

4

SCIENCE

# TEACHER GUIDELINES



## Sunbirds

These guidelines provide important information to support administration and implementation of the QCATs.

### SECTIONS IN THIS BOOKLET:

**Section 1:** Understanding QCATs

**Section 2:** Implementing this QCAT

**Section 3:** Resources

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## Contact information:

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# Section 1: Understanding QCATs

## Queensland Comparable Assessment Tasks (QCATs)

QCATs are one of five components of the Queensland Curriculum, Assessment and Reporting (QCAR) Framework. They aim to provide:

- a model of authentic, performance-based assessment aligned to a selection of *Essential Learnings* and to the *Standards*
- resources to support consistency in the way teachers make judgments about the qualities in student work
- information for teachers and students relevant to a selection of *Essential Learnings* about what students know, understand and can do, what is working well and what needs attention.

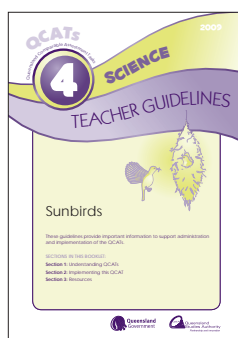
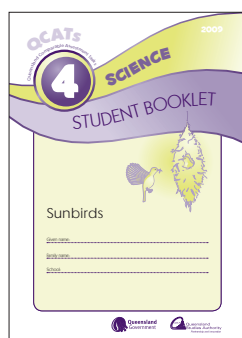
QCATs are assessments that encourage and rely upon interaction between teachers and students. They ask students to use relevant knowledge and skills to respond to a meaningful problem.

These assessments are resources that provide teachers, students and parents or carers with information to contribute to discussions about student learning and to plan for future learning. The effectiveness of these assessments in providing helpful information will depend on the level of interaction teachers have with their students before, during and after implementation.

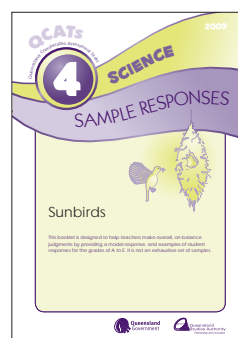
## Teacher preparation

- Check that you have the appropriate number of:
  - *Student booklets* — the assessment to be presented to students (one per student)
  - *Teacher guidelines* (one per teacher).
- Check for any defective *Student booklets*.
- Contact the QSA if any additional booklets are required.
- Read all the materials provided.
- Review the selected *Essential Learnings* listed in Section 3.
- Work through the assessment yourself so that you understand what students are required to do.
- Plan implementation with your colleagues:
  - Set times and dates for implementation.
  - Discuss how you will achieve consistency of teacher judgment.
  - Decide how to select five samples representative of the A to E grades for QSA's random sampling process.

**Note:** *Sample responses* are available for download from the QSA Assessment Bank <<https://qcar.qsa.qld.edu.au/assessmentbank>>.



(This document)



(Found online in the QSA Assessment Bank)

## Student orientation

It is important to set conditions that provide students with the opportunity to do their best work.

- Students should have had opportunities to engage with the selected *Essential Learnings* well in advance of participating in the QCATs. Review and consolidation may be necessary before implementing the QCAT, which assesses students' performance in applying knowledge and understanding in a new context.
- Allow some time to familiarise students with the expectations of the assessment. The time required will depend upon the needs of students.
- Begin each assessment with a teacher-facilitated discussion about the context of the assessment and the problem posed. It is vital that all students are engaged in this discussion.
- Ensure that preparation activities do not involve rehearsal of the actual assessment or a similar one.
- Explain what is being assessed by introducing the students to the Assessable elements. These are provided in the *Guide to making judgments* located on the back page of both the *Teacher guidelines* and the *Student booklet*.
- Discuss with students ways in which this assessment can provide them with information and insight into their strengths and areas for improvement.

## QCAT conditions

- You have the flexibility to implement the assessment at any time across the eight school weeks of the nominated implementation period, to suit school timetabling.
- Students need not complete the assessment in a single session. If you choose to implement the assessment over more than one session, ensure that the *Student booklets* are kept in a secure location between sessions.
- All responses must be recorded in the *Student booklet*. Extra paper may be provided to students for drafting purposes.
- *Student booklets* have clearly marked sections with prompts to indicate when students should await further instructions.
- Students should not be disadvantaged because they do not understand the instructions or questions — you may read and clarify the instructions and questions but it is important that you use professional judgment, and do not provide the information required in the response. Responses to individual student questions may be shared with the whole class.
- You may point out to a student if you notice that they have missed a question.
- Take advantage of the opportunity to interact with students during the assessment. This will enable you to gather information about future learning needs while the assessment is being implemented.
- Students absent during the administration of the QCATs should be given an opportunity to complete the assessment upon returning to school.
- Collect all *Student booklets* from students on completion of the assessment.
- Schools are responsible for the safe storage of *Student booklets* until December 2009.

## Making judgments

- Use the *Guide to making judgments* to grade student responses. Additional resources for your reference are:
  - model response (in this booklet)
  - *Sample responses*, graded A to E and annotated to explain how they demonstrate the qualities described in the *Guide to making judgments*. *Sample responses* are available for download from the QSA Assessment Bank <<https://qcar.qsa.qld.edu.au/assessmentbank>>.
- The model response and *Sample responses* are provided for reference purposes only. They each demonstrate possible responses and should be used to support the *Guide to making judgments*.
- Making judgments is **not** about determining whether one student's work is better than that of another. Rather, make standards-based judgments by matching student responses to the *Guide to making judgments*.
- Read and consider all of the evidence in the *Student booklet* before making and recording a judgment about the quality of the performance for each Assessable element.

### The judgment process

Making a judgment about the quality of a student's response to the assessment is a two-step process.

#### Step 1: Make a judgment about the evidence related to each Assessable element

- Read the purpose statement at the top of the *Guide to making judgments*. This statement describes the focus of the QCAT.
- Read the task-specific Assessable elements in the *Guide to making judgments*. These identify significant and discrete aspects that you will look for in student responses.
- Identify the evidence in the *Student booklet* as indicated in the *Guide to making judgments*.

- Match the evidence from the *Student booklet* with a task-specific descriptor. Begin at the bottom of each continuum. As you move up the continuum, each task-specific descriptor signposts a discernable difference in the quality of the student performance.
- Consider all the task-specific descriptors on the continuum.
- Record a judgment on the continuum for each Assessable element. A judgment may be recorded anywhere along the length of the continuum.

**Note:** Refer to the model response and *Sample responses* to support the process of matching student responses to task-specific descriptors in the *Guide to making judgments*.

#### Step 2: Make an overall on-balance judgment

- Reread the purpose of the assessment as stated at the top of the *Guide to making judgments*.
- Consider the judgments recorded for each Assessable element. Sometimes the on-balance judgment will be an easy fit over one of the A to E grades. However, where there is uneven performance across the Assessable elements, an overall on-balance judgment must be made by considering the significance of each Assessable element in relation to the purpose of the assessment.
- Record the overall grade by circling the relevant letter A to E on the *Guide to making judgments*.
- A nil award of "N" is to be recorded only when there is insufficient evidence to inform a judgment for an overall grade. In some circumstances students completing only part of the task may have their assessment considered complete if there is sufficient evidence of student performance across the Assessable elements to inform an overall on-balance judgment.

## Consistency of teacher judgment

- The process of achieving consistency of teacher judgment is integral to making judgments about the quality of student responses. This involves teachers consistently applying a shared understanding of those qualities that characterise the *Standards*.
- Consistency of teacher judgment is achieved through engaging in professional conversations about the quality of evidence in student responses using *Standards*, *Assessable elements* and task-specific descriptors as a common language. There are various ways of achieving teacher consensus. Three approaches to professional conversations are suggested on page 18. Schools may also develop their own processes for achieving consensus.
- Teacher consensus will facilitate the process of selecting five student responses considered to be representative of the overall A to E grades. Samples may be required as part of the QSA's random sampling process after implementation. Schools will be advised whether they have been selected to submit their representative samples in May.

## Providing feedback

- Effective feedback to students would include reference to the:
  - student responses
  - *Guide to making judgments*
  - *Essential Learnings and Standards*
  - model and *Sample responses*.
- Work with students and discuss information about what they were expected to know, understand and do, and how their responses were judged using the *Guide to making judgments*. Focus this discussion on developing strategies to improve learning.
- Consider strategies that could be used to cater to the needs of students who experienced either low or high levels of success in completing the assessment.

## Special consideration

Schools are responsible for determining which students require special provisions. Students should have the opportunity to participate in school-based assessment.

The QCATs are designed to be part of a classroom assessment program, and principles of participation and equity apply. The QSA offers this general advice about including all students:

- Students who have been identified as having specific educational needs may be assisted using those adjustments and supports usually available in the classroom. To make participation possible in all or part of the assessment task, such help may be in the form of assistive technologies, teacher-aide time or reading support.
- Students for whom English is not their first language, and who are assessed as not achieving a reading level appropriate to complete the task, may be assisted by an interpreter or educational devices (e.g. pictures, electronic whiteboards, interactive devices) to allow participation in all or part of the task.
- In exceptional circumstances where undertaking the task may be a traumatic experience for a student, the principal (in consultation with specialist and support staff and parents/carers) may make a decision regarding the participation of that student in the tasks.

## Important dates

16 March 2009	<ul style="list-style-type: none"> <li>• QCATs arrive in schools.</li> </ul>
16 March – 18 May 2009	<ul style="list-style-type: none"> <li>• Implement QCATs. <b>Note:</b> Schools have the flexibility to implement at any time across the eight school weeks of this period.</li> <li>• Submit student data.</li> <li>• Select five student samples that are representative of grades awarded. Where a school is unable to select student samples representative of all grades (A to E), they are to select five student samples representing the awarded range of grades.</li> </ul>
18 May 2009	<ul style="list-style-type: none"> <li>• Final day to submit student data.</li> <li>• Schools notified if they have been randomly selected to submit their five representative samples.</li> </ul>
December 2009	<ul style="list-style-type: none"> <li>• Schools retain all <i>Student booklets</i> until the end of the school year.</li> </ul>



## Section 2: Implementing this QCAT

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Read this section in conjunction with the *Student booklet*.

**The purpose of this QCAT is for students to explain sunbird behaviour based on information and evidence.**

### Getting ready

Students should have had an opportunity to cover the targeted selection of *Essential Learnings* as listed in Section 3. In particular, students should:

- understand the term “season” is applied to things that happen over a period of time, e.g. netball season, football season, festive season, dry season, wet season
- be familiar with reading a thermometer and know that it is used to measure temperature in degrees Celsius (°C)
- understand that if you check the weather daily and track it over long periods, patterns emerge, and that these patterns reflect the usual climate of a region
- be familiar with using bar graphs, graphic organisers and web pages.

## On the day

This assessment will take approximately 90 minutes to implement. It is recommended that the task be completed in at least two sessions.

This section describes the organisation and procedures that teachers are expected to follow in the administration of this QCAT.

<b>Setting the scene: Group discussion</b> <i>Approximately 10 minutes (at teacher's discretion)</i>		
Teacher	Student	Materials
<p>The following steps are suggested:</p> <ul style="list-style-type: none"> <li>Read aloud to the class Setting the scene: Group discussion (<i>Student booklet</i>, pages 2 and 3).</li> <li>Engage students in a whole-class discussion to focus their thinking on the assessment context.</li> </ul> <p>Focus on:</p> <ul style="list-style-type: none"> <li>the illustration of a sunbird nest on a verandah</li> <li>the three discussion points listed on page 3 of the <i>Student booklet</i>.</li> </ul> <ul style="list-style-type: none"> <li>Work through the <i>Guide to making judgments</i> with students to highlight the Assessable elements for this QCAT. Explain in student-friendly terms the task-specific Assessable elements. These identify what is valued in student responses, and what is looked for when making judgments.</li> <li>Instruct students that they must stop and wait for your directions at the bottom of page 3.</li> </ul>	<p>Students listen to task expectations, discuss the context and issues, and ask clarifying questions.</p>	<p><i>Student booklet</i></p>

**Sunbirds, Q 1***Suggested time: 10 minutes*

Teacher	Student	Materials
<p>Instruct students to read all information and questions. Clarify by reading the questions and instructions where necessary.</p> <p>Discuss what is meant by “in detail” (Q1) by referring to the example.</p> <p>Instruct students to write a detailed description of as many of the sunbird’s body features as possible. While it is okay to say that tail feathers are a body feature, as in the example, do not give examples of other body features.</p> <p>Instruct students that they must stop and wait for your directions at the bottom of page 4.</p>	<p>Students listen to the expectations and ask any clarifying questions.</p> <p>Students work independently to complete question 1.</p>	<p><i>Student booklet</i></p> <p>HB pencil</p> <p>sharpener</p> <p>eraser</p>

**Sunbirds at Sam’s house: Group discussion***Suggested time: 10 minutes*

Teacher	Student	Materials
<p>Read the group discussion text on page 5 to the class. Discuss the text, the illustration and the purpose of a cat run.</p> <p>Engage students in a whole-class discussion that focuses on nesting, the problem and the steps outlined to solve the problem:</p> <p style="padding-left: 20px;">Sam must help his Dad find out the earliest month the sunbirds could return, i.e. when the weather becomes warm but it is still dry. They will then know when the cat run must be finished so that their cat does not harm the sunbirds or their chicks.</p> <p>Emphasise the main steps students must complete:</p> <ul style="list-style-type: none"> <li>• finding the warm months</li> <li>• finding the dry months</li> <li>• finding the warm, dry months</li> <li>• using this information to find out the earliest month that the sunbirds could return.</li> </ul> <p><b>Note:</b> “Nesting” refers to the making or repairing of nests, laying and incubating eggs and feeding chicks.</p> <p>Instruct students that they must stop and wait for your directions at the bottom of page 5.</p>	<p>Students participate in group discussion and ask any clarifying questions.</p>	<p><i>Student booklet</i></p> <p>HB pencil</p> <p>sharpener</p> <p>eraser</p>

**Temperature and rainfall, Q 2–5***Suggested time: 15 minutes*

Teacher	Student	Materials
<p>In questions 2 to 5 students read and interpret data to identify the warm months.</p> <p>Instruct students to read all information and questions. Clarify by reading the questions and instructions where necessary.</p> <p>You may emphasise the need to identify the warm months as a necessary step in the process of solving the overall problem.</p> <p>Instruct students that they must stop and wait for your directions at the bottom of page 7.</p>	<p>Students listen to the expectations and ask any clarifying questions.</p> <p>Students work independently to complete questions 2 to 5.</p> <p>Students may use an HB pencil or red pencil/ crayon to shade the thermometers.</p>	<p><i>Student booklet</i></p> <p>HB pencil</p> <p>sharpener</p> <p>eraser</p> <p>red pencil or crayon</p>

**Temperature and rainfall, Q 6–7***Suggested time: 10 minutes*

Teacher	Student	Materials
<p>In questions 6 and 7 students identify the dry months.</p> <p>Instruct students to read all information and questions. Clarify by reading the questions and instructions where necessary.</p> <p>You may emphasise the need to identify the dry months as a necessary step in the process of solving the overall problem. You may wish to remind students of the overall problem.</p> <p>Instruct students that they must stop and wait for your directions at the bottom of page 9.</p>	<p>Students listen to the expectations and ask any clarifying questions.</p> <p>Students work independently to complete questions 6 and 7.</p> <p>Students may shade the bars with their HB pencil or a colour.</p>	<p><i>Student booklet</i></p> <p>HB pencil</p> <p>sharpener</p> <p>eraser</p> <p>coloured pencil or crayon</p>

### The warm, dry months, Q 8–10

*Suggested time: 20 minutes*

Teacher	Student	Materials
<p>In question 8 students identify the months that are both warm and dry. In question 9 they will use this information to identify the earliest month the sunbirds could return. Students will solve the overall problem in question 10.</p> <p>Instruct students to read all information and questions. Clarify by reading the questions and instructions where necessary.</p> <p>You may emphasise the need to identify months that are both warm and dry as a necessary step in the process of solving the overall problem. You may wish to remind students of the overall problem.</p> <p>Instruct students that they must stop and wait for your directions at the bottom of page 11.</p>	<p>Students listen to the expectations and ask any clarifying questions.</p> <p>Students work independently to complete questions 8, 9 and 10.</p>	<p><i>Student booklet</i></p> <p>HB pencil</p> <p>sharpener</p> <p>eraser</p>

### Sunbird behaviour, Q 11–13

*Suggested time: 15 minutes*

Teacher	Student	Materials
<p>Questions 11 to 13 provide the opportunity for students to find scientific information and draw conclusions from text and illustrations.</p> <p>Instruct students to read all information and questions. Clarify by reading the questions and instructions where necessary.</p> <p>Instruct students that they must:</p> <ul style="list-style-type: none"> <li>answer each question as fully as possible</li> <li>refer to the text and the images on the web page when thinking about their answers.</li> </ul> <p>Instruct students that when they have finished questions 11, 12 and 13 they should check their prior work.</p>	<p>Students listen to the expectations and ask any clarifying questions.</p> <p>Students work independently to complete questions 11, 12 and 13.</p>	<p><i>Student booklet</i></p> <p>HB pencil</p> <p>sharpener</p> <p>eraser</p>

## Feedback

This QCAT has been trialled at a number of schools across Queensland. Feedback from the trials showed these areas as common points for follow-up with students:

- links between recurring weather patterns, their cyclical nature and their effects on living things
- accuracy required when collecting and representing data
- importance in using scientific data, information and evidence gained through research and investigation when drawing conclusions and providing explanations
- using correct scientific terminology, including symbols, and giving detailed and cohesive explanations.

## Section 3: Resources

### The selected *Essential Learnings*

The 2009 QCATs will assess what students know, understand and can do. The following selection of Year 3 Science *Essential Learnings* form the basis of the 2009 assessment.

#### Science *Essential Learnings* by the end of Year 3

##### Ways of working

*Ways of working* describe processes students use to develop and demonstrate their *knowledge and understanding*.

##### Students are able to:

- identify and collect data, information and evidence
- use identified tools, technologies and materials
- draw conclusions and give explanations, using data, information and evidence
- communicate scientific ideas, data, information and evidence, using terminology, illustrations or representations.

##### Knowledge and understanding

*Knowledge and understanding* describes essential concepts, facts and procedures.

##### Earth and beyond

##### Changes in the observable environment influence life.

- Earth and space experience recurring patterns and natural cycles of events, including seasons, weather and moon phases, and these can affect living things.

##### Life and living

Needs, features and functions of living things are related and change over time.

- Change occurs during the life cycle of living things.
- Living things depend on the environment and each other.

##### Assessable elements

*Assessable elements* identify the valued features of the key learning area about which evidence of learning is collected and assessed.

- Knowledge and understanding
- Investigating
- Communicating

## Standards

*Standards* are integral to the alignment of curriculum, assessment and reporting. For teachers, parents and students, they provide a shared language for describing the quality of student achievement.

The *Standards* are achievement standards linked to the *Essential Learnings*. Using a five-point scale, the *Standards* describe how well a student has demonstrated their learning based on a collection of evidence. They can also be used to report student progress and achievement.

### Standards

*Standards* describe how well a student has demonstrated their learning based on a collection of evidence.

#### **A** standard

Evidence in a student's work typically demonstrates a very high level of knowledge and understanding of concepts, facts and procedures, and application of processes.

#### **B** standard

Evidence in a student's work typically demonstrates a high level of knowledge and understanding of concepts, facts and procedures, and application of processes.

#### **C** standard

Evidence in a student's work typically demonstrates a sound level of knowledge and understanding of concepts, facts and procedures, and application of processes.

#### **D** standard

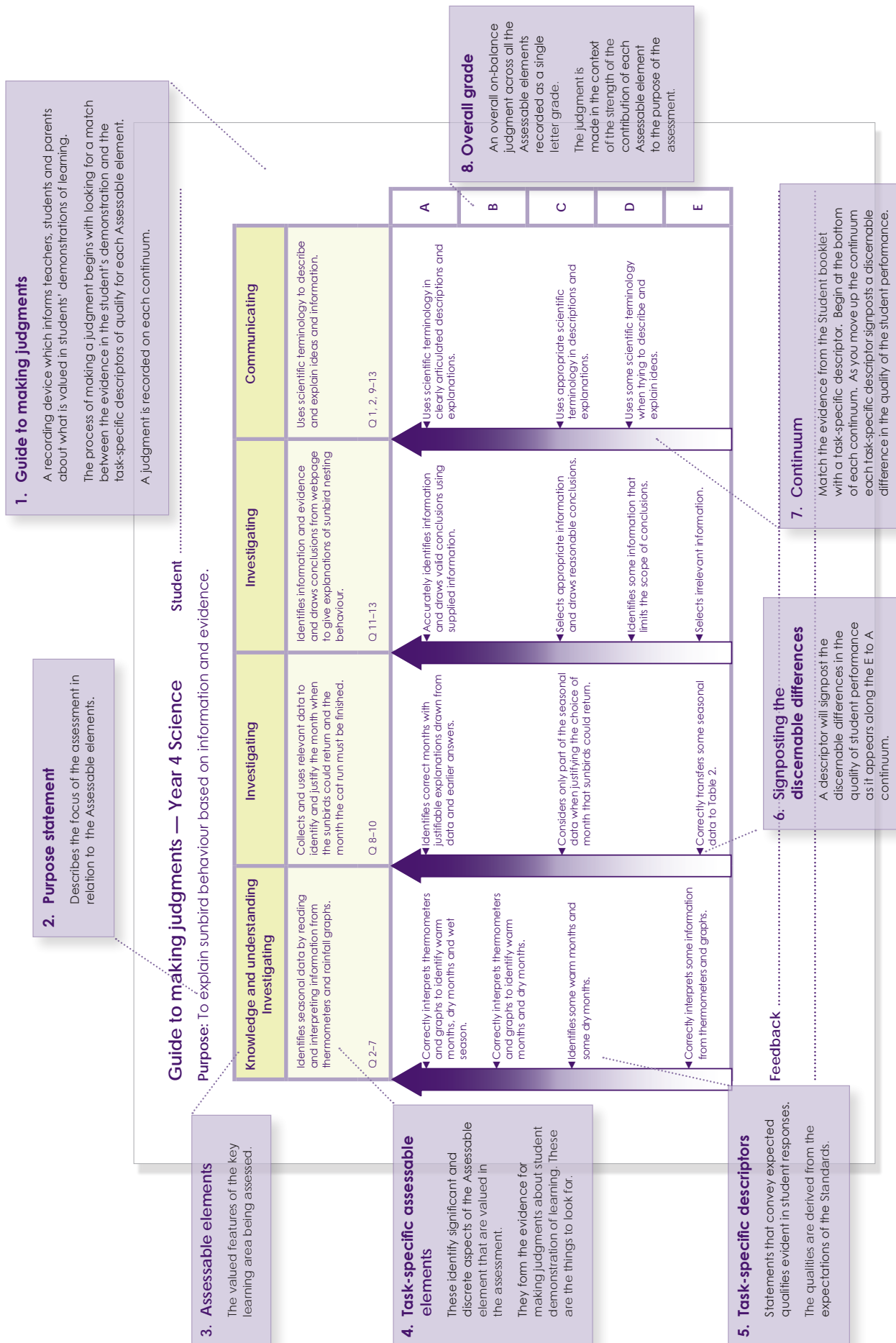
Evidence in a student's work typically demonstrates a limited level of knowledge and understanding of concepts, facts and procedures, and application of processes.

#### **E** standard

Evidence in a student's work typically demonstrates a very limited level of knowledge and understanding of concepts, facts and procedures, and application of processes.



# Explanation of the *Guide to making judgments*



## Three approaches for consistency of teacher judgment

### Calibration model

A facilitator selects samples deemed to be of a certain standard to be used in the calibration process.

Teachers individually grade the samples and then compare their judgment with the grade nominated for the sample. Task-specific descriptors are used as the basis for common and explicit language for teachers to use in their discussions about the quality of student performance. These discussions are based on evidence provided in student responses. Through this professional dialogue, teachers aim to adjust their interpretation and application of the *Standards* to reach consensus about the quality of the sample. This process is repeated for all the student samples. Teachers then individually grade all student responses, applying the shared understanding achieved through this calibration process.

**Advantage** — Saves time because it focuses on establishing a common understanding of the *Standards* in context, before marking all of the student responses.

**Disadvantage** — Making the initial quality judgments in isolation can be difficult.

### Conferencing model

Teachers grade student responses individually and then select student samples representative of their application or understanding of the A to E qualities. A meeting is convened in which a conferencing process is employed to enable teachers to share samples and discuss their judgments. Task-specific descriptors are used as the basis for a common and explicit language for teachers to use during discussions about the quality of student performance. These discussions are based on the evidence provided in student responses.

Through professional dialogue, teachers aim to reach consensus on the interpretation and application of the *Standards*. Teachers review judgments about their previously graded student responses, applying the shared understanding achieved through this conferencing process.

**Advantage** — Teachers are involved in professional dialogue with other teachers to reach consensus.

**Disadvantage** — Establishes a common interpretation and application of the *Standards* after student work has been allocated a grade. Extra time is needed to review and adjust previously graded work.

### Expert model

Teachers grade all student responses and then submit selected samples representative of their application or understanding of the A to E qualities to an expert. Advice is provided by the expert confirming whether there is consistency in the way the *Standards* are interpreted and applied, or whether teachers need to adjust their understanding, and why. This advice is used by teachers when reviewing judgments about their previously graded student responses.

**Advantage** — Imposes a common school-based view of the interpretation and application of the *Standards*.

**Disadvantage** — Teachers are not involved in the rich professional dialogue of reaching consensus with other teachers. This model can be used to reach consistency within a school, but does not best support consistency of teacher judgments across the state.

## 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/2230003637>.

This picture shows the actual size of the sunbird.

### Body features

Example: tail feathers — thin, dark feathers with white edges  
Beak — curved, pointed, sharp, dark colour  
Wings — feathers are dark green, brown colour  
Eye — round, black  
Throat or chest — feathers are dark blue-black colour  
Legs — black, thin  
Feet — sharp toes on end of feet, dark colour  
Belly — yellow feathers

STOP HERE: WAIT FOR YOUR TEACHER'S DIRECTIONS

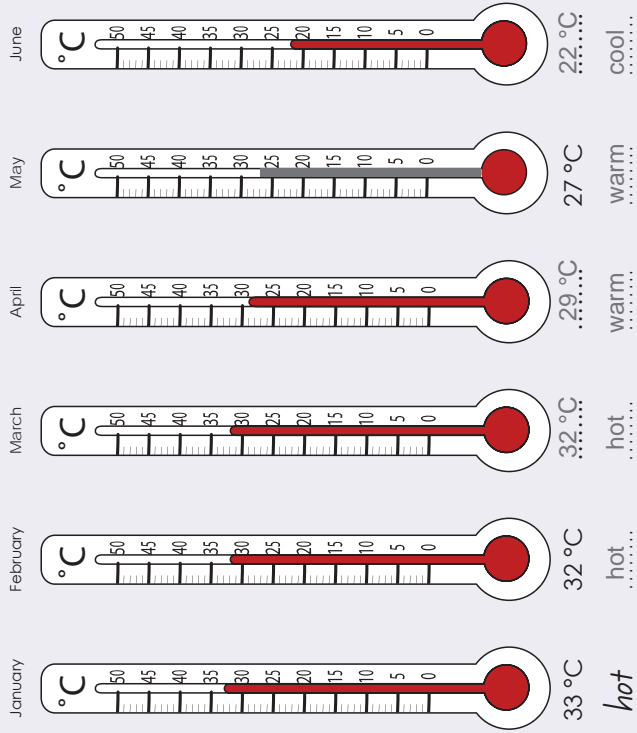
# Model response

## 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

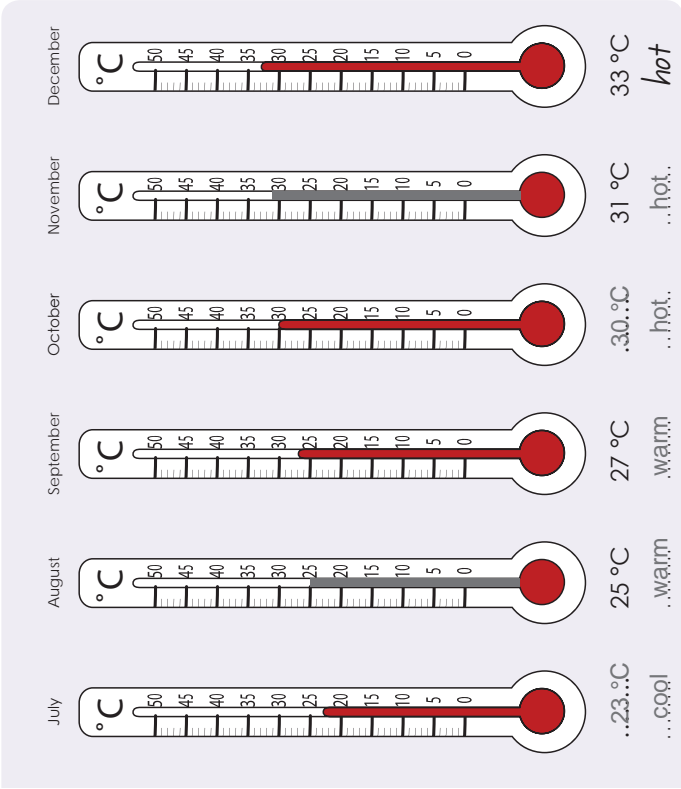


3. Shade the thermometers to show the temperature for May, August and November.

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: April, May, August and September

STOP HERE: WAIT FOR YOUR TEACHER'S DIRECTIONS

## Model response

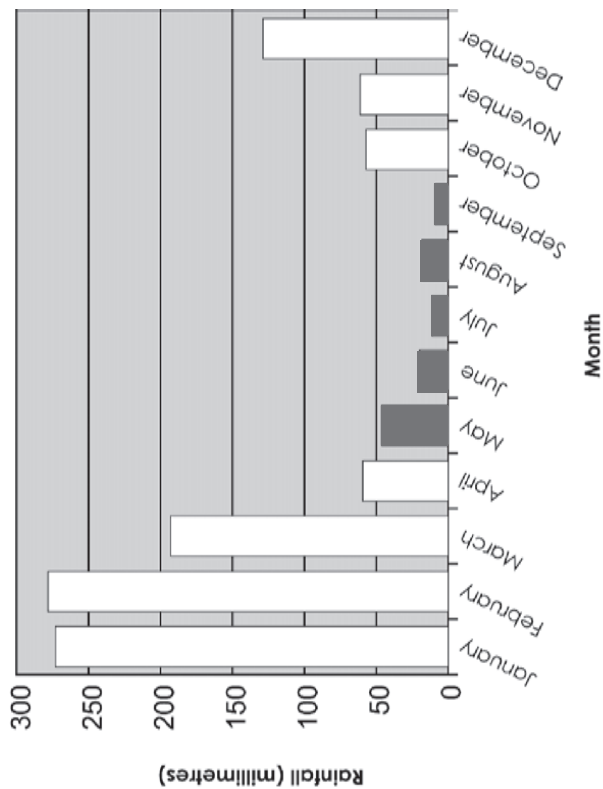
To find out the earliest month that the sunbirds could return, you need to identify the dry months.

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



8

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 and September .....

The wet season starts in ..... October .....  
 and finishes in ..... April .....

STOP HERE: WAIT FOR YOUR TEACHER'S DIRECTIONS

9

Model response

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	wet	
May	warm	dry	✓
June	cool	dry	
July	cool	dry	
August	warm	dry	✓
September	warm	dry	✓
October	hot	wet	
November	hot	wet	
December	hot	wet	

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: August

Give all the reasons why you chose this month as the earliest month. Looking at my table, there are three months that are warm and dry – May, August and September.

The months that are late in the dry season are August and September.

The earliest month late in the dry season is August.

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

Month: July

Why did you choose this month? July is the month before August, which is when the sunbirds could return.

STOP HERE: WAIT FOR YOUR TEACHER'S DIRECTIONS

# Model response

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: The female sunbird feeds her chicks in the nest for .....  
 about 15 days.....  
 .....

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

The opening is in the middle.....  
 of the nest. This keeps the eggs.....  
 and chicks warm and protected.....  
 It also makes it hard for predators to get to the chicks. The nest.....  
 also hangs from a thread which makes it difficult for predators.....  
 to climb down. The nest is shaped like a leaf which means it.....  
 can be camouflaged if built in the forest.....



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, leaves, grass, sticks and spider web.....  
 Sources of food – insects, spiders, nectar from flowers.....  
 A branch or something to hang their nest on.....  
 Shelter.....  
 A safe place.....  
 .....



# 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
<ul style="list-style-type: none"> <li>Correctly interprets thermometers and graphs to identify warm months, dry months and wet season.</li> <li>Correctly interprets thermometers and graphs to identify warm months and dry months.</li> <li>Identifies some warm months and some dry months.</li> <li>Correctly interprets some information from thermometers and graphs.</li> </ul>	<ul style="list-style-type: none"> <li>Identifies correct months with justifiable explanations drawn from data and earlier answers.</li> <li>Considers only part of the seasonal data when justifying the choice of month that sunbirds could return.</li> <li>Correctly transfers some seasonal data to Table 2.</li> </ul>	<ul style="list-style-type: none"> <li>Accurately identifies information and draws valid conclusions using supplied information.</li> <li>Selects appropriate information and draws reasonable conclusions.</li> <li>Identifies some information that limits the scope of conclusions.</li> <li>Selects irrelevant information.</li> </ul>	<ul style="list-style-type: none"> <li>Uses scientific terminology in clearly articulated descriptions and explanations.</li> <li>Uses appropriate scientific terminology in descriptions and explanations.</li> <li>Uses some scientific terminology when trying to describe and explain ideas.</li> </ul>
A	B	C	D
E			

Feedback .....