

Mathematics

Year 1

Below Satisfactory

WORK SAMPLE PORTFOLIO

The 2012 portfolios are a resource to support teachers in planning and implementation of the Foundation to Year 10 Australian Curriculum in the learning area. Each portfolio comprises a collection of student work illustrating evidence of student learning in relation to the achievement standard. At every year level there are three portfolios illustrating satisfactory, above satisfactory and below satisfactory achievement in relation to the standard.

Each portfolio comprises a collection of different student work selected by state and territory nominees, and annotated and reviewed by classroom teachers and other curriculum experts. Each work sample in the portfolio varies in terms of how much time was available to complete the task and/or the degree of scaffolding provided by the teacher.

There is no pre-determined number of student work samples in a portfolio nor are they sequenced in any particular order. Together as a portfolio, the samples provide evidence of all aspects of the achievement standard unless otherwise specified.

As the Australian Curriculum is progressively implemented in schools, the portfolios will continue to be reviewed and enhanced in relation to their comprehensiveness in coverage of the achievement standard and their representation of the diversity of student work that can be used to highlight evidence of student learning.

THIS PORTFOLIO – Year 1 Mathematics

This portfolio comprises a number of work samples drawn from a range of assessment tasks, namely:

Sample 1	Numbers – Count to 100 - skip counting
Sample 2	Numbers – One half
Sample 3	Numbers – Coins
Sample 4	Geometry - Shapes
Sample 5	Statistics – Data and graphs - Our fruit today
Sample 6	Numbers – Addition and subtraction – I dropped my counters
Sample 7	Numbers – My number
Sample 8	Numbers – Growing patterns
Sample 9	Measurement - Capacity
Sample 10	Measurement – What time is it?
Sample 11	Geometry - Walking school bus
Sample 12	Statistics - Familiar events

This portfolio of student work shows an ability to draw and describe pictures using shapes (WS4), represent addition and subtraction (WS6) and skip count (WS1). The student models and compares representations of a half (WS2) and represents money in various ways (WS3). The student uses concrete objects to describe locations (WS12) and position and to continue a pattern (WS8). The student describes, collects and displays data (WS5 and WS11). The student uses informal units to order objects based on capacities (WS9), tells the time to the half hour (WS10) and partitions numbers using place value (WS7).

The following aspects of the achievement standard are not evident in this portfolio:

- explain time durations
- order objects based on lengths using informal units.

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Count to 100 - Skip counting

Relevant parts of the achievement standard

By the end of Year 1, students describe number sequences resulting from skip counting by 2s, 5s and 10s. They identify representations of one half. They recognise Australian coins according to their value. Students explain time durations. They describe two-dimensional shapes and three-dimensional objects. Students describe data displays.

Students count to and from 100 and locate numbers on a number line. They carry out simple additions and subtractions using counting strategies. They partition numbers using place value. They continue simple patterns involving numbers and objects. Students order objects based on lengths and capacities using informal units. They tell time to the half hour. They use the language of direction to move from place to place. Students classify outcomes of simple familiar events. They collect data by asking questions and draw simple data displays.

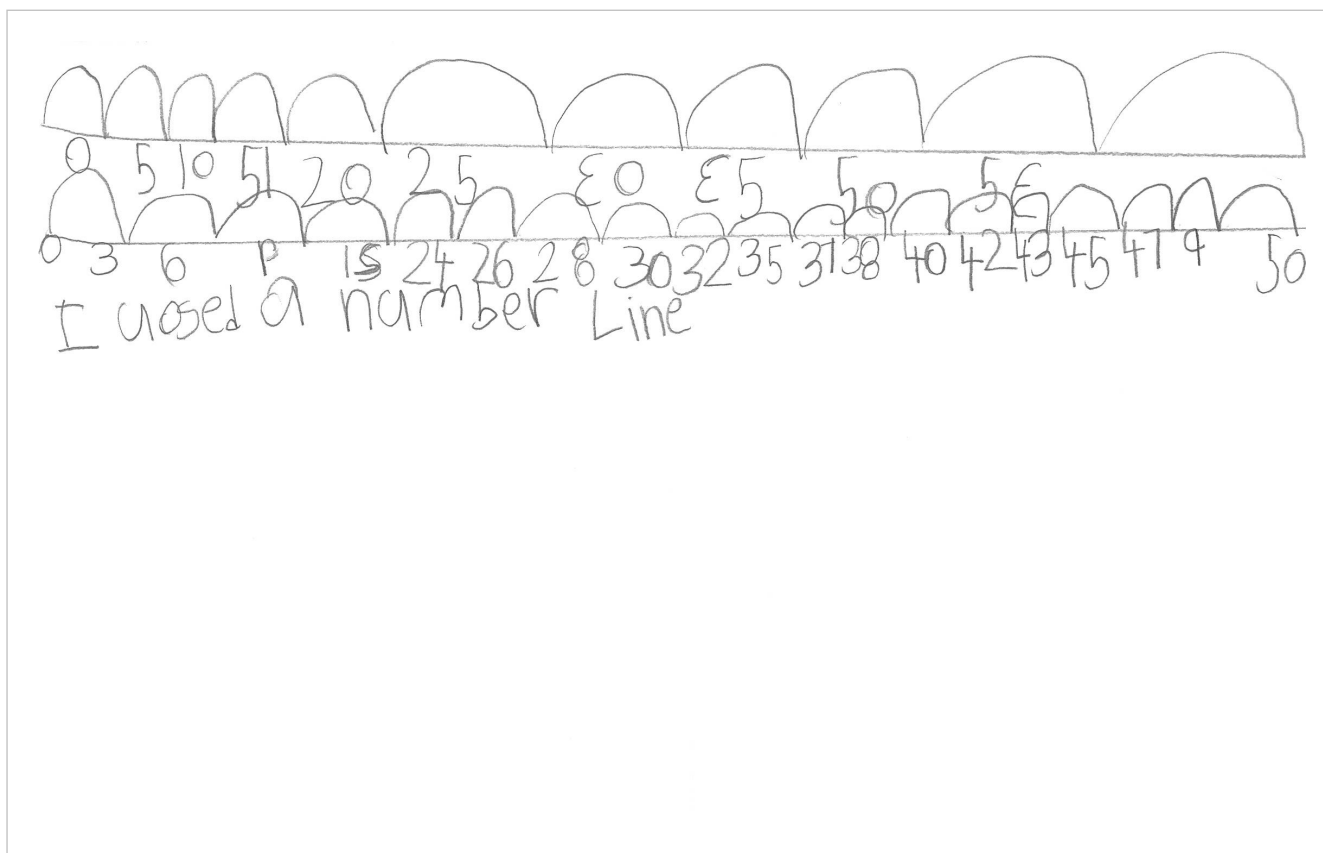
Summary of task:

Students were given a number line. They chose a number to start and then demonstrated how they would skip count to reach another number.

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Count to 100 - Skip counting



Annotations

Demonstrates some skip counting by 3's and then skip counting by 2's

Shows knowledge of sequence with some reversal of numerals

Acknowledgement

ACARA acknowledges the contribution of Australian teachers and education authorities in providing the tasks and work samples. The annotations are referenced to the Australian Curriculum achievement standards.

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Fractions and Decimals

Relevant parts of the achievement standard

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Summary of task:

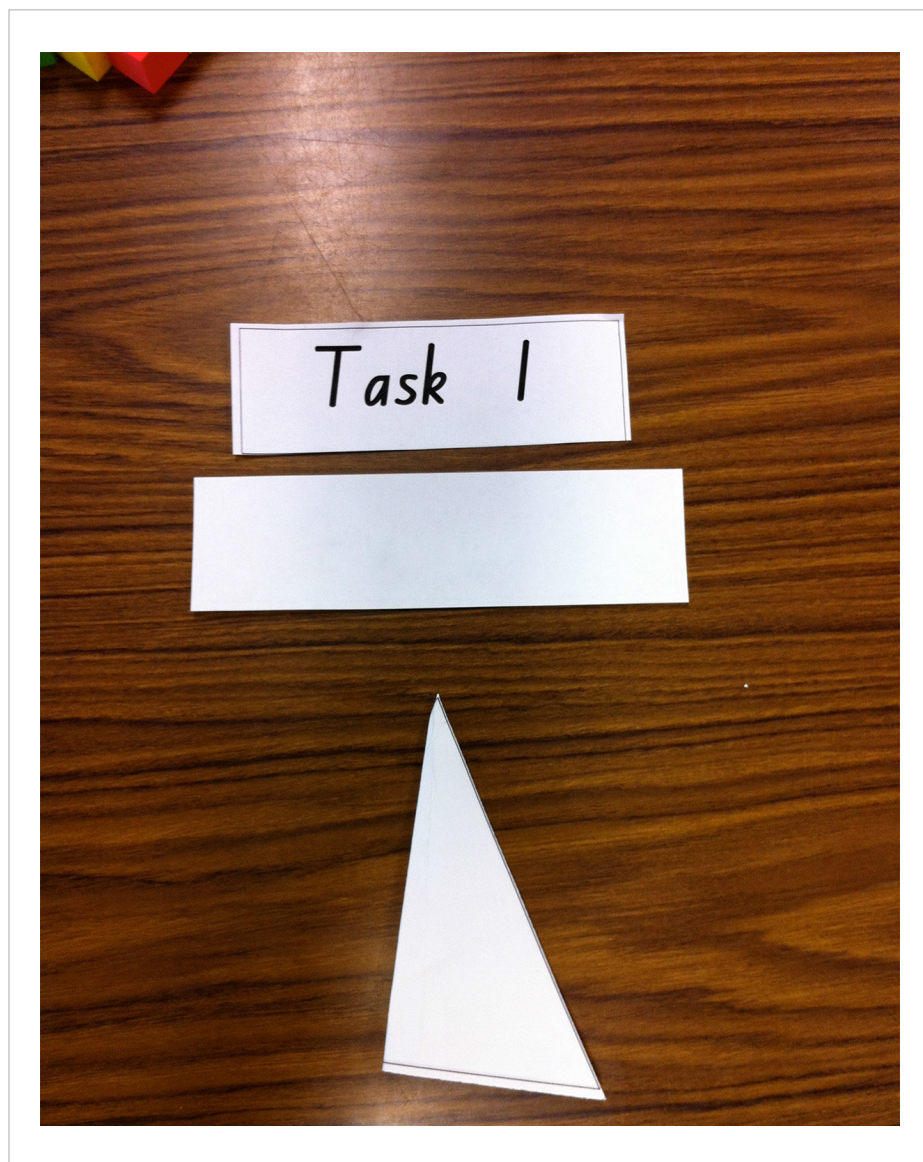
Students were given a number of different shapes and were asked to show how they would use the shape to demonstrate a half.

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Fractions and Decimals



Annotations

Folds a two-dimensional object to model half

Acknowledgement

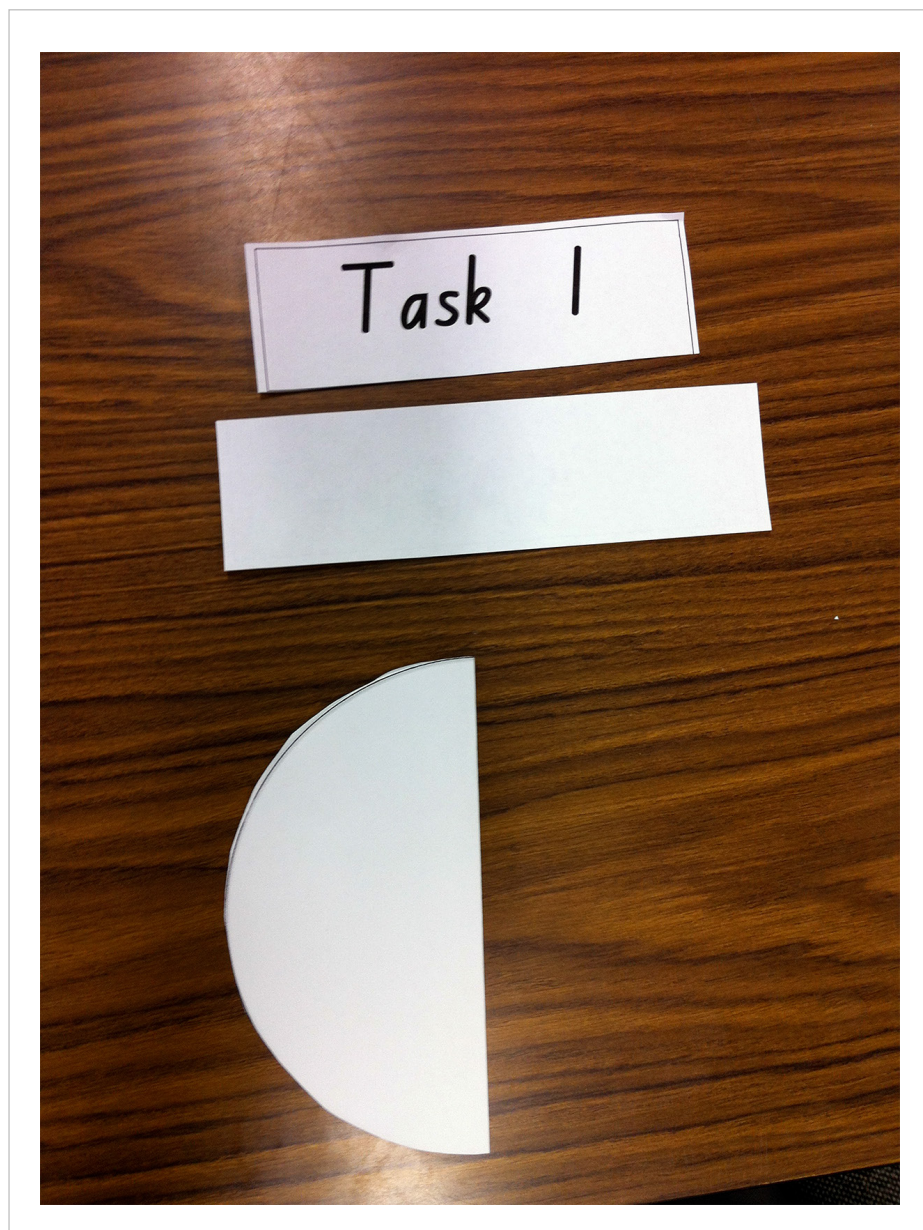
ACARA acknowledges the contribution of Australian teachers and education authorities in providing the tasks and work samples. The annotations are referenced to the Australian Curriculum achievement standards.

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Fractions and Decimals



Annotations

Folds a two-dimensional object to model half

Acknowledgement

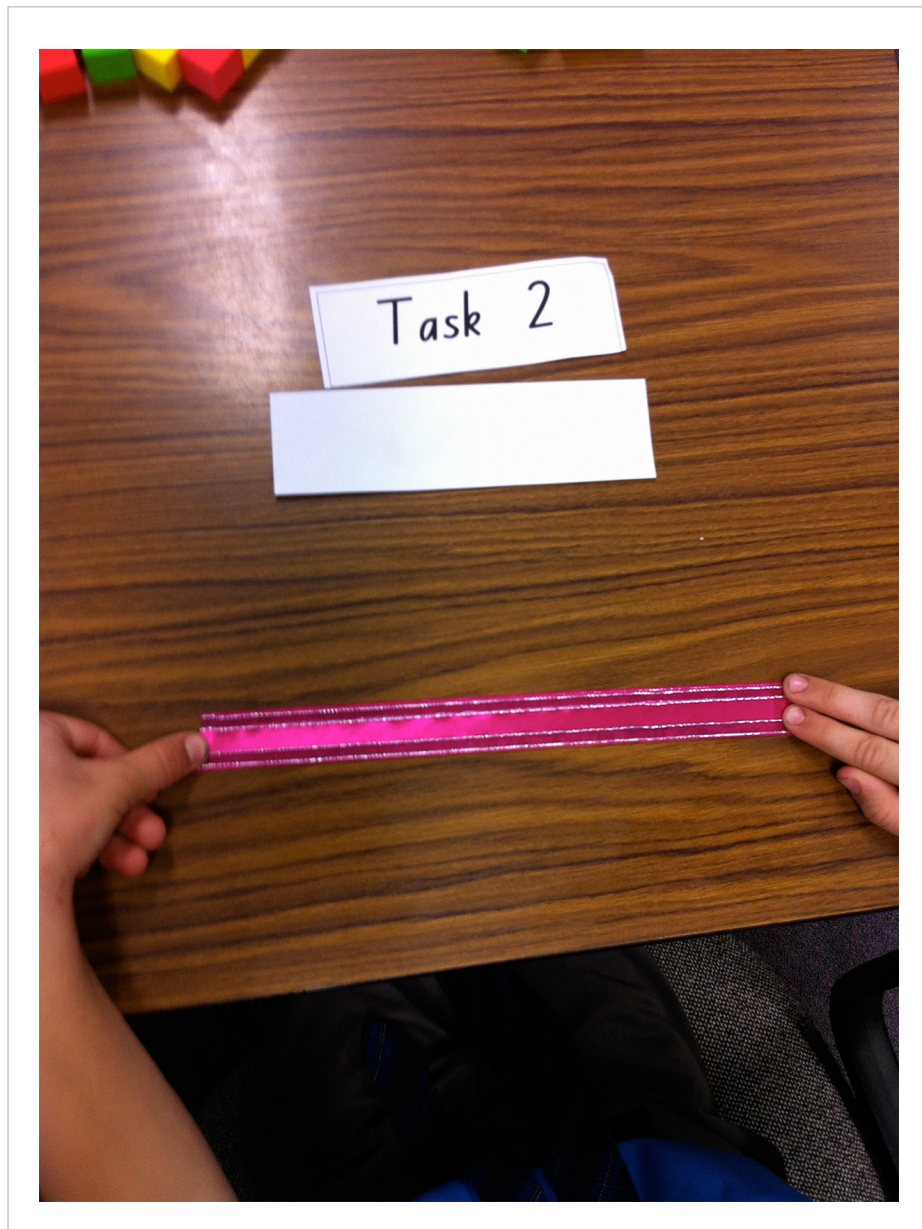
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Fractions and Decimals



Annotations

Compares fractional parts based on length

Compares objects directly by placing one on top of another and aligning ends

Acknowledgement

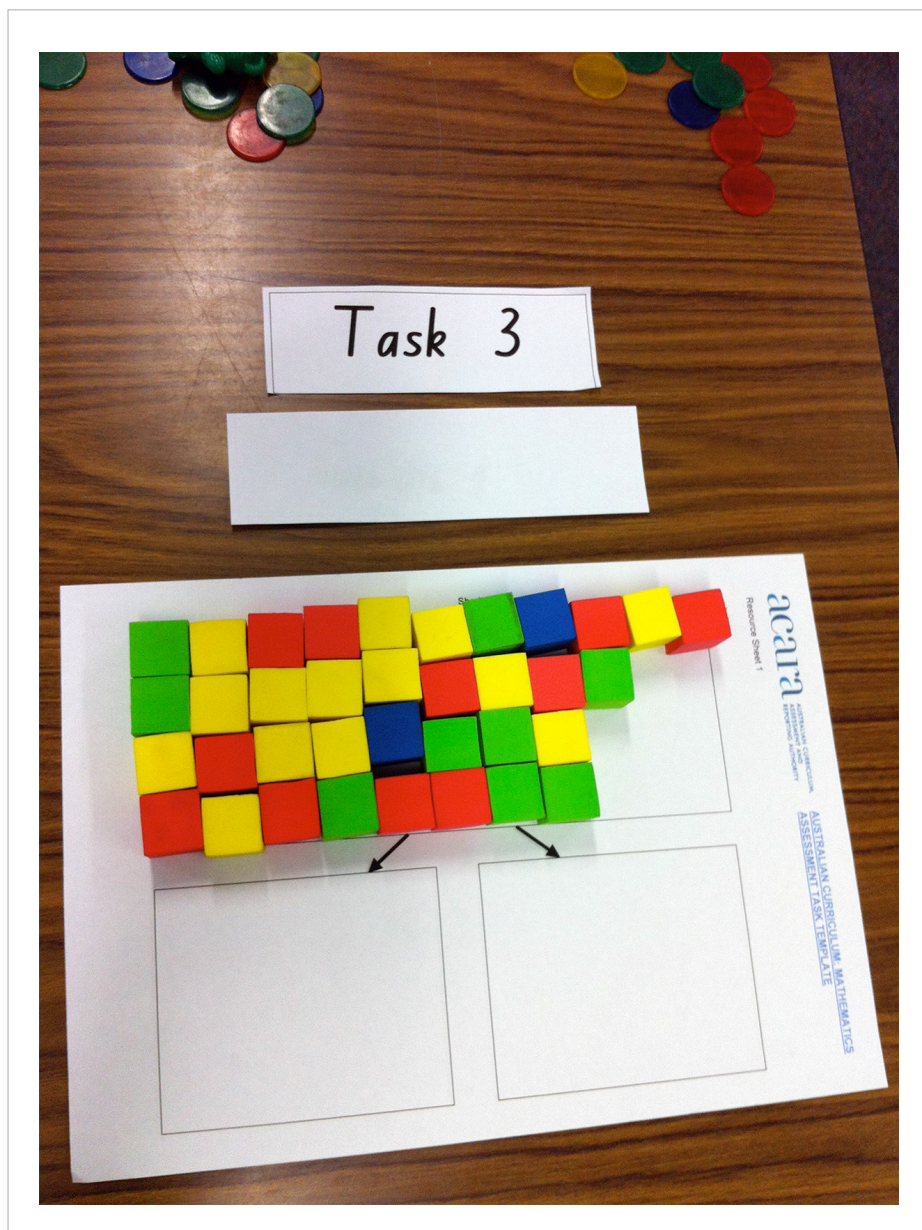
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Fractions and Decimals

Annotations



Acknowledgement

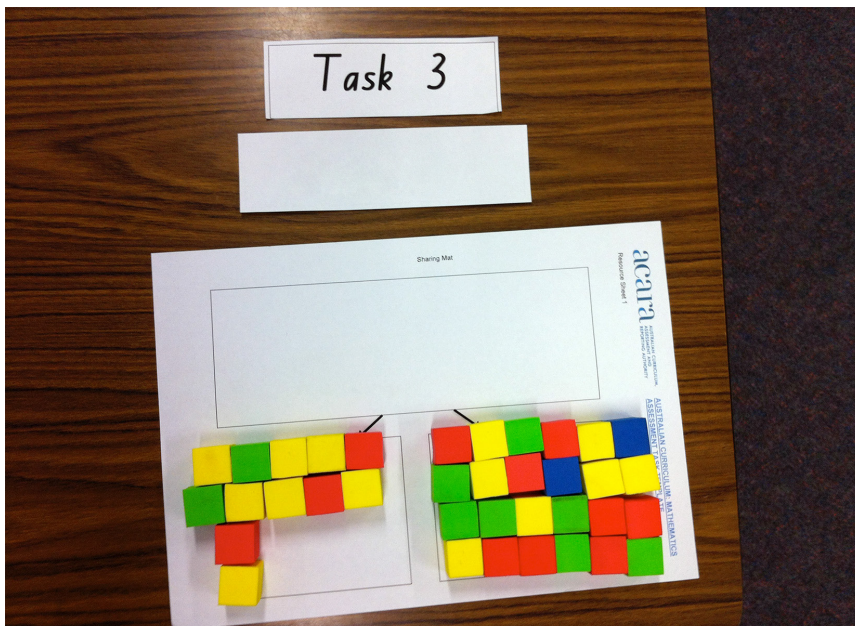
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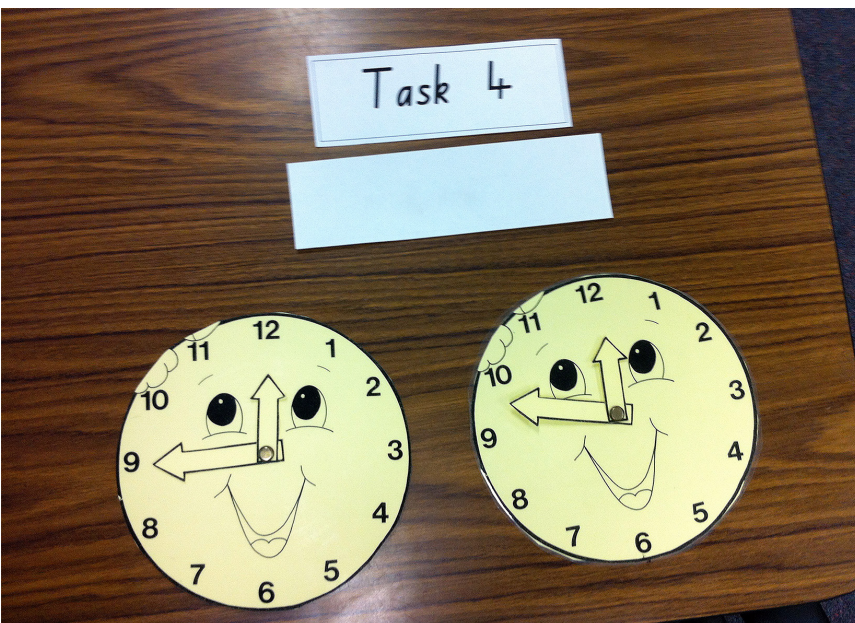
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Fractions and Decimals

Annotations



Shares a collection of objects into 2 groups of 12 and 24 but not into 2 equal portions or halves



Confuses the hour and minute hand when telling time on the hour on an analog clock

Unable to demonstrate half-hour on an analog clock

Annotations (Overview)

Acknowledgement

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Coins

Relevant parts of the achievement standard

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Summary of task:

Students were given a number of different Australian coins and coins of other currencies. Students discussed the features of the coins. They were asked to group the Australian coins and order them according to their value.

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Coins



Annotations

Recognises the size of the coin but not the value of the coin

Acknowledgement

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Shapes

Relevant parts of the achievement standard

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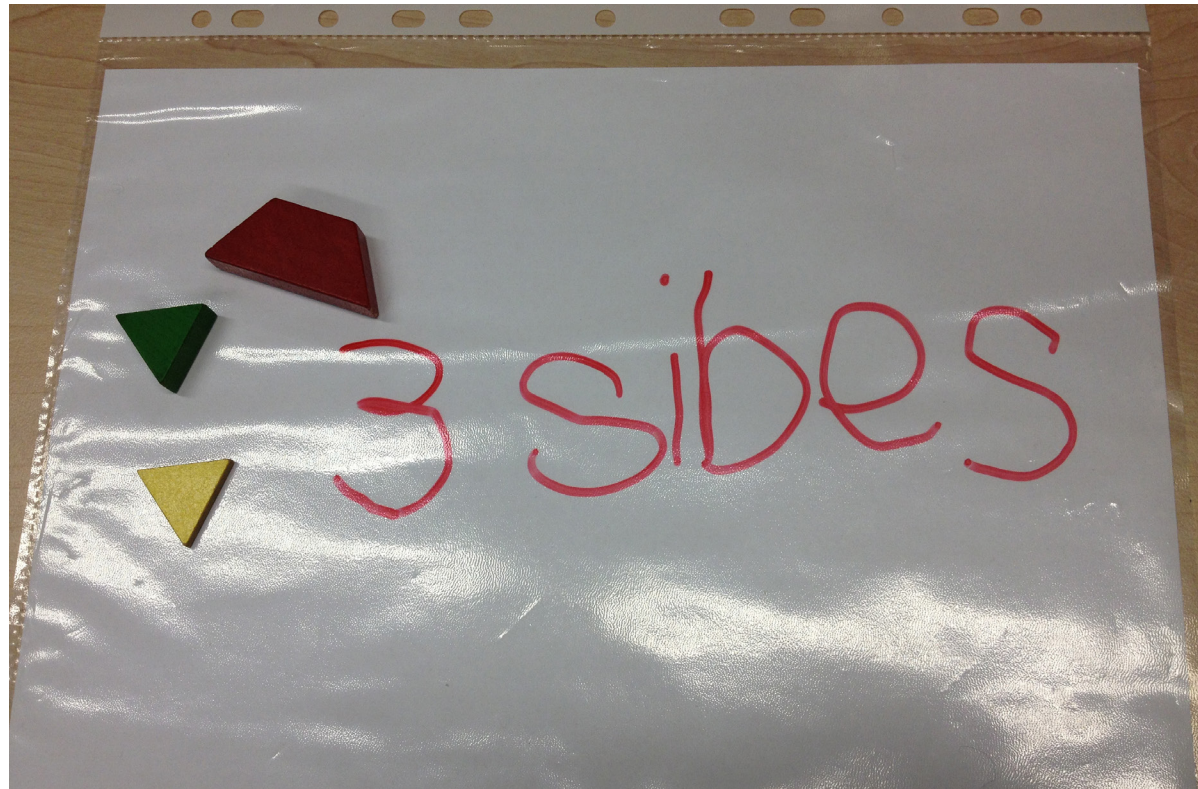
Summary of task:

Students were given a number of different shapes and were asked to show how they would group them together by different characteristics. They were asked to describe the different features of each shape.

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Shapes



Annotations

Attempts to group shapes with 3 sides.

Acknowledgement

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Our Fruit Today

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Summary of task:

Students discussed what fruit they had brought to school. They looked at different ways of showing how to describe all of the fruit and were asked to draw the displays.

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Our Fruit Today

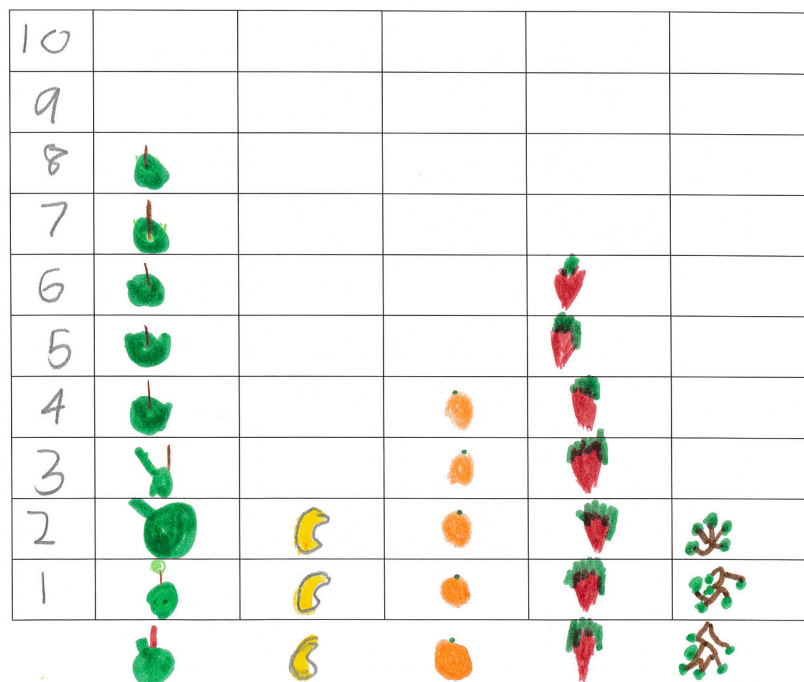
Data and Graphs

- Investigate which fruits were brought to school today by our class for recess. Show this using tally marks in the table below.

Fruit	Tally Marks	Total
		7
		2
		4
		6
		2

- Show your data on a picture graph. Make sure you include all the information you need.

Our Fruit Today



Annotations

Tally marks and totals match.

Represents the data with a picture graph but includes an error.

Acknowledgement

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I dropped my counters

Relevant parts of the achievement standard

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Summary of task:

Students were given a bundle of counters to hold in their hand. They were asked to drop some of the counters and then figure out how many were on the floor and how many were still in their hand. They described their results both numerically and with a picture. Some prompts were given to those students who were unable to use any strategies to describe the number of counters they had in mathematical terms.

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I dropped my counters



Annotations

Demonstrates limited correspondence between the pictures and the statements.

Acknowledgement

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My Number

Relevant parts of the achievement standard

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Summary of task:

Students were asked to choose a number and place it in the middle of their sheet. They then had to describe their number in different ways.

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My Number

Write the number in words

fote one

Make the number with 10s and 1s

tens ones

Before and After

Count on from this number

11 12 13 14 15 16 17 18 19 20

11 + 10

Annotations

Recognises, reads and writes two digit numbers.

Models numbers using concrete material.

Understands that two-digit numbers are comprised of tens and ones.

Acknowledgement

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Growing Patterns

Relevant parts of the achievement standard

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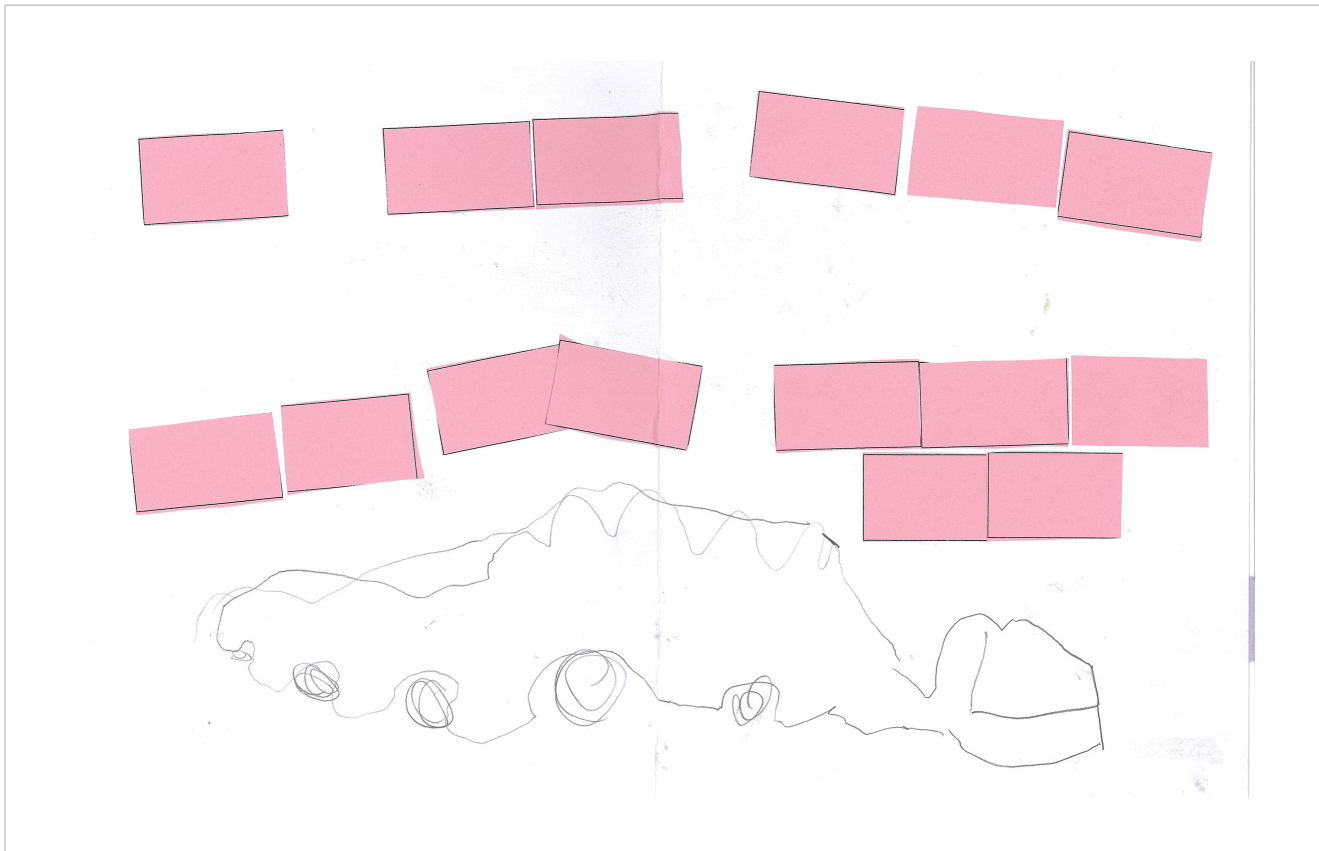
Summary of task:

Students were asked to use objects to continue a given pattern of a number sequence.

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Growing Patterns



Annotations

Creates a simple pattern that increases.

Create patterns with two-dimensional shapes.

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Capacity

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Summary of task:

Students had been comparing the capacity of different containers. They were asked to describe in words a comparison of the capacity of a number of different containers.

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Capacity



Annotations

Describes the amount of water in each container as 'little' and 'big' rather than using words describing comparison.

Acknowledgement

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Measurement - What time is it?

Relevant parts of the achievement standard

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Summary of task:

Students have been learning how to tell the time.

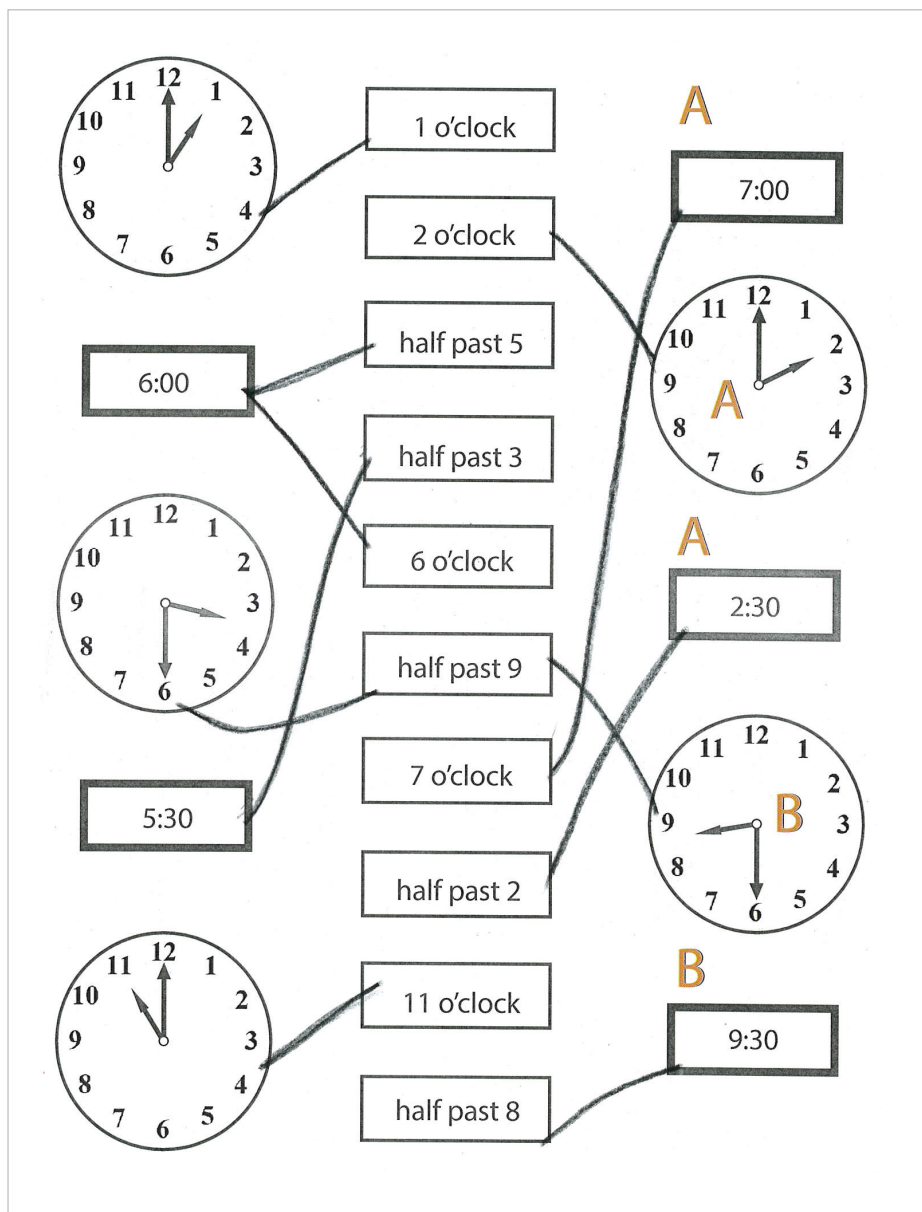
Students were presented with diagrams of several analogue and digital clock faces and were asked to match each clock face to a written description. Times given were on the hour or half past the hour.

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Measurement - What time is it?



Annotations

Demonstrates a limited understanding of the connection between analogue, digital and written times.

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Geometry - Walking School Bus

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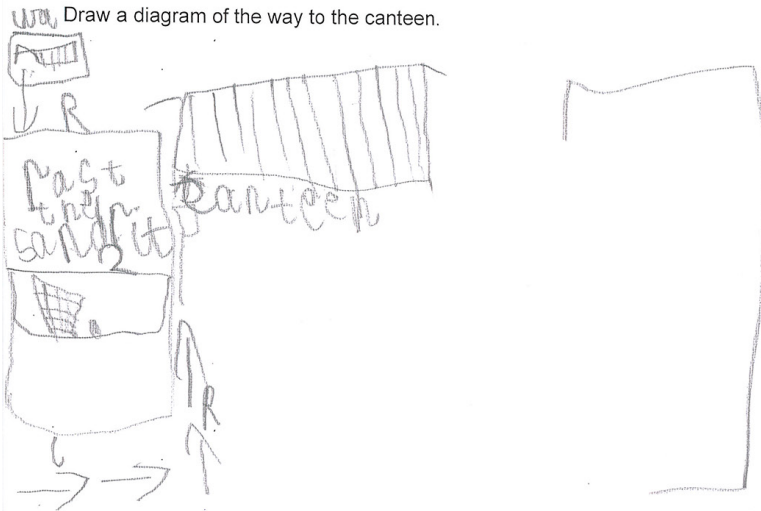
Students had been using the language of direction in their class discussions. They were asked to complete a worksheet linking the different ways of demonstrating pathways around the school.

Geometry - Walking School Bus

Annotations

Take the walking school bus on a tour to the canteen.

Draw a diagram of the way to the canteen.



Label you diagram to show which way the bus turned.

How many turns are there?

How far is it to the canteen?

3
1783 Sters

Interprets a two-dimensional representation.

Highlights direction of movement using arrows.

Identifies the number of turns following the route.

Identifies the distance travelled using an informal unit of measurement.

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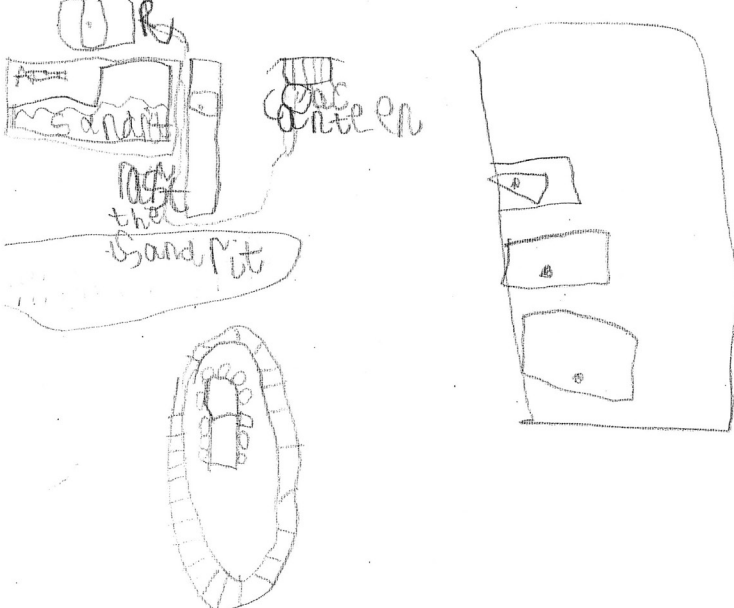
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Geometry - Walking School Bus

Can you show another way to get to the canteen?



Which is the better way to go? Why?

Standard with a sleeper.
Pastoroom is because
it has less steps.

Annotations

Draws a diagram including landmarks to a familiar location.

Justifies and gives reasons about which is the best route.

Acknowledgement

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Familiar Events

Relevant parts of the achievement standard

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Summary of task:

Students had been talking about familiar events in their day-to-day lives. They were asked to complete a worksheet linking familiar events and to display their information.

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Familiar Events

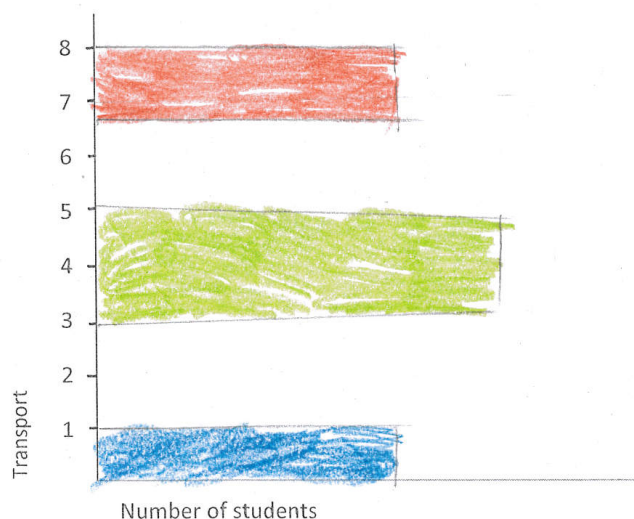
1. What time do you get up on school days? 6 o'clock
2. What time do you get up on weekends? 6 o'clock
3. What transport do you use to get to school? car
WALK CAR BUS BIKE
4. What time do you have dinner? 6 o'clock
5. What time do you go to bed? 10 o'clock

From the class results below, draw bar chart of the results. Describe how you compare with the class.

Transport	Number of students
WALK	8
CAR	6
BUS	5
BIKE	2

On the diagram colour the columns.

WALK – RED
CAR – BLUE
BUS – YELLOW
BIKE – GREEN



Annotations

Recognises times but not the context in which the times are relevant.

There is evidence that the student understands that 'walk' has a value of 8.

Demonstrates an understanding of what a display should look like. There is no connection between the displayed graph and the information in the table.

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