Planning for camp

Teacher guidelines

4

Mathematics

Queensland Comparable
Assessment Tasks (QCATs)
2010

Queensland Government
Queensland Studies Authority

Queensland Studies Authority

Contact information

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Contents

The 2010 QCATs

What are QCATs?

Queensland Comparable Assessment Tasks (QCATs) are designed to provide evidence of what students know, understand and can do in relation to a selection of Essential Learnings for English, mathematics and science in Years 4, 6 and 9, and to the Standards.

QCATs are authentic, performance-based assessments that:

- engage students in solving meaningful problems
- emphasise critical thinking and reasoning
- provide teachers, students and parents/carers with information about student progress and a focus for future teaching and learning.

Consistency of teacher judgments

QCATs support teachers in making consistent judgments about the quality of student work. Improved consistency of teacher judgments is achieved when teachers:

- engage in professional conversations about the quality of evidence in student responses
- reach consensus about the quality of student work
- adopt a consistent approach when using the Guide to making judgments (page 36).

Information gathered may be used by teachers to promote, assist and improve key learning area programs and help students achieve the highest standards they can.

Additional resources

QCATs Information Statement
www.qsa.qld.edu.au › Prep–Year 9 › QCATs (Years 4, 6 & 9)

Essential Learnings and Standards
www.qsa.qld.edu.au › Prep–Year 9 › Essential Learnings & Standards (Years 1–9)

Important dates

Friday 25 June	QCATs packages have arrived in schools
Tuesday 13 July ↓ Friday 17 September	Schools: • administer QCATs at any time during the school weeks of this period • grade QCATs • select five student samples that are representative of grades awarded
Monday 4 October	Schools are notified if selected to submit student samples for QSA's random sampling process
Monday 1 November	Final day for schools to submit student data to QSA
Friday 10 December*	Schools must retain all Student booklets until the end of the school year

*This date may vary from school to school

Getting ready

Student preparation

Students should have the opportunity to do their best work. For this to occur, student preparation should include:

- opportunities to engage with the Selected Essential Learnings (page 27) well in advance of participating in QCATs. If students have not engaged with the Selected Essential Learnings recently, review and consolidation may be necessary. Preparation activities should not involve rehearsal of the actual or a similar assessment
- experience with the types of questions used within the QCAT.

The quality of information provided by the QCATs will depend on the level of interaction teachers have with their students before, during and after implementation.

Additional resources Centrally-devised design brief
www.qsa.qld.edu.au › Prep–Year 9 › QCATs (Years 4, 6 & 9)

Catering for diversity — special provisions

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

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:

- Students who have been identified as having specific educational requirements 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 inclusive learning technologies, reading support or the use of support personnel.
- 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 a student's learning difficulties have precluded them from engaging with the Selected Essential Learnings, the principal (in consultation with specialist and support staff and parents/carers) may make a decision about the participation of that student in the task. Some students may be given an opportunity to complete some aspects of the assessment.

Additional resources Inclusive strategies for implementing QCATs
www.qsa.qld.edu.au › Prep–Year 9 › QCATs (Years 4, 6 & 9)

Equity
www.qsa.qld.edu.au › P–12 approach › Equity

Teacher preparation

Check contents of QCAT packages as soon as they arrive at your school

- Check that you have the appropriate number of Student booklets (one per student) and Teacher guidelines (one per implementing teacher).
- Check for any defective Student booklets.
- Contact the QSA if any additional copies are required.

Familiarise yourself with the assessment

- Read all the documents provided.
- Review the Selected Essential Learnings (page 27).
- Complete a Student booklet yourself, and then refer to the Model response (page 29) so that you understand what students are required to do.
- Download and view Sample responses from the QSA Assessment Bank (see Additional resources below).

Plan implementation

- Discuss the assessment with your colleagues, and plan any teaching or revision that may be required.
- Set the times and dates for the implementation:
  - teachers have flexibility to implement the QCATs at any time during the designated period
  - the QCATs may be completed in one, two or more sessions over one or more days
  - implementation times may differ for verified students, students with specific educational requirements or students who have English as a second language.
- Plan:
  - any support required to enable students to do their best work (e.g. teacher aides or other support personnel)
  - any materials or equipment needed to implement the assessment.
- Decide:
  - how you will implement this task for all classes at this year level
  - the processes you will use to achieve consistency of teacher judgment
  - how you will select student samples for the QSA's random sampling process
  - when, how and who will submit your school's data.

Additional resources

Sample responses
QSA Assessment Bank ‹https://qcar.qsa.qld.edu.au/assessmentbank›

Using Queensland Comparable Assessment Tasks (QCATs) to support learning
www.qsa.qld.edu.au › Prep–Year 9 › QCATs (Years 4, 6 & 9)

Implementation

Setting up — Practical activity (Student booklet page 13)

Administration options

The practical activity is independent of the activities that follow it, and so can be completed out of sequence if this better suits your class needs.

- You may elect to have a teacher aide administer the practical activity. Make sure that whoever monitors the activity records a comment about each student's result in the space provided on page 13 of the Student booklet.
- You may wish to use multiple sets of equipment to speed completion.

Equipment

- Kitchen scales (NOT digital scales)
- Two containers labelled A and B
  - Fill container A so that it has a mass that is exactly on an increment on the scale the students are using. For example, the mass might be 450 grams, but not 458 grams.
  - Container B is empty.
- Bucket of sand
- Scoop

Working with the Student booklet

Use the Annotated Student booklet (page 8) to set the conditions that ensure all students have the opportunity to do their best work.

Students should be encouraged to interact with teachers to seek clarification when required, and with other students if appropriate to the task.

Suggested implementation timeline

Preparation

Setting the scene: Group discussion	15 minutes

The assessment task

Planning time when camping	20 minutes
Thinking about location	25 minutes
Thinking about packing	30 minutes
Reflecting on learning	5 minutes
A new situation	10 minutes

Annotated Student booklet

Suggested time: 15 minutes

The group discussion provides an opportunity for students to share their camping experiences.

Ensure the discussion includes a focus on the need to plan. If good planning does not occur then the camping experience may not be very successful. For example campers may:

- forget to book a camp site
- not be able to find the campground
- forget to pack some items they need
- miss camp activities.

Student ideas may be written on the board by the teacher to help facilitate discussion.

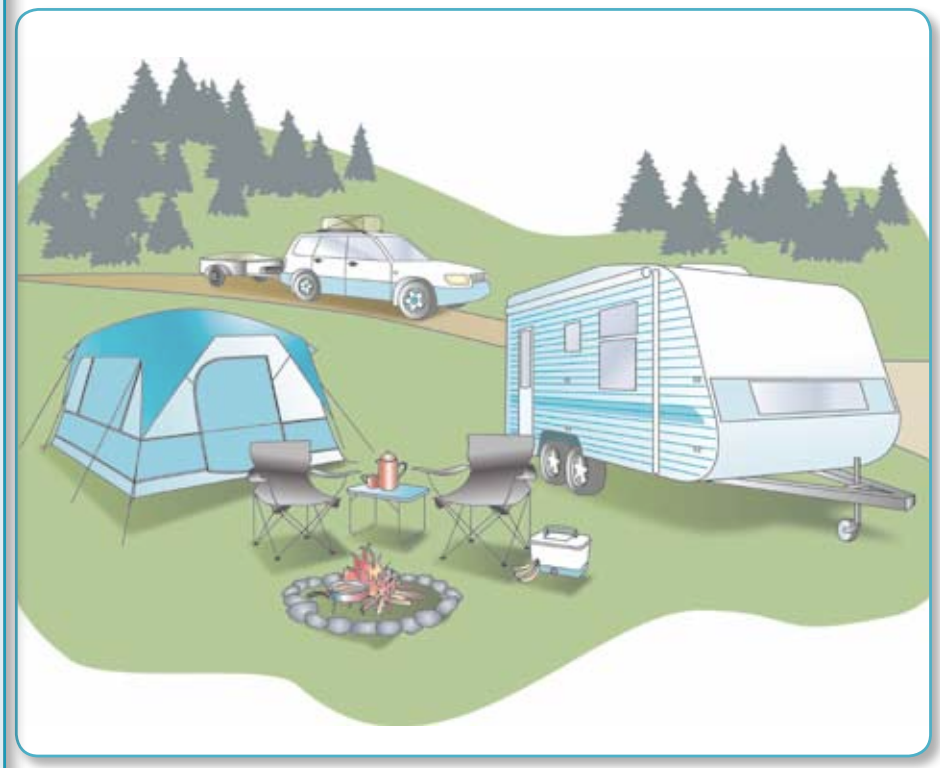
Setting the scene: Group discussion

Many families go camping.

Families can camp near the beach, near a rainforest or even in the backyard.

Where are some good camping places that you know about?

What are some of the activities you can do when camping?



Families have to plan when they go camping.

What might happen if a family went camping without planning?

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Outline what is covered in the task.

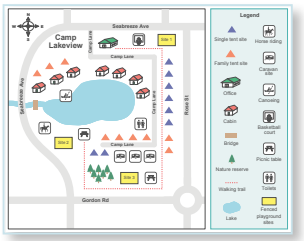
Guide students through the booklet to familiarise them with the requirements of the task.

This assessment focuses on using mathematics to help plan a camping holiday.

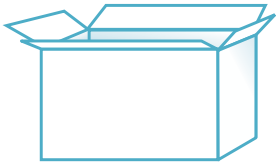
In this assessment, you will:

- refer to clocks, calendars, timelines and timetables

- locate places and give directions using a map of a campground



- measure and identify the mass of items you could pack into boxes



- think about how you would use mathematics in another situation.

Work through the Guide to making judgments (page 36) with students to highlight the assessable elements for this QCAT. Explain, in student-friendly terms, the task-specific assessable elements. These identify what is being valued in the student responses.

Suggested time: 20 minutes

Read the text on both pages to the students, providing clarification as needed.

Where students ask individual questions, answers should be shared with all students wherever possible.

Planning time when camping

Clocks, timetables, timelines and calendars are items we use when planning.

1. **Use your ruler to draw a line from each statement to the item you would most likely use.**

Hint: Items may be used more than once.

a) To identify which days the school holidays start and finish, I will use a …

b) To work out the time I will arrive at a nearby campground, I will use a …

c) To plan my day, I will record my activities and times using a …

d) To work out how many minutes until a shop opens, I will use a …

e) To find out what time buses stop at the campground on Tuesday, I will use a …

clock

yearly calendar

weekly timetable

daily timeline

Emphasise "yearly" when referring to the calendar, "weekly" when referring to the timetable, and "daily" when referring to the timeline.

Note:
Clocks, calendars, timetables and timelines can be used to measure time in different ways. For example, a timeline could be used for a day, a week or over centuries. For this reason, a time descriptor, e.g. "weekly", has been placed before three of the items.

More than one answer may be possible even though the question asks for the "most likely" item. This will depend on how the use of the item has been taught.

Ask students to use a ruler to ensure accuracy.

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This question gathers evidence of a student's knowledge and understanding of items used to measure time in personal activities. They do this by reflecting on the use of clocks, calendars, timetables and timelines in a camping context.

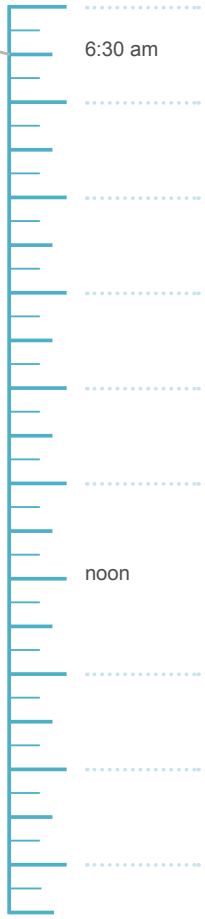
Use the information in the table below to help you complete Questions 2 and 3.

2. **Write the hours on the dotted lines next to the timeline. Include am or pm in your answer.**

3. **Rule a straight line from each activity's time to the timeline to show when the activity starts.**

The first one has been done for you.

Activity	Time	Daily timeline
Feed pelicans	6:30 am	
Treasure hunt	2:00 pm	
Bush art	9:45 am	
Canoeing	3:15 pm	
Beach Olympics	8:30 am	
Movie	12:10 pm	
Fishing	10:50 am	



Stop here: Wait for your teacher's directions.

Questions 2–3 gather evidence of a student's knowledge and understanding of time sequencing. They demonstrate their understanding by generating solutions using a vertical timeline.

Complete this page in two steps.

Step 1: Question 2

First ask the students to place the hour or o'clock times on the daily timeline. Remind them to place am or pm in their answer.

Explain how two times are already given on the timeline; 6:30 am and noon. Clarify the timeline as necessary but don't explain the meaning of noon or the time conventions of am and pm.

Step 2: Question 3

Read out activities and times from the table. Discuss the example. Ask students to draw a line from each circle (times) to the timeline.

Ask students to use a ruler to ensure accuracy.

Read the text to the students, providing clarification as needed.

Where students ask individual questions, answers should be shared with all students wherever possible.

Calendars help us to plan our time effectively.

Point out calendar elements to students:

- months
- days of week
- first and last day of each month
- the key.

If you decide to read out the activities in the cells, do not identify the days or dates associated with those activities.

December 2010

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
		1	2	3	4	5
6	7	8	9	10 Last day of school term	11	12
13	14	15	16	17	18	19
20	21	22	23 Take dog to Aunty Sue's	24 Morning drive to campground	25 Christmas Day	26 Beach BBQ
27	28	29 Fishing trip	30	31 Fancy dress party		

January 2011

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
31					1	2
3	4	5 Return home from camp	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24 Student-free day	25 Student-free day	26	27	28	29	30

School holidays Weekends

Use the calendars on page 6 to answer Questions 4, 5 and 6.

4. Complete the table below.

Activity	Day	Date
e.g. Last day of school term	Friday	10 December
a) Beach BBQ		
b) Fishing trip		
c) Fancy dress party		

5. Write these activities on the calendar in the correct place.

Activity	Date
a) Canoeing	3 January
b) Beach swim	27 December
c) Rainforest walk	1 January

6. a) How many nights will you be camping?

.....

b) The dog is at Aunty Sue's house for 15 nights. What day and date will you pick up the dog from Aunty Sue's house?

.....

c) The camping gear is cleaned and packed away on the weekend after returning home. What are the days and dates of this weekend?

....

Stop here: Wait for your teacher's directions.

Explain the example given in Question 4.

Students write their answer in the appropriate cell on the calendar.

Students do not have to write the whole phrase — they could write "canoe", "beach" and "walk", or a), b) and c) in the cell instead.

Remind students that they are counting the nights, not the days.

Questions 4–6 gather evidence of a student's knowledge and understanding of time sequencing and scheduling. They demonstrate their understanding by generating solutions and making decisions using a calendar.

Suggested time: 25 minutes

Read the text on both pages to the students, providing clarification as needed.

Where students ask individual questions, answers should be shared with all students wherever possible.

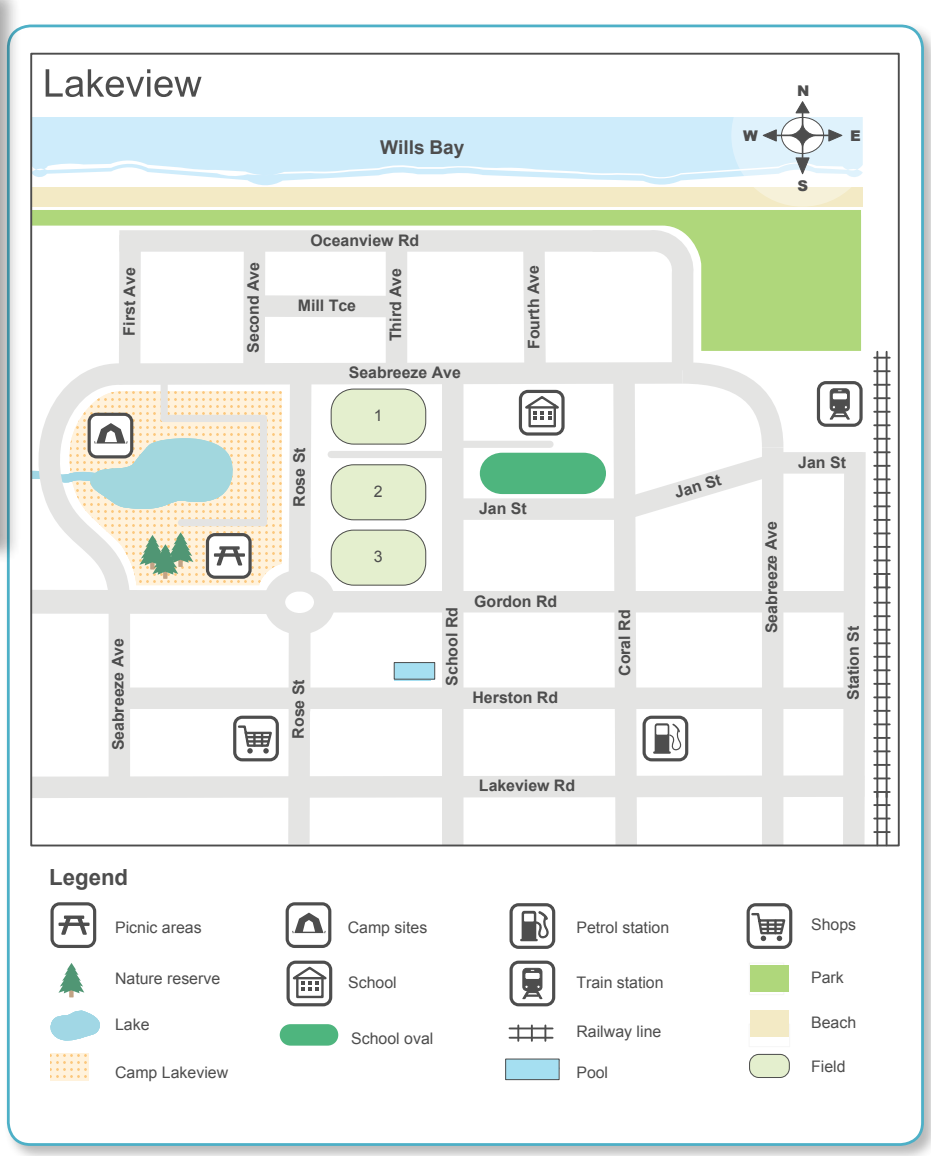
Thinking about location

This map shows where Camp Lakeview is located.

Briefly discuss features and symbols on the map and legend.

Direct student attention to the location of the compass but do not explain its use.

Encourage students to ask questions about the map if there is anything they do not understand.



7. **Write north, south, east or west to make each statement true.**

The school oval is ..... **of the school.**

The train station is ..... **of field 1.**

The shops are ..... **of the petrol station.**

8. **Draw each symbol in the correct location on the map.**

a) 	The **tennis court** is between First Ave and Second Ave.
b) 	The **playground** is on Gordon Rd south of the nature reserve.
c) 	The **skate arena** is east of the shops between Rose St and School Rd.
d) 	The **hall** is north of the school on the west side of Fourth Ave.

Explain to students that the symbol they draw should look similar to the symbol shown in Question 8. It does not have to be exactly the same.

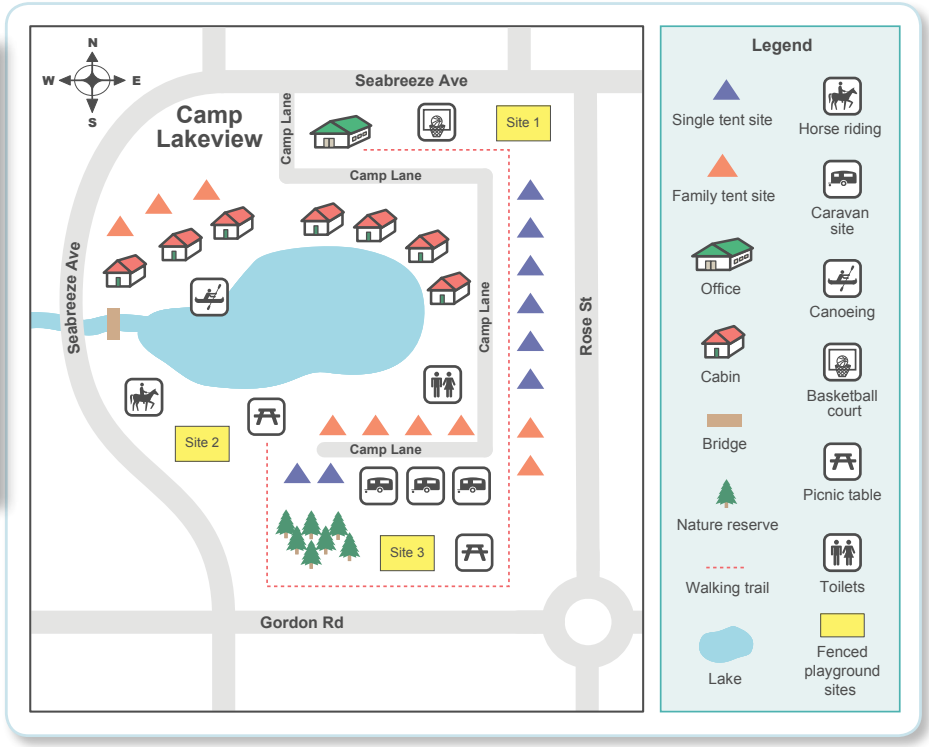
Stop here: Wait for your teacher's directions.

Questions 7–8 gather evidence of a student's knowledge and understanding of specific mapping conventions (representations). They demonstrate this understanding by identifying map symbols, legends and major compass points and making decisions based on that identification.

Read the text on both pages to the students, providing clarification as needed.

Where students ask individual questions, answers should be shared with all students wherever possible.

Here is a map of Camp Lakeview.



Remind students to:

- place the symbol ☺ clearly on the chosen site
- choose one of the given sites, not create their own
- give reasons with detail based on their interpretation of the map.

A family would like a quiet tent site.

9. a) Place the symbol ☺ on the family tent site you think will be the quietest.

b) Why is your choice the quietest? Refer to the map to explain your reasons.

- .....

.....

- .....

.....

A fenced playground will be built on one of three sites ( ) shown on the map.

10. a) Place a tick (✓) on the site you think is best.

b) Why is this site the best? Refer to the map to explain your reasons.

- .....

.....

- .....

.....

Encourage students to:

- place a tick (✓) clearly on the chosen site
- choose one of the given sites, not create their own
- give reasons with detail based on their interpretation of the map.

The map of Camp Lakeview shows a walking trail (------).

11. Write directions to follow the walking trail, starting at the office.

- Describe what you will see as you walk along the trail.
- Use compass directions.

- From the office, walk east toward Rose Street. Camp Lane will be on your right and the basketball court on your left.
- Turn .....

.....

.....

.....

.....

.....

.....

.....

Encourage students to:

- ensure their directions are detailed and include the things a person would see as they follow the trail
- include compass points
- write each new direction on a new line.

Stop here: Wait for your teacher's directions.

Questions 9–10 gather evidence of a student's knowledge and understanding of specific mapping conventions, i.e. symbols, legend, to identify locations on a map. They demonstrate this understanding by using such conventions when communicating their reasoning about their choice of a family tent site and playground.

Question 11 gathers evidence of a student's knowledge and understanding of how specific mapping conventions, i.e. symbols, legend, and major compass points, are used to give direction. They demonstrate this understanding by using such conventions to communicate (write) directions, including turns, for a walking trail.

Suggested time: 30 minutes

Read the text on both pages to the students, providing further clarification of the task as needed.

Where students ask individual questions, answers should be shared with all students wherever possible.

Thinking about packing

When we go camping we need to pack food, clothes and camping gear to take with us. We may need to find the mass of items to make sure boxes are not too heavy.

We use kitchen scales to measure the mass of small things.

Here are three different kitchen scales. They have different measurements on them.

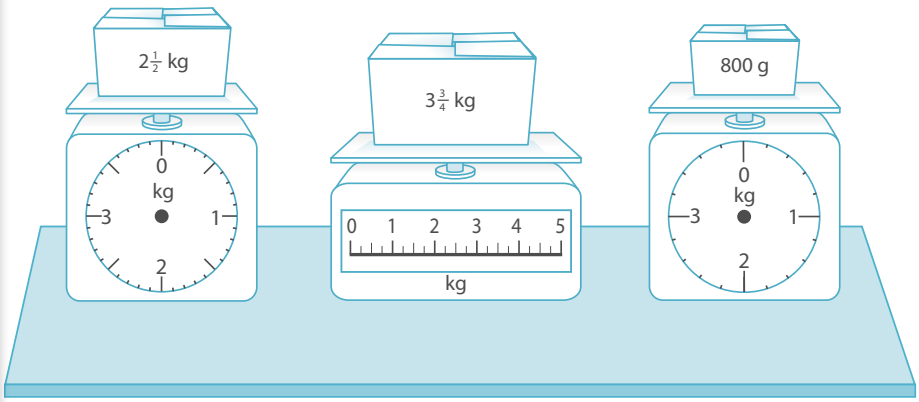
12. Draw an arrow on each scale to show the mass shown on each box.

Students draw a line on each of the scales to show the correct measurement. Teachers may model this on a board in the classroom.

Teachers may point out to students that each of the scales uses a different scale.

Do NOT clarify how the scales differ, or the masses shown on each box.

Hint: Draw your arrows accurately.



Stop here: Wait for your teacher's directions.

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Questions 12–14 gather evidence of a student's knowledge and understanding of the standard units of mass measurement and the use of an instrument to measure mass, i.e. kitchen scales.

They demonstrate this understanding by generating solutions to record and practically measure the mass of items on kitchen scales.

See Setting up on page 7 for guidelines on administering this activity.

Practical activity

On a table in your classroom there are two containers and one kitchen scale.

The containers are labelled A and B.

13. Find the mass of container A using the kitchen scale.

The mass of container A is .....

14. Fill container B with sand so the mass is 1700 grams.

Show your teacher when you have finished.

Container A should have a mass that is exactly on an increment on the scales the students are using. For example, the mass might be 450 grams, but not 458 grams.

Teacher comment (Question 14)

.....

.....

Record each student's result in Question 14 in the space provided. Where students have difficulty, record the nature of the difficulty, e.g. the student was unsure whether to add or take sand from the container when measuring.

Ensure comments are positively stated.

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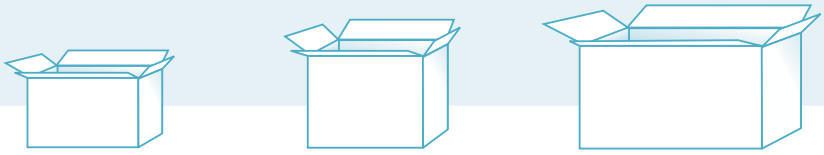
Read the text on both pages to the students, providing further clarification as needed.

Where students ask individual questions, answers should be shared with all students wherever possible.

When you go camping you will help to pack things in boxes. Different boxes can hold different weights.



The mass of **Box A** must be exactly 15 kilograms.

The mass of **Box B** must be exactly 20 kilograms.

The mass of **Box C** must be exactly 25 kilograms.

Here are the items to be packed into the three boxes.

Explain the images and their accompanying labels and masses.

 Clothing 5 kg	 Personal items 2 kg	 Bedding 7 kg	 Cutlery 1 kg
 Swimming gear 4 kg	 Games 5 kg	 Food 8 kg	 First-aid kit 2 kg
 Gas cylinders 13 kg	 Cooking items 6 kg	 Tent 7 kg	

Which items would you put in **Box A**, **Box B** and **Box C**?

Place no more than **four items** in each box. You must pack all items.

Show all working

Remind students of the two conditions:

- no more than four items in each box
- all items must be used.

15. Write the names of the items that should be placed in each box.

Box A 15 kg		Box B 20 kg		Box C 25 kg	
item	mass	item	mass	item	mass

Students should write the names of the items in the table. They should not draw pictures.

Beside the name of the item, the student should write the item's mass.

There are several possible correct answers to this question.

Stop here: Wait for your teacher's directions.

Question 15 gathers evidence of a student's knowledge and understanding of addition and subtraction using mass units (kg).

They demonstrate this understanding by generating solutions using mental and written calculations.

Suggested time: 5 minutes

Read the text on both pages to the students, providing further clarification as needed.

Where students ask individual questions, answers should be shared with all students wherever possible.

Reflecting on learning

16. Complete the following.

You can tick (✓) more than one box for each statement.

Students tick the boxes that make the statement correct.

There may be more than one tick for each statement.

a) Calendars can be used to:

- ❑ tell the time during the day
- ❑ find school holidays
- ❑ find days and dates
- ❑ plan activities during the year
- ❑ find out when buses arrive on a day

b) A legend on a map is used to:

- ❑ find direction of travel
- ❑ find places on a map
- ❑ work out how far places are from each other
- ❑ save room on the map

c) The four compass points are used to:

- ❑ find direction
- ❑ find places on a map
- ❑ work out how far places are from each other

Stop here: Wait for your teacher's directions.

Question 16 gathers evidence of a student's knowledge and understanding of mapping conventions and items used to measure time.

They demonstrate this understanding by reflecting on the mathematical use of a calendar, legend and a compass.

Suggested time: 10 minutes

A new situation

You can use mathematics when planning many of your personal activities.
Choose one activity by ticking (✓) a box, then answer the questions below.

❑ a birthday party ❑ a sleepover ❑ a fishing trip

17. How can you use mathematics in your chosen activity?

a) I can use a timetable to:

.....

.....

b) I can use a clock to:

.....

.....

c) I can use a kitchen scale to:

.....

.....

d) I can use a map to:

.....

.....

Encourage students to choose a familiar activity.

Students must refer to this activity when completing each statement.

Ask students to be detailed in their responses, i.e. they must connect the mathematics to the specific activity.

For example:

If there was a choice "going to the movies", a relevant example would be: "I can use a timetable to find out what times the movie starts at the cinema", rather than "I can use a timetable to catch a bus."

Question 17 gathers evidence of a student's knowledge and understanding of items that measure time and mass, and the use of maps.

They demonstrate this understanding by reflecting on and identifying how a timetable, clock, kitchen scale and map can be used to plan a personal activity.

Making judgments

Use the Guide to making judgments (GTMJ) on page 36 to grade student responses.

The Model response (page 29) and Sample responses are provided for reference purposes only. They each demonstrate possible responses and should be used to support the GTMJ.

Making judgments is not about determining whether one student's work is better than that of another. Rather, you should make standards-based judgments by matching evidence in student responses to descriptors in the GTMJ.

Read and consider all of the evidence in the student's responses before making and recording a judgment about the quality of the performance for each assessable element.

Additional resources Sample responses
QSA Assessment Bank ‹https://qcar.qsa.qld.edu.au/assessmentbank›

Using the GTMJ

This QCAT uses a continua-style GTMJ, where descriptors are placed along a continuum within each column. The diagrams below show the different parts of the GTMJ continua model, and how to use the GTMJ when grading student responses.

Record a nil award of "N" only when there is insufficient evidence to make a judgment for an overall grade.

In the following diagrams:

- Diagram 1: Understanding the GTMJ points out the different parts of the GTMJ
- Diagram 2: Using the GTMJ — the judgment process gives steps to follow when grading student responses.

Diagram 1: Understanding the GTMJ

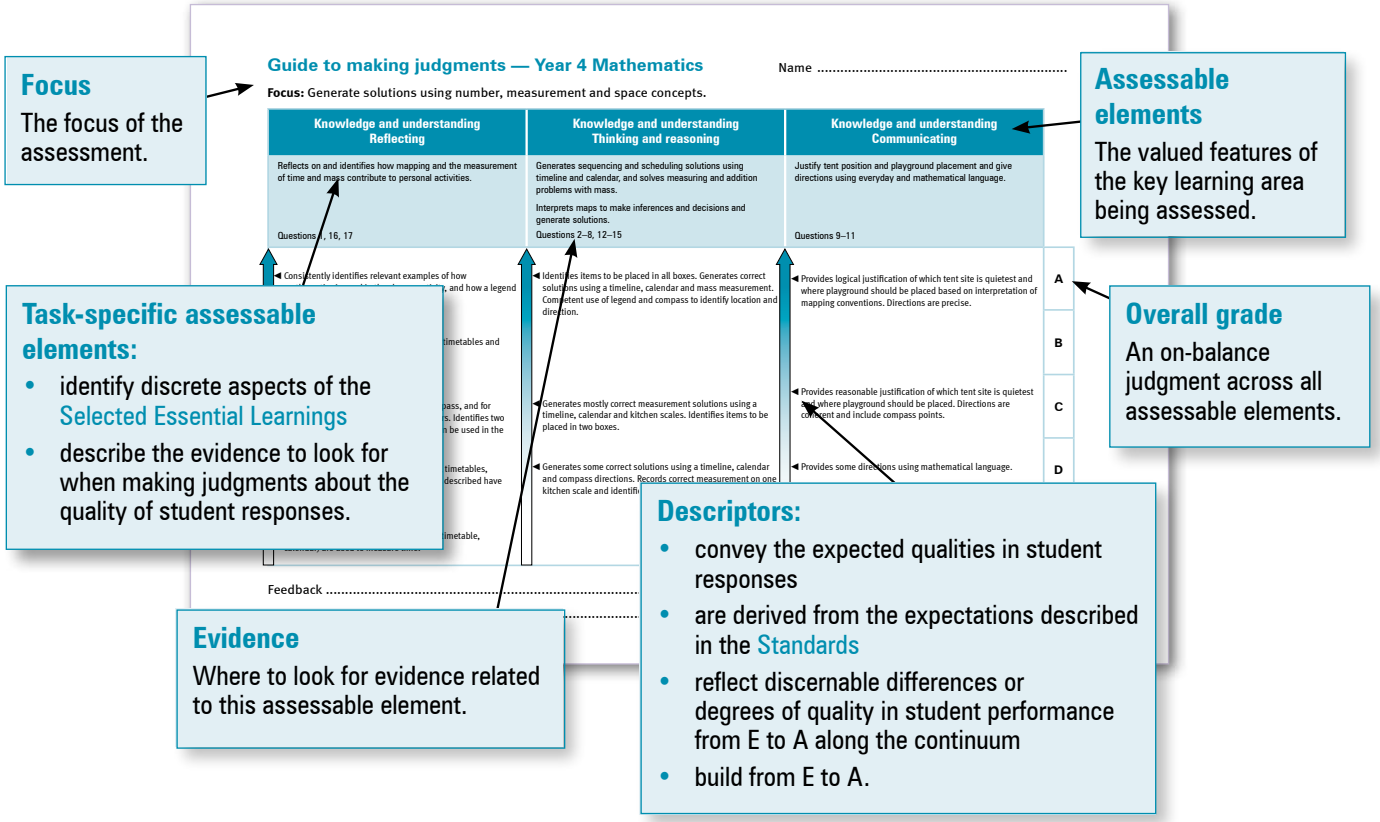
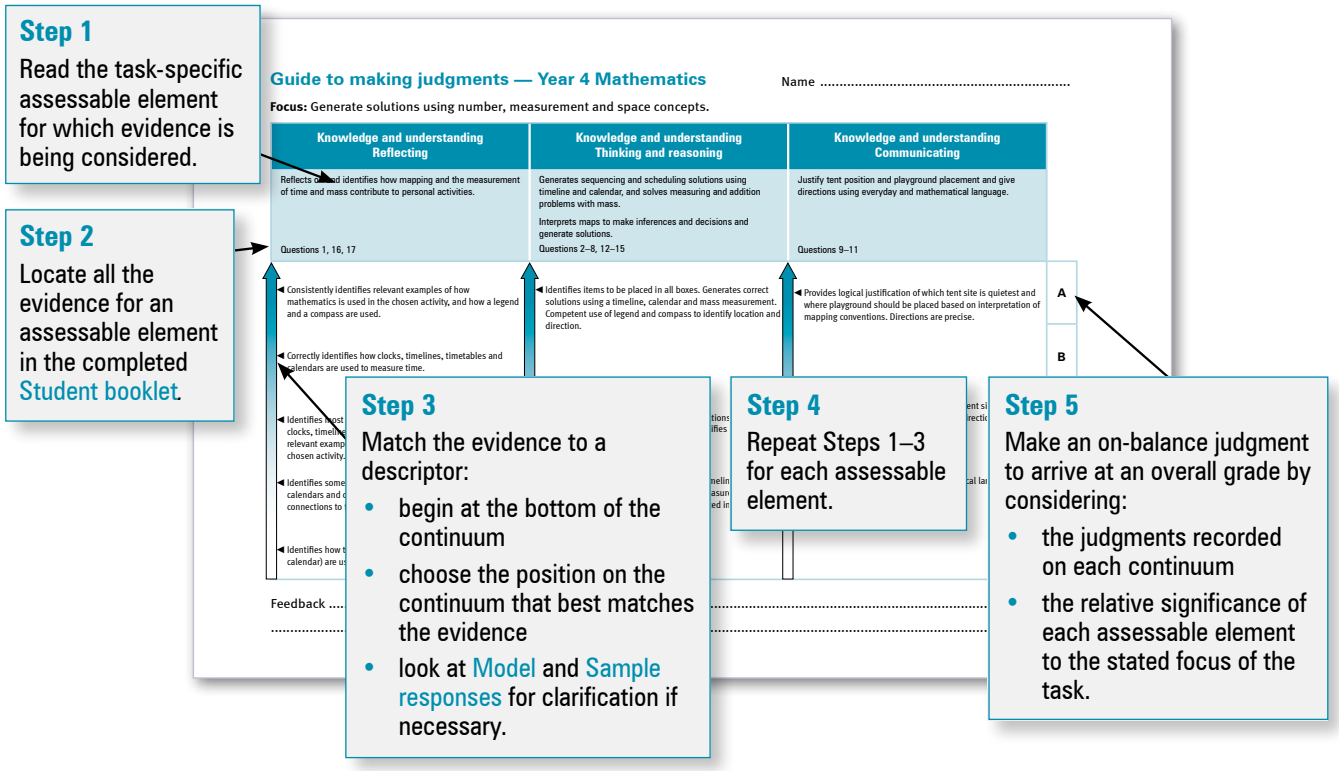


Diagram 2: Using the GTMJ — the judgment process



Using feedback

Assessment alone will not contribute significantly to improved learning — it is what teachers and students do with the information gathered that makes the difference. Providing quality and useful feedback is a crucial step in using assessment information to support future learning.

Assessment feedback goes beyond a simple mark or grade. Comments on the strengths of students' achievements, and on areas for improvement, provide quality feedback that can be used to inform future teaching and learning. Assessment feedback is most helpful if the specific elements of the knowledge and skills are identified and specific suggestions are provided.

The information gathered from the implementation, marking and moderation of QCATs should feed back into future planning of teaching and learning.

Feedback to help students learn

Quality feedback to a student:

- focuses on their achievement in relation to either the assessable elements with their task-specific descriptors or the Selected Essential Learnings (page 27) and their associated questions
- includes strengths of achievements
- identifies areas for improvement and strategies for future learning
- is communicated in student-friendly language
- is appropriate (e.g. in quantity and detail) to the student's age and their capacity to respond
- includes the use of Sample responses to provide examples of the quality of work corresponding to each standard.

Feedback to help teacher planning

Individual and collective student performance on QCATs, along with other school-based assessment, can be used to inform teaching and learning.

Additional resources

Using feedback to inform teaching and learning
www.qsa.qld.edu.au › Prep–Year 9 › QCATs (Years 4, 6 & 9)

Sample responses
QSA Assessment Bank ‹https://qcar.qsa.qld.edu.au/assessmentbank›

Resources

Selected Essential Learnings

The 2010 QCATs will assess what students know, understand and can do in relation to the following selection of Essential Learnings.

Mathematics Essential Learnings by the end of Year 5	
Assessable elements The valued features of the key learning area about which evidence of learning is collected and assessed.	**Ways of working** The processes students use to develop and demonstrate their knowledge and understanding. Students are able to:
Thinking and reasoning	• identify and use mental and written computations, estimations, representations and technologies to generate solutions and check for reasonableness of solutions • make statements, predictions, inferences and decisions based on mathematical interpretations
Communicating	• communicate and justify thinking and reasoning, using everyday and mathematical language, concrete materials, visual representations and technologies
Reflecting	• reflect on mathematics and identify the contribution of mathematics to personal activities.
	Knowledge and understanding The essential concepts, facts and procedures.
Knowledge and understanding	***Number*** **Whole numbers, simple and decimal fractions and a range of strategies are used to solve problems.** • Whole numbers (to thousands) and decimal fractions (to hundredths) can be calculated using addition and subtraction. ***Measurement*** **Length, area, volume, mass, time and angles can be estimated, measured and ordered, using standard and non-standard units of measure.** • Timelines, clocks, calendars and timetables are used to sequence, schedule and calculate timed events. • Standard units, including centimetre, metre, square centimetre, square metre, gram, kilogram, minute, degree, millilitre and litre, and a range of instruments are used to measure and order attributes of objects, including length, area, volume, mass, time, and angles. ***Space*** **Geometric features are used to group shapes and guide the accuracy of representation of 2D shapes and 3D objects. Mapping conventions apply to the structure and use of maps and plans.** • Mapping conventions, including symbols, scales, legends and alphanumeric grids, are used to represent and interpret movements and to identify locations on maps and plans. • Mapping conventions, including the four major compass points, are used to give direction and movement and can be linked to turns.

Source: www.qsa.qld.edu.au > Prep–Year 9 > Essential Learnings & Standards (Years 1–9)

Literacy and Numeracy Indicators

The Literacy and Numeracy Indicators are a resource that can be used when planning for teaching, learning, assessment and monitoring in all key learning areas.

This QCAT may provide opportunities to monitor and assess student progress in a selection of the Literacy and Numeracy Indicators, and may provide further focus for feedback for teachers and students to support improved learning.

Additional resources Literacy and Numeracy Indicators Information Statement
www.qsa.qld.edu.au › Prep–Year 9 › Literacy & Numeracy Indicators (P–Year 9)

Model response

This Model response gives one example of a very high quality response for each question. The Sample responses, available for download from the QSA Assessment Bank, demonstrate the quality of student responses for each standard, A to E.

Planning time when camping

Clocks, timetables, timelines and calendars are items we use when planning.

1. **Use your ruler to draw a line from each statement to the item you would most likely use.**

Hint: Items may be used more than once.

- a) To identify which days the school holidays start and finish, I will use a …
- b) To work out the time I will arrive at a nearby campground, I will use a …
- c) To plan my day, I will record my activities and times using a …
- d) To work out how many minutes until a shop opens, I will use a …
- e) To find out what time buses stop at the campground on Tuesday, I will use a …

- clock
- yearly calendar
- weekly timetable
- daily timeline

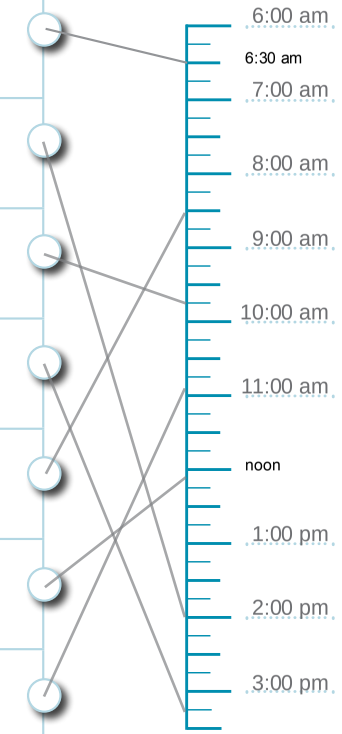
Use the information in the table below to help you complete Questions 2 and 3.

2. **Write the hours on the dotted lines next to the timeline. Include am or pm in your answer.**

3. **Rule a straight line from each activity's time to the timeline to show when the activity starts.**

The first one has been done for you.

Activity	Time	Daily timeline
Feed pelicans	6:30 am	
Treasure hunt	2:00 pm	
Bush art	9:45 am	
Canoeing	3:15 pm	
Beach Olympics	8:30 am	
Movie	12:10 pm	
Fishing	10:50 am	



Stop here: Wait for your teacher's directions.

Model response

Calendars help us to plan our time effectively.

December 2010

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
		1	2	3	4	5
6	7	8	9	10 Last day of school term	11	12
13	14	15	16	17	18	19
20	21	22	23 Take dog to Aunty Sue's	24 Morning drive to campground	25 Christmas Day	26 Beach BBQ
27 Beach swim	28	29 Fishing trip	30	31 Fancy dress party		

January 2011

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
31					1 Rainforest walk	2
3 Canoeing	4	5 Return home from camp	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24 Student-free day	25 Student-free day	26	27	28	29	30

School holidays Weekends

Use the calendars on page 6 to answer Questions 4, 5 and 6.

4. Complete the table below.

Activity	Day	Date
e.g. Last day of school term	Friday	10 December
a) Beach BBQ	Sunday	26 Dec
b) Fishing trip	Wednesday	29 Dec
c) Fancy dress party	Friday	31 Dec

5. Write these activities on the calendar in the correct place.

Activity	Date
a) Canoeing	3 January
b) Beach swim	27 December
c) Rainforest walk	1 January

6. a) How many nights will you be camping?

12

b) The dog is at Aunty Sue's house for 15 nights. What day and date will you pick up the dog from Aunty Sue's house?

Friday 7 January

c) The camping gear is cleaned and packed away on the weekend after returning home. What are the days and dates of this weekend?

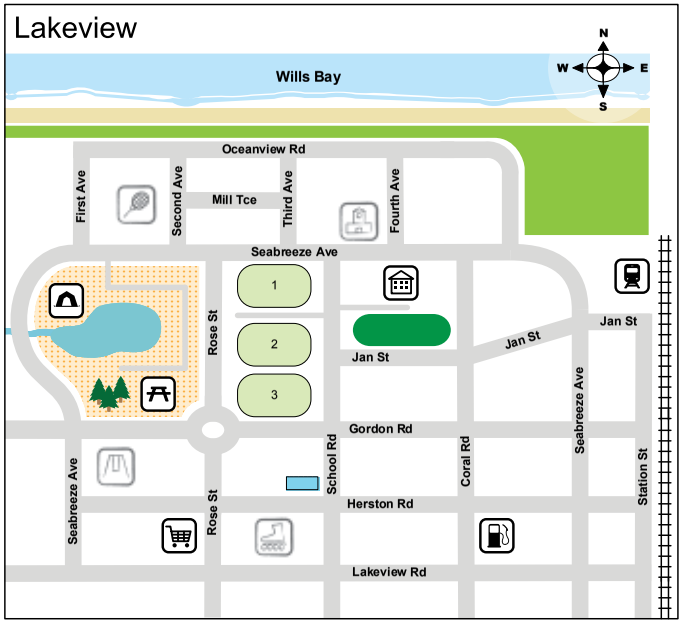
Saturday 8 Jan Sunday 9 Jan

Stop here: Wait for your teacher's directions.

Model response

Thinking about location

This map shows where Camp Lakeview is located.



7. Write north, south, east or west to make each statement true.

The school oval is south **of the school.**

The train station is east **of field 1.**

The shops are west **of the petrol station.**

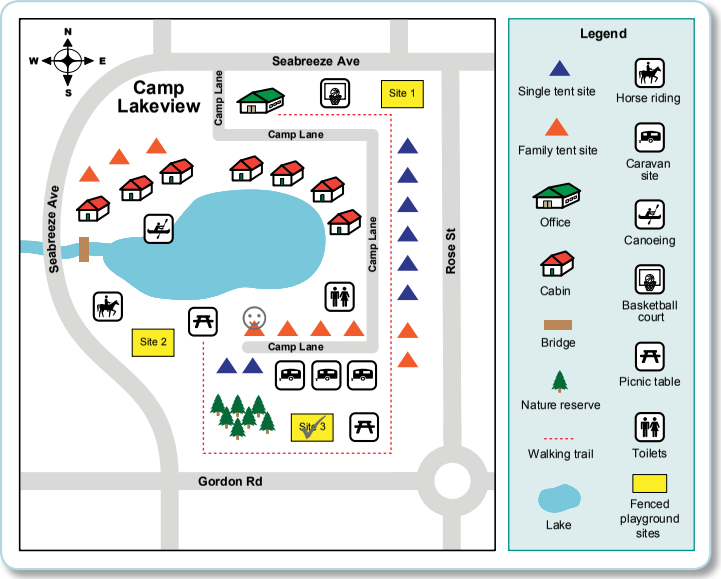
8. Draw each symbol in the correct location on the map.

a) 	The **tennis court** is between First Ave and Second Ave.
b) 	The **playground** is on Gordon Rd south of the nature reserve.
c) 	The **skate arena** is east of the shops between Rose St and School Rd.
d) 	The **hall** is north of the school on the west side of Fourth Ave.

Stop here: Wait for your teacher's directions.

Model response

Here is a map of Camp Lakeview.



A family would like a quiet tent site.

9. a) Place the symbol ☺ on the family tent site you think will be the quietest.

b) Why is your choice the quietest? Refer to the map to explain your reasons.

- Away from the main road, so less noise.
- The end site, so not surrounded by other campers who may be noisy.

A fenced playground will be built on one of three sites (▭) shown on the map.

10. a) Place a tick (✓) on the site you think is best.

b) Why is this site the best? Refer to the map to explain your reasons.

- Close to caravans and family tent sites so not too far to walk.
- Close to picnic table so parents can sit and watch.

The map of Camp Lakeview shows a walking trail (-----).

11. Write directions to follow the walking trail, starting at the office.

- Describe what you will see as you walk along the trail.
- Use compass directions.

- From the office, walk east toward Rose Street. Camp Lane will be on your right and the basketball court on your left.
- Turn right, then walk south between the tent sites and Camp Lane.
- Continue walking south until you pass the first caravan and then the park bench.
- Turn right, walk west past Site 3 and the nature reserve.
- Turn right, walk north toward the park bench near the lake.

Stop here: Wait for your teacher's directions.

Model response

Thinking about packing

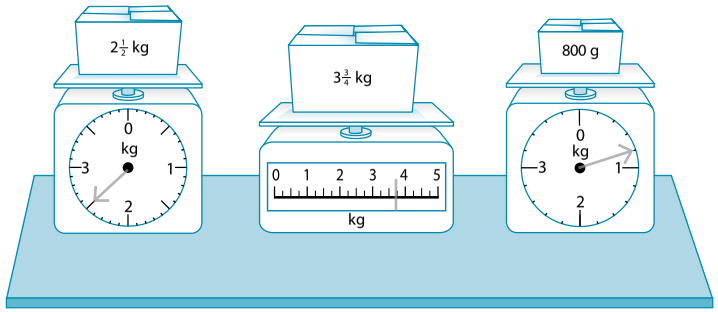
When we go camping we need to pack food, clothes and camping gear to take with us. We may need to find the mass of items to make sure boxes are not too heavy.

We use kitchen scales to measure the mass of small things.

Here are three different kitchen scales. They have different measurements on them.

12. Draw an arrow on each scale to show the mass shown on each box.

Hint: Draw your arrows accurately.



Stop here: Wait for your teacher's directions.

Practical activity

Practical activity

On a table in your classroom there are two containers and one kitchen scale.

The containers are labelled A and B.

13. Find the mass of container A using the kitchen scale.

The mass of container A is .....

14. Fill container B with sand so the mass is 1700 grams.

Show your teacher when you have finished.

As set by teacher. Suggested mass: 450 grams, but will depend on scale.

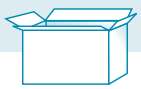
Teacher comment (Question 14)

Mike correctly measured 1700 grams

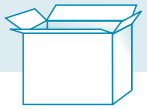
.....

Model response

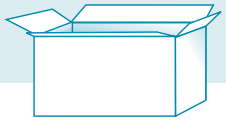
When you go camping you will help to pack things in boxes. Different boxes can hold different weights.



The mass of **Box A** must be exactly 15 kilograms.



The mass of **Box B** must be exactly 20 kilograms.



The mass of **Box C** must be exactly 25 kilograms.

Here are the items to be packed into the three boxes.

Clothing 5 kg

Personal items 2 kg

Bedding 7 kg

Cutlery 1 kg

Swimming gear 4 kg

Games 5 kg

Food 8 kg

First-aid kit 2 kg

Gas cylinders 13 kg

Cooking items 6 kg

Tent 7 kg

Which items would you put in **Box A**, **Box B** and **Box C**?

Place no more than **four items** in each box. You must pack all items.

Show all working

7 kg	5 kg	13 kg
2 kg	6 kg	+ 8 kg
+ 1 kg	+ 2 kg	4 kg
5 kg	7 kg	25 kg
15 kg	20 kg	

There are several possible correct answers.

15. Write the names of the items that should be placed in each box.

Box A 15 kg		Box B 20 kg		Box C 25 kg	
item	**mass**	**item**	**mass**	**item**	**mass**
Bedding	7	Clothing	5	Gas cylinders	13
Personal items	2	Cooking items	6	Food	8
Cutlery	1	First aid kit	2	Swimming gear	4
Games	5	Tent	7		

Stop here: Wait for your teacher's directions.

Model response

Reflecting on learning

16. Complete the following.

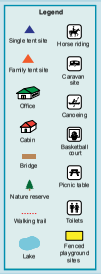
You can tick (✓) more than one box for each statement.

a) Calendars can be used to:

- ❑ tell the time during the day
- ☑ find school holidays
- ☑ find days and dates
- ☑ plan activities during the year
- ❑ find out when buses arrive on a day

b) A legend on a map is used to:

- ❑ find direction of travel
- ☑ find places on a map
- ❑ work out how far places are from each other
- ☑ save room on the map



c) The four compass points are used to:

- ☑ find direction
- ❑ find places on a map
- ❑ work out how far places are from each other

Stop here: Wait for your teacher's directions.

A new situation

You can use mathematics when planning many of your personal activities.
Choose one activity by ticking (✓) a box, then answer the questions below.

❑ a birthday party ❑ a sleepover ☑ a fishing trip

17. How can you use mathematics in your chosen activity?

a) I can use a timetable to:

find out when it is high tide.

b) I can use a clock to:

set the alarm to wake up in time to go fishing.

c) I can use a kitchen scale to:

measure the mass of the fish I catch.

d) I can use a map to:

go to the best fishing spot on the river.

Guide to making judgments — Year 4 Mathematics

Name .....

Focus: Generate solutions using number, measurement and space concepts.

Knowledge and understanding Reflecting	Knowledge and understanding Thinking and reasoning	Knowledge and understanding Communicating	
Reflects on and identifies how mapping and the measurement of time and mass contribute to personal activities. Questions 1, 16, 17	Generates sequencing and scheduling solutions using timeline and calendar, and solves measuring and addition problems with mass. Interprets maps to make inferences and decisions and generate solutions. Questions 2–8, 12–15	Justify tent position and playground placement and give directions using everyday and mathematical language. Questions 9–11	
◀ Consistently identifies relevant examples of how mathematics is used in the chosen activity, and how a legend and a compass are used.	◀ Identifies items to be placed in all boxes. Generates correct solutions using a timeline, calendar and mass measurement. Competent use of legend and compass to identify location and direction.	◀ Provides logical justification of which tent site is quietest and where playground should be placed based on interpretation of mapping conventions. Directions are precise.	**A**
◀ Correctly identifies how clocks, timelines, timetables and calendars are used to measure time.			**B**
◀ Identifies most uses for a legend and compass, and for clocks, timelines, timetables and calendars. Identifies two relevant examples of how mathematics can be used in the chosen activity.	◀ Generates mostly correct measurement solutions using a timeline, calendar and kitchen scales. Identifies items to be placed in two boxes.	◀ Provides reasonable justification of which tent site is quietest and where playground should be placed. Directions are coherent and include compass points.	**C**
◀ Identifies some uses for clocks, timelines, timetables, calendars and one use for a legend. Items described have connections to the chosen activity.	◀ Generates some correct solutions using a timeline, calendar and compass directions. Records correct measurement on one kitchen scale and identifies items to be placed in one box.	◀ Provides some directions using mathematical language.	**D**
◀ Identifies how two items (clock, timeline, timetable, calendar) are used to measure time.			**E**

Feedback .....

.....