

4

SCIENCE

SAMPLE RESPONSES



Sunbirds

This booklet is designed to help teachers make overall, on-balance judgments by providing examples of student responses. The responses are not an exhaustive set.

E samples

© The State of Queensland (Queensland Studies Authority) 2009

Please read the copyright notice on our website.

Contact information:

Information about QCATs is available on the QSA website <www.qsa.qld.edu.au>.

Direct questions concerning implementation or receipt of materials to:

Project Officer (Operations)

Phone: 07 3864 0299

Email: QCARadmin@qsa.qld.edu.au

Queensland Studies Authority Ground floor, 295 Ann Street Brisbane. PO Box 307 Spring Hill Qld 4004.

Phone: (07) 3864 0299 Fax: (07) 3221 2553 Email: office@qsa.qld.edu.au Website: www.qsa.qld.edu.au

E Sample: Response 1

Guide to making judgments — Year 4 Science

Student

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

Knowledge and understanding	Investigating	Investigating	Communicating
Investigating [Q 2–7] Mostly correct interpretation of thermometers and graphs. Inconsistent identification and recording of warm months and dry months.	Investigating [Q 8–10] Unfinished transfer of seasonal information from prior work. No attempt to interpret seasonal data. Incorrect response in Q 9 with no valid reasoning given.	Investigating [Q 11–13] Correct number of days identified, indicating student has read the webpage information, but explanation is not provided. While the one-word answers in Q 12 and 13 have a degree of relevance, the responses are very limited in scope.	Communicating [Q 1, 2, 9–13] Uses few scientific terms. Explanations and descriptions lack detail and clarity.
Identifies some warm months and some dry months.	Considers only part of the seasonal data when justifying the choice of month that sunbirds could return.	Selects appropriate information and draws reasonable conclusions.	Uses appropriate scientific terminology to describe and explain ideas and information.
Correctly interprets some information from thermometers and graphs.	Correctly transfers some seasonal data to Table 2.	Identifies some information that limits the scope of conclusions.	Uses some scientific terminology when trying to describe and explain ideas.
		Selects irrelevant information.	

Feedback

Overall grade

The purpose of this QCAT is for students to explain sunbird behaviour based on information and evidence. This student's work demonstrates a sound level of knowledge and understanding when investigating seasonal data, and a very limited level when explaining sunbird behaviour based on seasonal information and evidence. On balance, this is an overall E grade.

E Sample: Response 1

Sunbirds

Look at the picture below.

1. Describe the sunbird in detail.

Include as many body features as you can.



This picture shows the actual size of the sunbird.

Body features

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

Is black — is round so it
taken get netrn from flaoosy.

STOP HERE: WAIT FOR YOUR TEACHER'S DIRECTIONS

E Sample: Response 1

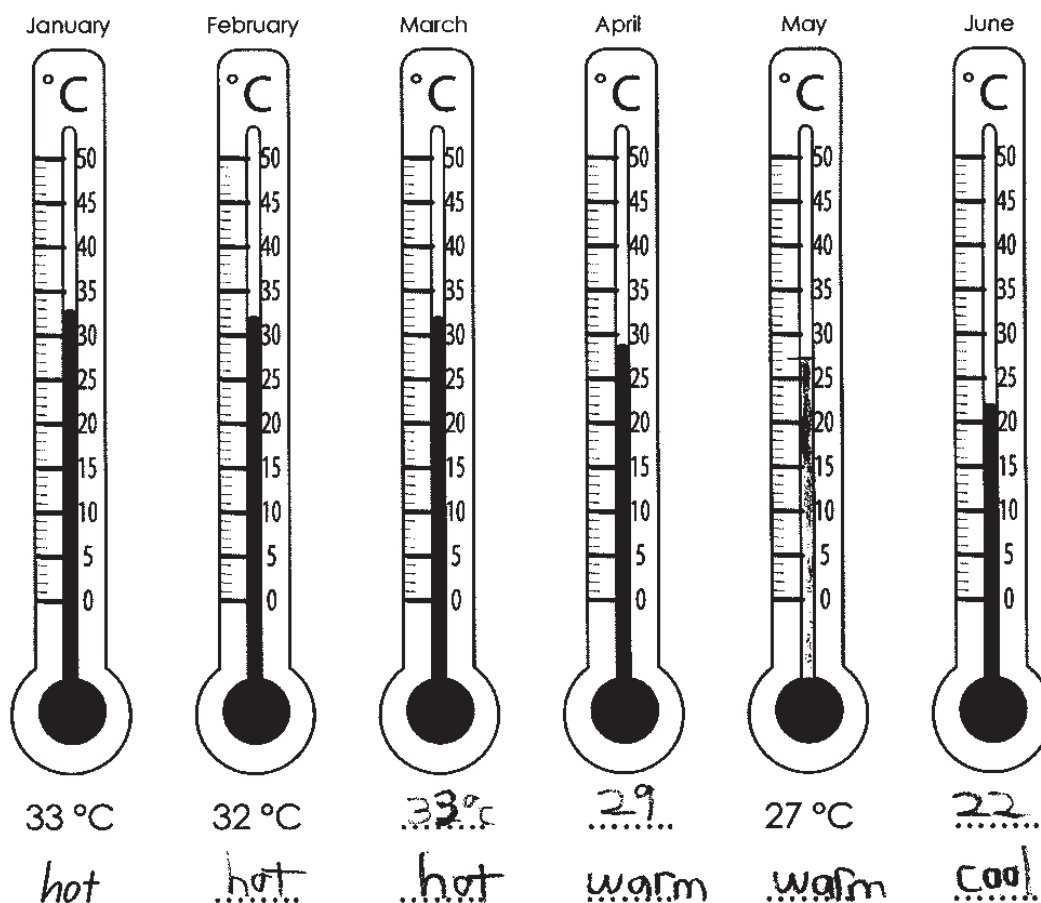
Temperature and rainfall

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



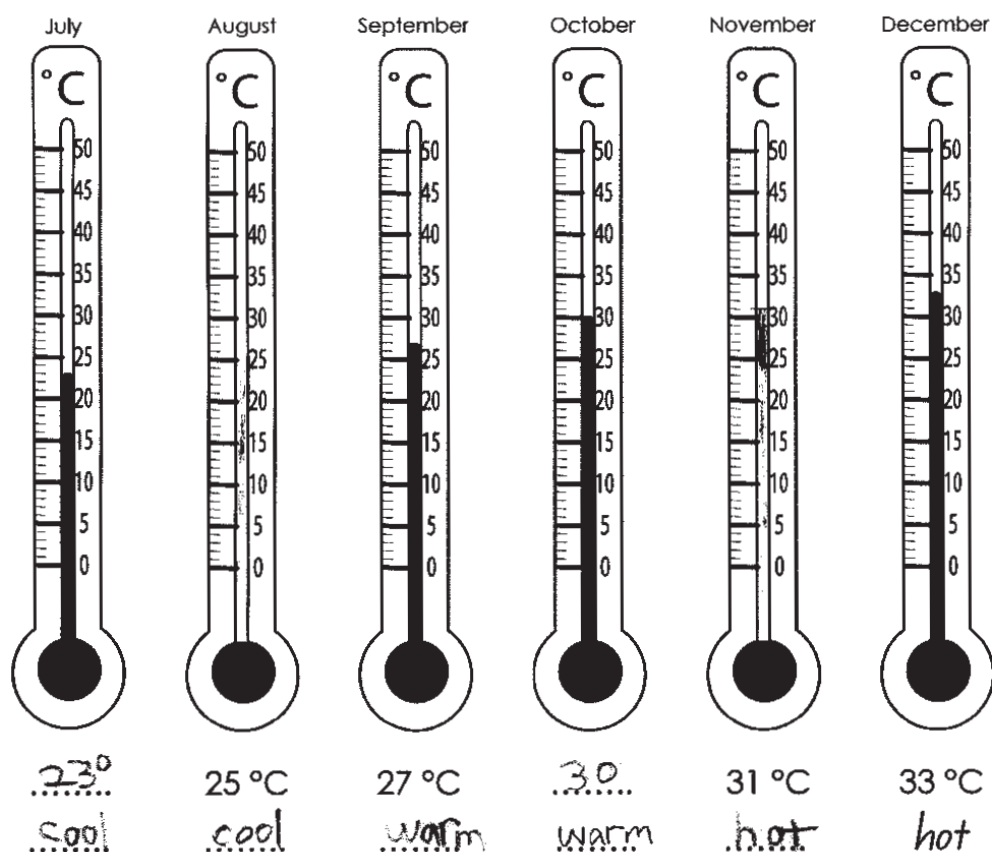
- Shade the thermometers to show the temperature for May, August and November.

E Sample: Response 1

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



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

STOP HERE: WAIT FOR YOUR TEACHER'S DIRECTIONS

E Sample: Response 1

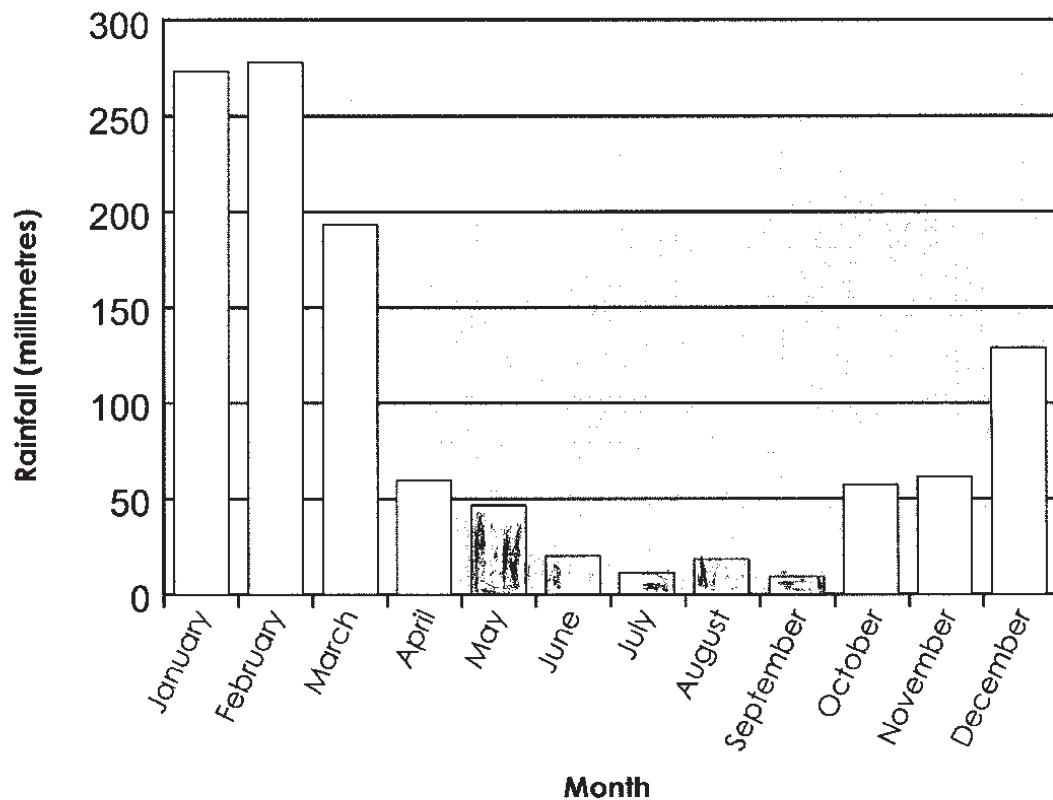
To find out the earliest month that the sunbirds could return, you need to identify the dry months.

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



E Sample: Response 1

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

In Sam's area the months in the dry season are May.....
June July August.....

The wet season starts in
and finishes in

STOP HERE: WAIT FOR YOUR TEACHER'S DIRECTIONS

9

E Sample: Response 1

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	hot	wet	
February	hot	wet	
March	hot	wet	
April	warm		
May	warm		
June	cool		
July	cool		
August	warm		
September	warm		
October	hot		
November	hot		
December	hot		

E Sample: Response 1

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: January

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

.....

.....

.....

.....

.....

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?

.....

.....

.....

STOP HERE: WAIT FOR YOUR TEACHER'S DIRECTIONS

11

E Sample: Response 1

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 ...15..... days

Explain:

.....
.....

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

.....warm.....

.....

.....

.....

.....

.....

.....



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.

.....twigs.....

.....

.....

.....

.....

.....

Overall grade

This student's work demonstrates a very limited level of knowledge and understanding when investigating seasonal data and explaining sunbird behaviour based on seasonal information and evidence. On balance, this is an overall E grade.

Student

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

Knowledge and understanding Investigating	Investigating	Investigating	Communicating
<p>Identifies seasonal data by reading and interpreting information from thermometers and rainfall graphs.</p> <p>Knowledge and understanding Investigating [Q 2–7] Correctly interprets some information from some information from thermometers and graphs.</p>	<p>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.</p> <p>Q 8–10</p> <p>Identifies correct months with</p> <p>Investigating Incorrect transfer of seasonal information from prior work.</p>	<p>Identifies information and evidence and draws conclusions from webpage to give explanations of sunbird nesting behaviour.</p> <p>Q 11–13</p> <p>Accurately identifies information</p> <p>Investigating Selects irrelevant information.</p>	<p>Uses scientific terminology to describe and explain ideas and information.</p> <p>Q 1, 2, 9–13</p> <p>Uses scientific terminology in and</p> <p>Communicating Uses few scientific terms in one- or two-word responses.</p>

Feedback:

E Sample: Response 2

Sunbirds

Look at the picture below.

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



This picture shows the actual size of the sunbird.

Body features

Example: tail feathers — thin, dark feathers with white edges
its beak is black

STOP HERE: WAIT FOR YOUR TEACHER'S DIRECTIONS

E Sample: Response 2

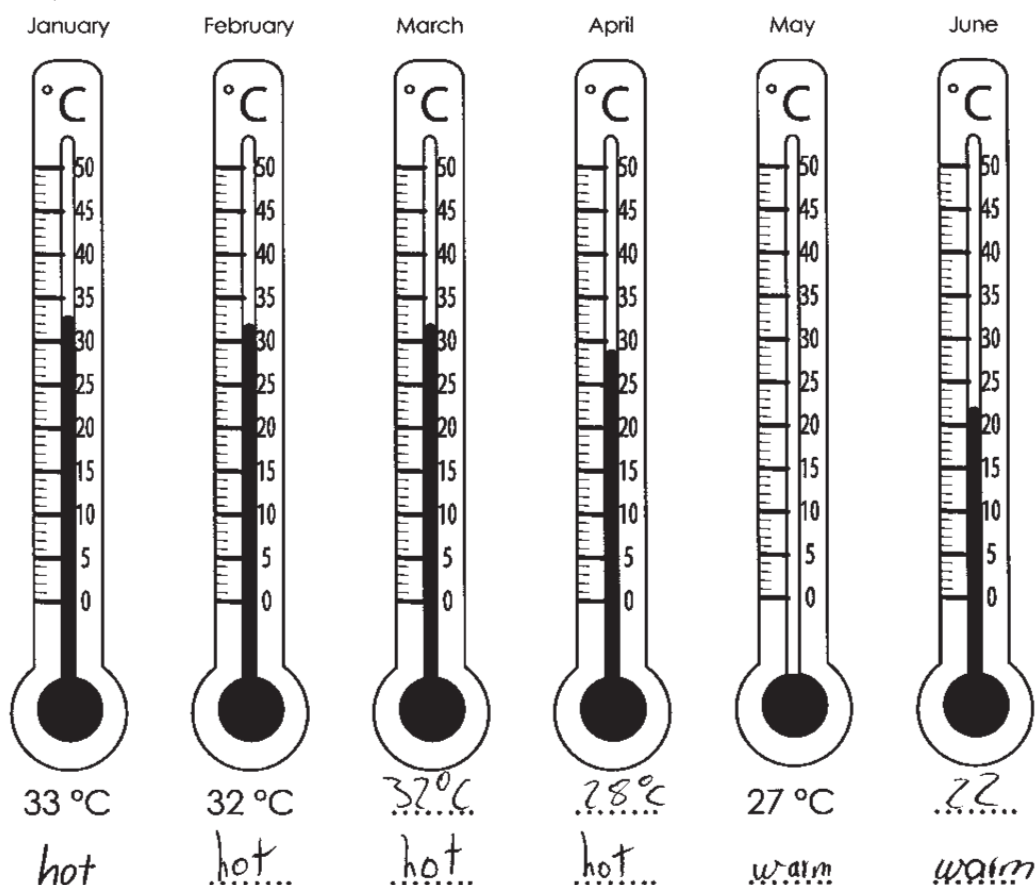
Temperature and rainfall

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.

2. 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



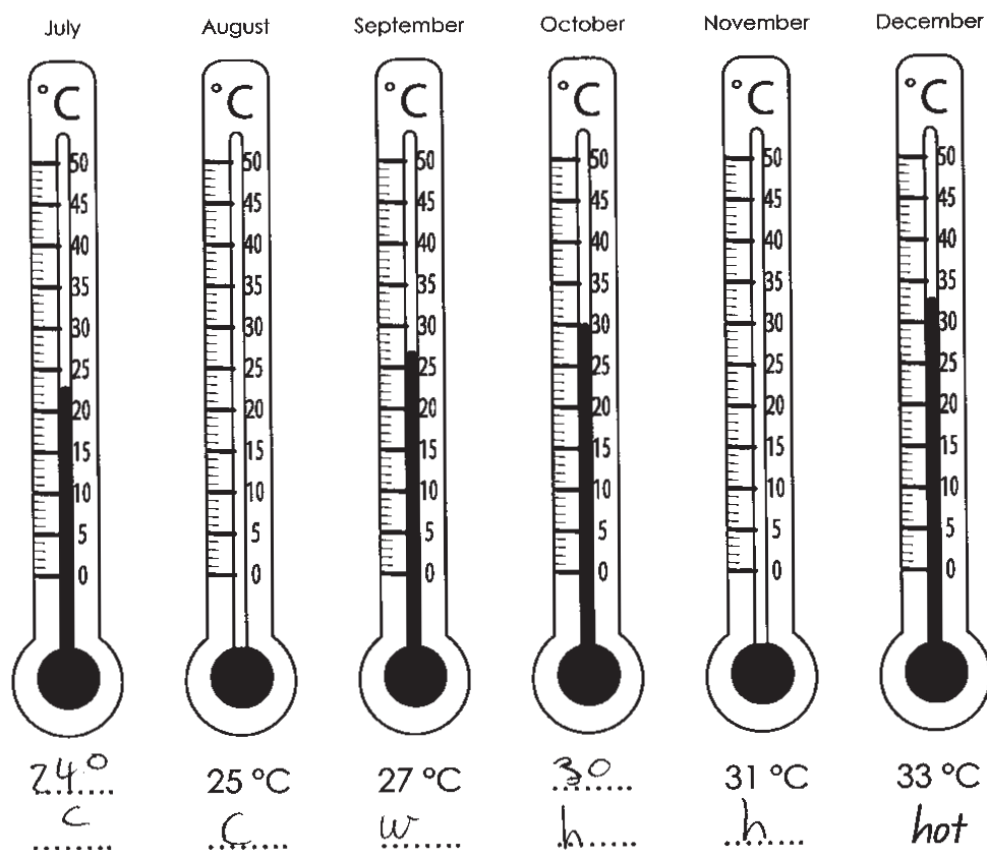
3. Shade the thermometers to show the temperature for May, August and November.

E Sample: Response 2

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



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

STOP HERE: WAIT FOR YOUR TEACHER'S DIRECTIONS

E Sample: Response 2

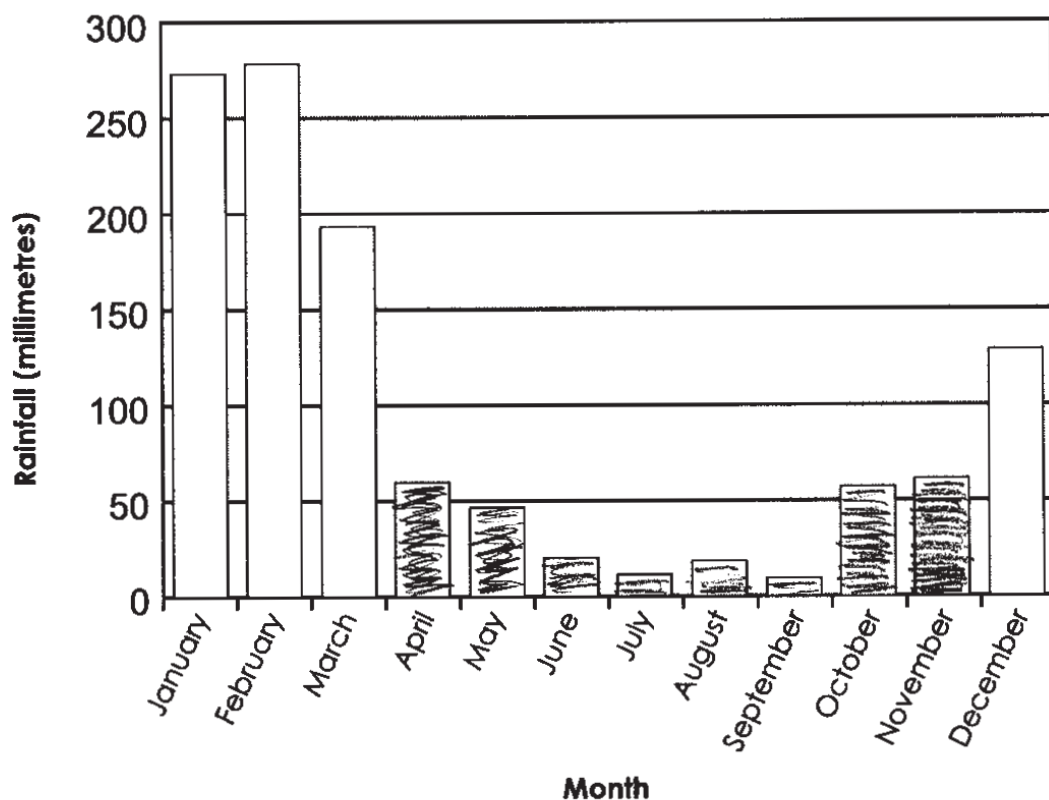
To find out the earliest month that the sunbirds could return, you need to identify the dry months.

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



E Sample: Response 2

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

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

The wet season starts inJan.....
and finishes indecember.....

STOP HERE: WAIT FOR YOUR TEACHER'S DIRECTIONS

9

E Sample: Response 2

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	hot	wet	
February	h	w	
March	h	w	
April	h	w	
May	w	d	✓
June	w	d	
July	c	d	
August	c	d	
September	w	d	
October	h	d	
November	h	d	
December	h	w	

E Sample: Response 2

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: *January*

Give all the reasons why you chose this month as the earliest month. *it is first month*

.....

.....

.....

.....

.....

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

Month: *december*

Why did you choose this month?

.....

.....

.....

STOP HERE: WAIT FOR YOUR TEACHER'S DIRECTIONS

//

E Sample: Response 2

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 2 days

Explain: weekend

.....

.....

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

home



The pictures may help you with ideas.

no snakes

.....

.....

.....

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

quiet

sun

house

.....

.....

.....