria for the children based on one of the characteristics of the minibeasts (<i>eg number of legs, colour, shape, size, wings</i>)</li> <li>• Ask the children to work together to sort the cards into two hoops based on the sorting criteria.</li> <li>• Supply each child with a magnifying glass and encourage them to practise using the hand lens to see more detail in the minibeast cards.</li> <li>• <b>Extension:</b> Ask the children to choose their own criteria to sort the animals.</li> </ul> <p><b>Monitor:</b> Note the children who can sort the minibeasts based on their characteristics.</p> | <p>Why do we have to be careful when hunting for minibeasts?<br/>Who has seen this animal?<br/>Where did you see it?<br/>What happens to the picture when you use a magnifying glass?</p>   | <p>Minibeast cards<br/>Hoops<br/>Magnifying glasses</p>                                   |
| <b>Investigating   Life and Living</b>   |   |   |   |
| <p><b>Conducting: Collect and record information relevant to the investigation</b></p> <ul style="list-style-type: none"> <li>• use the senses to gain information</li> <li>• follow simple instructions</li> </ul> <p><b>Structure and Function – Living things have different features</b></p>       | <p style="text-align: center;"><b>Hunting in the schoolyard</b><br/>Small group</p> <p><b>Preparation:</b> If children are collecting specimens from the schoolyard make sure an appropriate terrarium is installed in the class.</p> <ul style="list-style-type: none"> <li>• Ensure every child in the group has a magnifying glass, a pair of gloves and is familiar with the 'Being a good observer' code. Discuss the dangers of minibeasts that bite or sting such as bees and spiders.</li> <li>• Revise the Minibeast identification cards with the children.</li> </ul>  | <p>What colour is it?<br/>What shape is it?<br/>Does it look similar to any of the Minibeast cards?<br/>How big is it compared to the drawing pin?<br/>Where did you find it?<br/>Why is it important to place the minibeasts back where you find</p> | <p>Magnifying glasses<br/>Gloves<br/>Minibeast cards<br/>Pencil<br/>Camera (optional)</p> |



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| <ul style="list-style-type: none"> <li>• common features such as the eyes, nose, legs and body covering can vary for different living things (<i>eg an elephant's nose is much larger than a human's nose</i>)</li> </ul> | <p>Supply each child with a copy of the cards to try and match to the minibeasts they find in the schoolyard.</p> <ul style="list-style-type: none"> <li>• When the small group is in the schoolyard focus the children's search by throwing several hoops on the ground in different areas and ask the children to investigate the life enclosed in each hoop.</li> <li>• Encourage the children to observe as a group. Record any of the children's discoveries by taking photos or scribing their comments. Ask clarifying questions to encourage the children to closely observe the minibeasts they find.</li> <li>• When the children match a minibeast to one of the Minibeast cards mark the card with a cross to indicate the minibeast was found. When children are comparing the minibeasts they find with the cards encourage the children to use language to describe the similarity or difference between them (<i>'These are the same because they are both black and have wings'</i>).</li> <li>• If a child finds a minibeast that is not featured on the cards ask the children questions about the characteristics of the minibeast and record their answers to create a card for the minibeast at a later time.</li> </ul> <p><b>Extension:</b> With the children's help label and display the photos of all the minibeasts that are found during the hunt on the word wall.</p> | <p>them?</p> <p>Does it have wings?</p> <p>How does it move?</p> <p>Does it look like one of the minibeasts on the cards?</p> |  |
|---|--|---|--|

**Investigating**

|   |  |   |  |
|---|--|---|--|
| <p><b>Processing Data: Processing and translating information to find patterns and draw conclusions</b></p> <ul style="list-style-type: none"> <li>• with teachers, help to collect and sort information into simple categories (<i>eg using T-chart to sort, Y-chart for feelings</i>)</li> <li>• to share observations using firsthand experiences</li> </ul> | <p style="text-align: center;"><b>Sorting information</b></p> <p style="text-align: center;">Small group</p> <ul style="list-style-type: none"> <li>• Bring the children back into the class and create a T-chart with the headings 'Minibeasts we found' and 'Minibeasts we didn't find'.</li> <li>• Supply the children with the Minibeast cards and encourage them to work together to categorise them into either side of the T-chart based on their observations in the schoolyard hunt.</li> <li>• Show the children the Labelled minibeast diagram and explain the purpose of the captions on the diagram. Discuss the different parts of the insect and their functions. Ask, 'What</li> </ul> | <p>Which of these minibeasts did we see in the schoolyard?</p> <p>Which minibeasts didn't we see in the schoolyard?</p> <p>What colour/shape/size was the minibeast you saw?</p> <p>How many legs did the minibeast have?</p> | <p>Minibeast cards</p> <p>Labelled minibeast diagram</p> <p>Large sheet of paper</p> <p>Marker</p> |
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|   | <p>does an insect use its wings/mouth/eyes/legs/antennae for?’</p> <ul style="list-style-type: none"> <li>• Provide each child with a square of paper. Ask the children to draw a picture of one of the minibeasts that they saw on the hunt that does not feature in the cards. Encourage the children to think about the colours, size and shape of the minibeasts they want to draw. Find the name for the minibeast the children choose to draw and encourage them to write the name underneath their picture or scribe it for them.</li> <li>• When the children have finished drawing their minibeast encourage them to compare their picture with the Labelled minibeast diagram. Ask, ‘What features does your minibeast have that this one does not?’</li> <li>• Encourage the children to indicate the different body parts and their functions of the minibeast they have drawn.</li> </ul>   |   |   |
| <b>Investigating</b>  |  |   |   |
| <p><b>Evaluating: Reflecting on an investigation, evaluating the process and generating further ideas</b></p> <ul style="list-style-type: none"> <li>• share thoughts and feelings about discoveries</li> </ul> | <p style="text-align: center;"><b>What Augustus would find in our schoolyard</b></p> <p style="text-align: center;">Whole Class</p> <ul style="list-style-type: none"> <li>• Create a poster with the heading ‘What minibeasts would Augustus find if he searched in our schoolyard?’.</li> <li>• Revise the investigation process the class underwent to find the answer to this question.</li> <li>• Encourage the children to think-pair-share with a partner about their favourite part of the investigation. Invite some of the children to share what their partner told them with the class.</li> <li>• List all the minibeasts that were encountered on the schoolyard hunt on this poster.</li> <li>• Stick the Minibeast cards that feature discovered minibeasts on the poster as well as children’s drawings of their encountered minibeasts.</li> <li>• Revise the list of minibeasts with the children and use their suggestions to write a conclusion to the investigation on the poster (<i>eg If Augustus went searching for his smile in our schoolyard he would find _____ and _____.</i>)</li> </ul> | <p>Which of these minibeasts did we find in the schoolyard?<br/>How did we find the answer to this question?<br/>What was the first thing we did in this investigation?</p> | <p>Card<br/>Markers<br/>Minibeast cards</p> |

Pre-primary

| Investigating  |  |  |                             |
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| <p><b>Processing Data: Processing and translating information to find patterns and draw conclusions</b></p> <ul style="list-style-type: none"> <li>• how to share information with others</li> </ul> <p><b>English: Listening and Speaking – Contextual Understandings</b></p> <ul style="list-style-type: none"> <li>• speakers and listeners interact in different ways depending on the purpose and context including:                             <ul style="list-style-type: none"> <li>○ to recount through retelling stories</li> </ul> </li> </ul> | <p><b>Finding minibeasts: An oral recount</b></p> <p>Individual</p> <ul style="list-style-type: none"> <li>• Support children to recount the steps involved in the minibeasts investigation in a structured way by using the Oral recount prompts.</li> <li>• Place the cards in front of the child and ask, ‘What was the first thing we did when we were investigating minibeasts?’</li> <li>• Encourage children to use the language on the Oral procedural recount prompts when providing a recount (<i>eg First we read a book and then I hunted for insects in a computer game. Next I hunted for minibeasts in the schoolyard. At the end I drew a picture of a minibeast I found.</i>) Refer children to the Oral procedural recount picture prompts to help them structure their responses.</li> </ul> <p><b>Monitor:</b> Can the child identify the order of events and give a recount of the investigation.</p> | <p>What was the first thing we did in this investigation?</p> <p>What did you do first?</p> <p>And then what happened?</p> <p>What happened next?</p> <p>What did you do at the end?</p> | <p>Oral recount prompts</p> |

Minibeast cards



*fly*



*slater*



*snail*



*ant*



*beetle*



*earthworm*



*spider*



*butterfly*



*bee*



*moth*

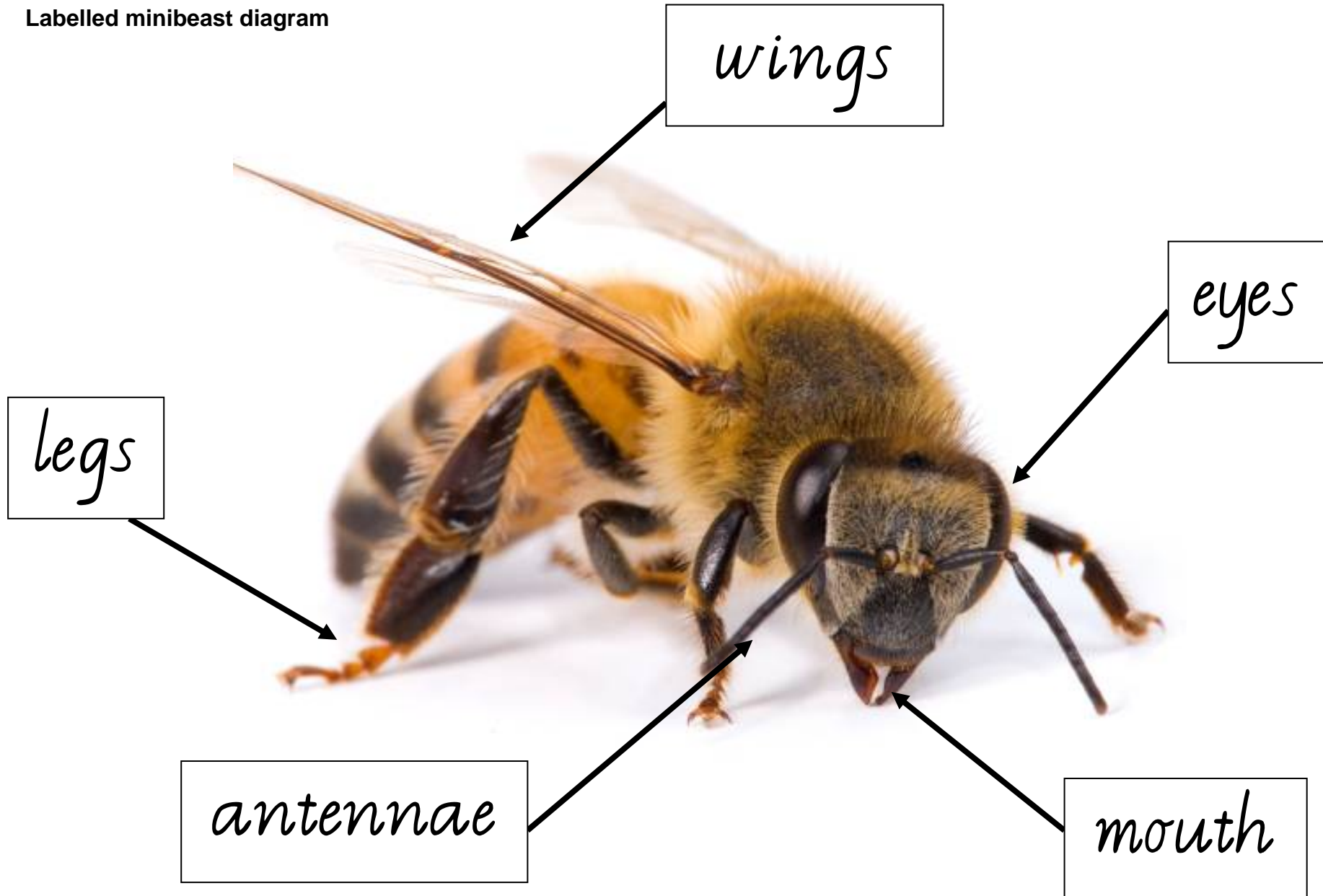


*cricket*



*caterpillar*

Labelled minibeast diagram



first

and then

next

At the end