

4

SCIENCE

STUDENT BOOKLET



Sunbirds

Given name:

Family name:

School:

Setting the scene: Group discussion

At your home you have many animal visitors. Many of these animals like to make their homes in and around your house.

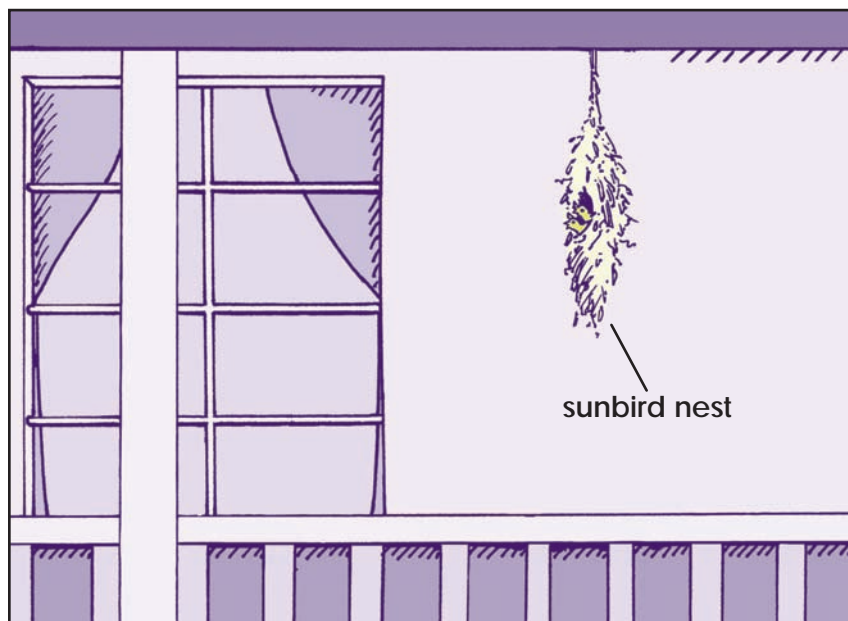
You may have frill-necked lizards that live under rocks in your garden, possums that make their home under your roof and spiders that move in and out of your house looking for a place to build a web.

Some birds also live in areas where people live. They build nests where they can lay their eggs and look after their chicks.

Birds build their nests at a particular time each year.

Different birds build different types of nests.

A kookaburra may build a nest in the hollowed trunk of a tree. A crow may build a nest of twigs in the branches of a nearby eucalypt. A scrub turkey may gather small branches and leaves into a mound on the ground. A sunbird may build a hanging nest on the verandah of a house.



Your teacher will discuss with you:

- how people and animals depend on each other
- the problems that may occur when animals live in or near your home
- why you see some animals, especially birds, around your home only at particular times of the year.

STOP HERE: WAIT FOR YOUR TEACHER'S DIRECTIONS

Sunbirds

Look at the picture below.

1. **Describe the sunbird in detail.**
Include as many body features as you can.



Image: Olive-backed sunbird (*Cinnyris jugularis*) eclipse; also known as *Nectarinia jugularis*. A Creative Commons: Attribution-Share Alike 2.0 Generic licensed photo from Lip Kee's Flickr stream, accessed 8 Jan 2009, <www.flickr.com/photos/lipkee/2230003837/>.

This picture shows the actual size of the sunbird.

Body features

Example: *tail feathers — thin, dark feathers with white edges*

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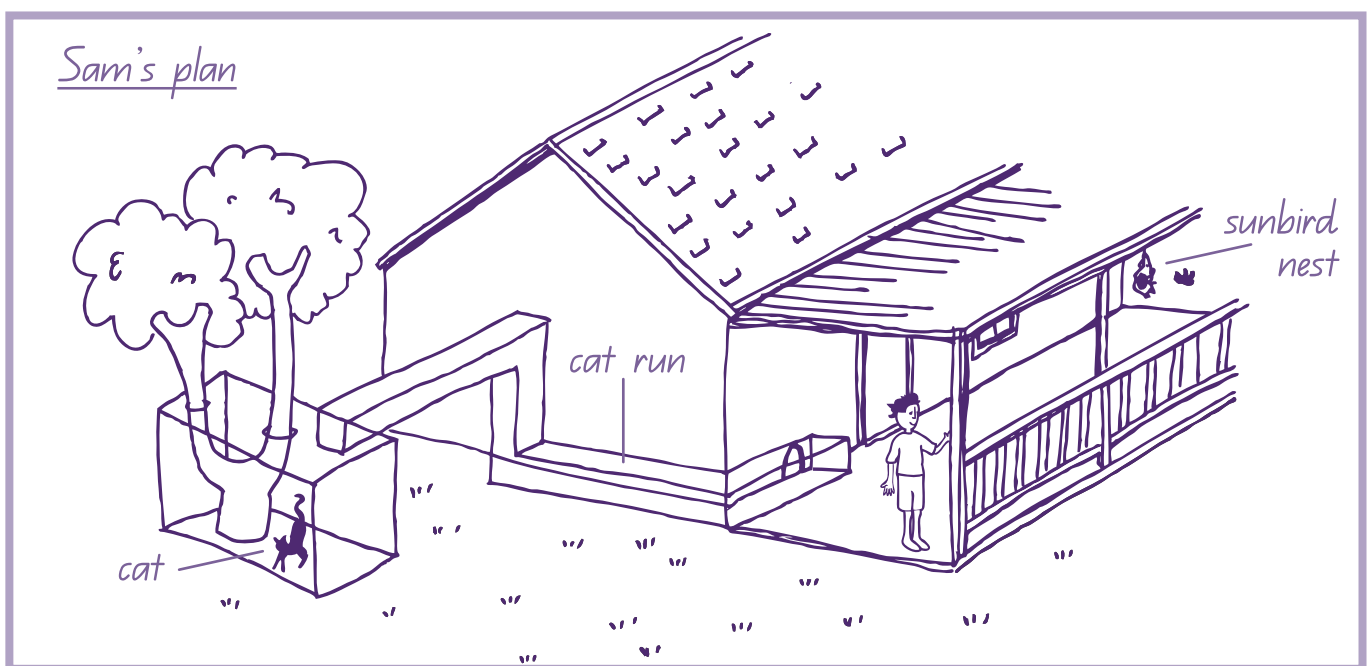
Sunbirds at Sam's house: Group discussion

Sunbirds return each year to nest in the same place.

For as long as Sam can remember, sunbirds have returned each year to nest under the roof of his verandah.

Last year, Sam stopped his pet cat just as she was about to pounce on a nest of chicks.

This year, Sam and his dad are going to build a cat run to make sure the sunbirds are safe from his pet cat.



Sunbirds return to nest late in the dry season when the months are warm.

You are going to help Sam and his dad find out the earliest month the sunbirds could return, so that they can finish the cat run in time.

STOP HERE: WAIT FOR YOUR TEACHER'S DIRECTIONS

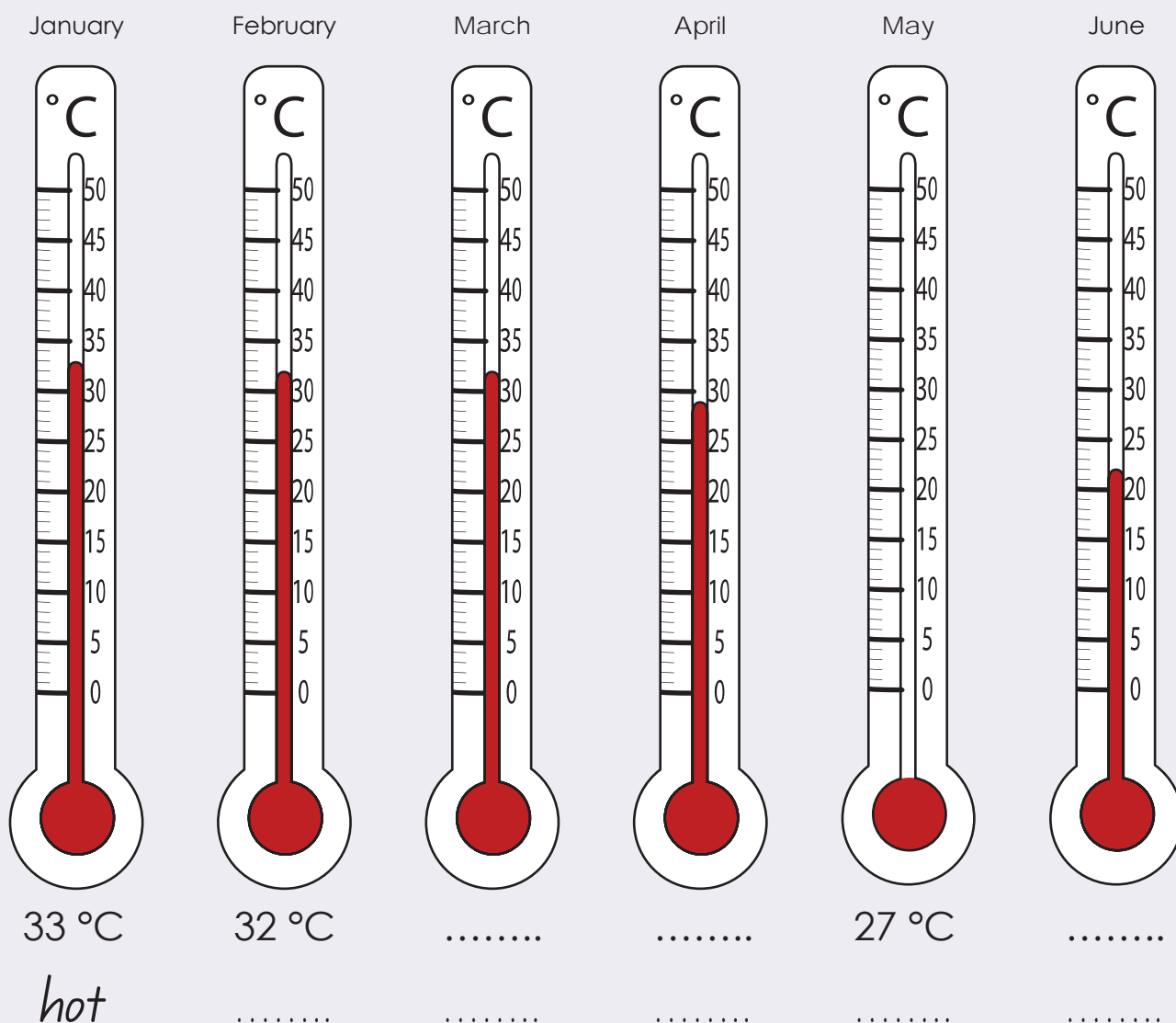
Temperature and rainfall

You are now going to identify the months that are both warm and dry.

The thermometers in Diagram 1 will help you identify the warm months for Sam's area.

- Read the temperature shown on the thermometers for March, April, June, July and October in Diagram 1. Write the temperature under these thermometers.

Diagram 1: Highest daily temperature for each month in Sam's area



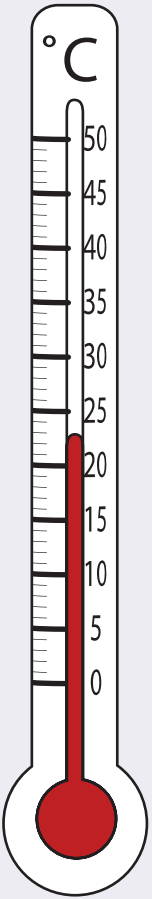
- Shade the thermometers to show the temperature for May, August and November.

4. Write which months are hot or warm or cool under each thermometer. Use the information from Table 1.

Table 1

Highest daily temperature	Description
30 °C and above	hot
25 °C, 26 °C, 27 °C, 28 °C, 29 °C	warm
24 °C and below	cool

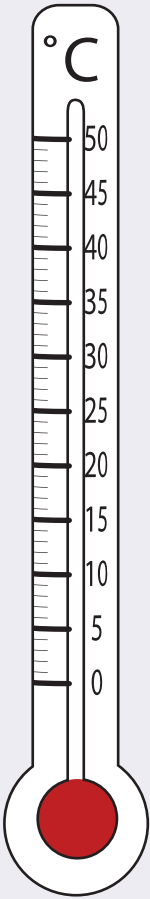
July



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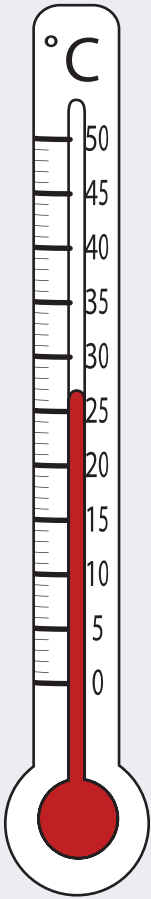
August



25 °C

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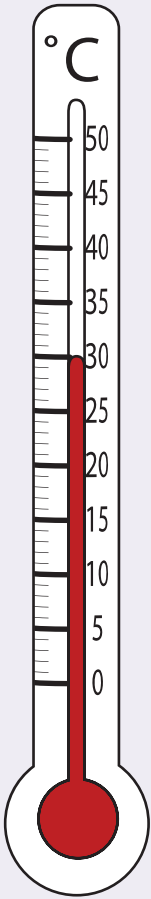
September



27 °C

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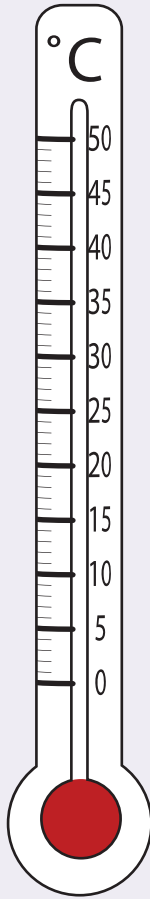
October



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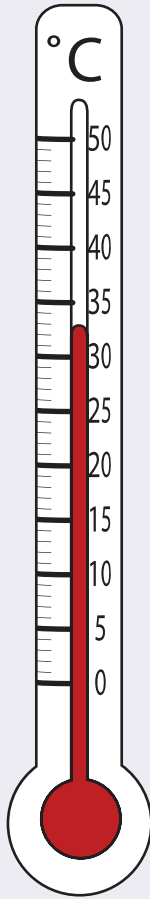
November



31 °C

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December



33 °C

hot

5. The warm months in Sam's area are:

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STOP HERE: WAIT FOR YOUR TEACHER'S DIRECTIONS

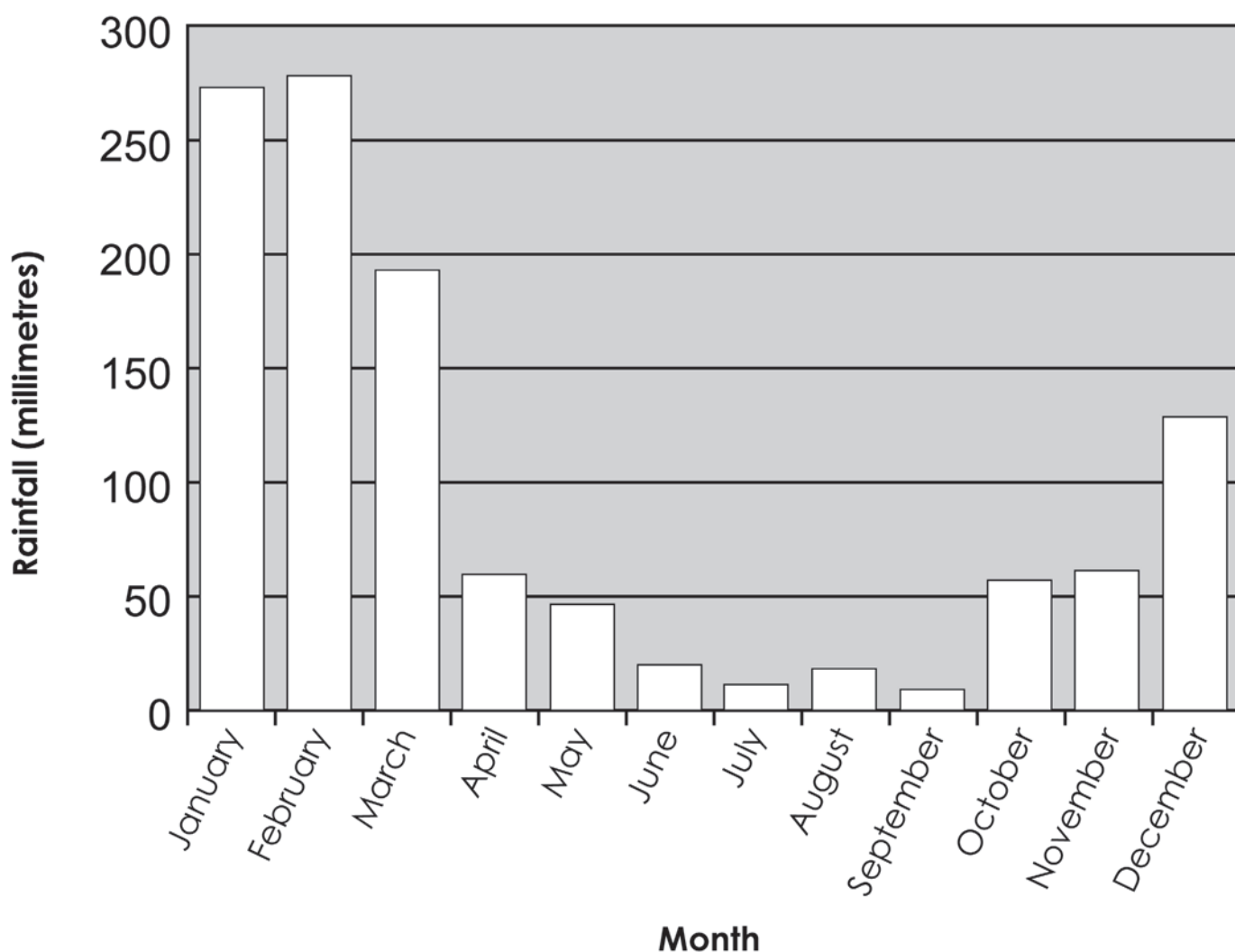
To find out the earliest month that the sunbirds could return, you need to identify the dry months.

6. Shade the bars of the dry months in Diagram 2.



- A dry month has less than 50 millimetres of rain.
- A wet month has 50 millimetres or more of rain.

Diagram 2: Monthly rainfall in Sam's area



7. Complete the following sentences. Use the information from Diagram 2.

In Sam's area the months in the dry season are

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The wet season starts in

and finishes in

STOP HERE: WAIT FOR YOUR TEACHER'S DIRECTIONS

The warm, dry months

To find out which is the earliest month that the sunbirds could return, you now need to identify the months that are both warm and dry.

8. Work out which months are both warm and dry by completing Table 2.

January has been done for you.

Write **hot** or **warm** or **cool** for each month. Refer to your answers on pages 6 and 7.

Write **wet** or **dry** for each month. Refer to your answer on page 9.

Tick ✓ the months that are **both** warm and dry.

Table 2

Month	Temperature	Rainfall	Warm and dry months
January	<i>hot</i>	<i>wet</i>	
February			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			

Use the information on page 10 to help you complete the following questions.

9. What is the earliest month the sunbirds could return?



The sunbirds return to nest in the warm months late in the dry season.

Month:

Give all the reasons why you chose this month as the earliest month.

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10. To keep the sunbirds safe, what is the latest month Sam and his dad must finish building the cat run?

Month:

Why did you choose this month?

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STOP HERE: WAIT FOR YOUR TEACHER'S DIRECTIONS

Sunbird behaviour

You have worked out when the sunbirds are most likely to return. Now Sam wants to tell his friends about the sunbirds. He will invite his friends to come and see the sunbirds.

Sam prepared for his friends' visit by researching sunbirds on the internet.

Read the webpage below.

Sunbirds - About sunbirds in my area


File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites

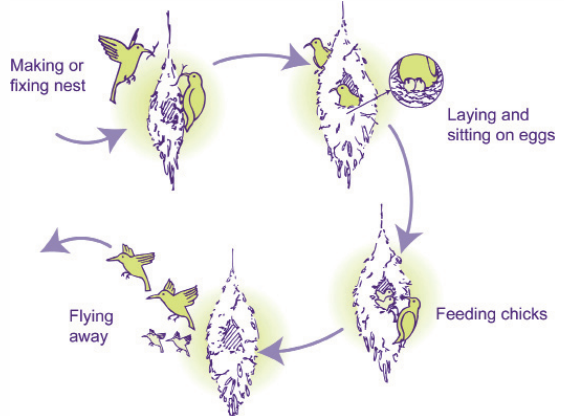
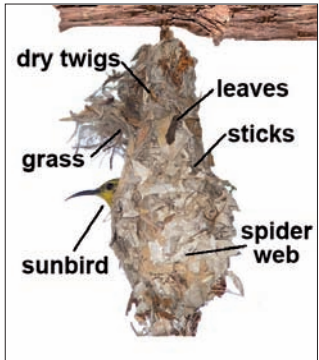

Address http://www.australian-scientist.org.au/nectarinia_jugularis/ Go Links

Sunbird

Nectarinia jugularis



- A small Australian native bird
- Eats insects, spiders and nectar from flowers
- Nests late in the dry season during warm months
- May take 4 days to fix an old nest
- May take up to 1 month to build a new nest
- Female lays one or two eggs
- Female sits on eggs for about 14 days
- Feeds chicks in the nest for about 15 days



dry twigs leaves sticks grass sunbird spider web

Making or fixing nest

Laying and sitting on eggs

Feeding chicks

Flying away

Internet

Image: Olive-backed sunbird, a Creative Commons: Attribution 2.0 Generic licensed photo from B_cool's Flickr stream, accessed 8 Jan 2008, <http://www.flickr.com/photos/bengchye_loo/1278628891>.

Use the webpage to help you answer these questions.

11. For how many days can Sam's friends come to see the chicks in the nest?

About days

Explain:

12. Explain how a sunbird nest helps to keep the chicks safe.

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The pictures may help you with ideas.

13. List the things sunbirds might look for when they are searching for a place to build their nests.

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Guide to making judgments — Year 4 Science

Student

Purpose: To explain sunbird behaviour based on information and evidence.

Knowledge and understanding Investigating	Investigating	Investigating	Communicating
Identifies seasonal data by reading and interpreting information from thermometers and rainfall graphs. Q 2-7	Collects and uses relevant data to identify and justify the month when the sunbirds could return and the month the cat run must be finished. Q 8-10	Identifies information and evidence and draws conclusions from webpage to give explanations of sunbird nesting behaviour. Q 11-13	Uses scientific terminology to describe and explain ideas and information. Q 1, 2, 9-13
Correctly interprets thermometers and graphs to identify warm months, dry months and wet season. Correctly interprets thermometers and graphs to identify warm months and dry months. Identifies some warm months and some dry months. Correctly interprets some information from thermometers and graphs.	Identifies correct months with justifiable explanations drawn from data and earlier answers. Considers only part of the seasonal data when justifying the choice of month that sunbirds could return. Correctly transfers some seasonal data to Table 2.	Accurately identifies information and draws valid conclusions using supplied information. Selects appropriate information and draws reasonable conclusions. Identifies some information that limits the scope of conclusions. Selects irrelevant information.	Uses scientific terminology in clearly articulated descriptions and explanations. Uses appropriate scientific terminology in descriptions and explanations. Uses some scientific terminology when trying to describe and explain ideas.
A	B	C	D
E			

Feedback

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