

Assessing students' work

The following descriptions indicate typical levels of performance. After each description is an example of some work at this level.

Little progress

- **Representing:** Selects some of the data given
- **Analysing:** Uses some of the data given for analysis of choice. E.g. counts only first choices or performs some calculations on the cost of the trip.
- **Interpreting and evaluating:** The result of analysis of some of the data may be used to select a destination.
- **Communicating and reflecting:** Describes the decision, or calculations made but this is incomplete and/or contains errors.

Sample response: *Chloe*

Chloe correctly counts the number of first choices for each venue.

<u>first choice</u>	<u>Second choice</u>
$Zoo = \frac{12}{30}$	$Zoo = \frac{\quad}{30}$
$Space Show = \frac{10}{30}$	$Space show = \frac{\quad}{30}$
$Prison museum = \frac{8}{30}$	$Prison MUSEUM = \frac{\quad}{30}$
Zoo most popular	

Questions for Chloe:

Chloe could be encouraged to improve her response by asking the following questions:

- *How might you take into account the second choices?
How would this affect your decision?*
- *What would be the entrance cost for 30 pupils to go to the zoo?*
- *How is the cost of the coach worked out?*
- *Can you calculate the total cost for 30 pupils to go to the zoo?*
- *How do you think the cost of going to the other places compares with the cost of going to the zoo?*

Some progress

- **Representing** Selects some of the data given
- **Analysing:** Uses some of the given data for analysis. Calculates the cost of a trip.
- **Interpreting and evaluating:** The result of analysis using some of the data is used to select a destination. Calculations on the cost of the trip are made though these may contain inaccuracies.
- **Communicating and reflecting:** Describes the decision made and cost of the trip but this may contain errors.

Sample response: Emily

Note: The work below is from the UK version of the task. Please read '£' as '\$' – the task is otherwise identical.

Emily correctly calculates the total cost of the entrance fee and travel for the three venues. She incorrectly calculates the cost per person. She selects the Space Science based on her calculations.

ZOO

$$\text{Entrance} = £2.50 \times 30 = £75$$

$$\text{miles} = 36 \text{ miles} \times £6 = £216$$

$$\underline{\hspace{1.5cm}} \\ £218.50 \text{ each}$$

Prison Museum

$$\text{Entrance} = £6 \times 30 = £180$$

$$\text{miles} = 30 \text{ miles} \times £6 = £180$$

$$\underline{\hspace{1.5cm}} \\ £186 \text{ each}$$

Space Science Show

$$\text{entrance} = £10 \times 30 = £300$$

$$\text{miles} = 10 \text{ miles} \times £6 = £60$$

$$\underline{\hspace{1.5cm}} \\ £70 \text{ each}$$

1. I think they should all go to the space science museum as it would be less pay.
2. Each person would have to pay £70 each to go to the space science show.

Questions for Emily:

Emily could be encouraged to improve her response by asking the following questions:

- Can you explain to me how you have worked out the cost of visiting the zoo?
- How many entrance tickets does this include?
- About how much per person will this be?
- How popular is the Space Science Show compared with the other places?

Substantial progress

- **Representing:** Produces summary data on choices presented
- **Analysing:** Takes both first and second choices into account, but may not weight them. Calculates cost per child accurately.
- **Interpreting and evaluating:** Interprets and evaluates the summary data and makes a reasoned decision on which trip to go on, though this may not take everything into account.
- **Communicating and reflecting:** Describes their decision making process and their methods but this may lack clarity.

Sample response: Robyn

Robyn counts the number of first and second choices for each venue, but does not attempt to weight first choice. She correctly calculates the cost of travel to each venue and chooses Space Science Show because travel is cheapest. Then she correctly calculates the cost per person.

1) Zoo - 12 - 5 30 pupils
 Space Show - 10 - 11 $6 \times 36 = 200$
 Prison museum - 8 - 14 $6 \times 30 =$ ~~Space Show~~ ^{Prison-M.}
 $6 \times 10 =$ Space Show.

 $6 \times 36 = 216$
 $6 \times 30 =$ ~~180~~ 180
 $6 \times 10 = 60$

So I think that they should go to the Space Science show because it is cheaper to go there 21 people said either in the 1 or second choice, therefore it is a good decision, however it is £10 to get in the show which is more expensive than the others.

2, each person needs £10 to get in.
 £200 pounds is paid by the school but it is £10 to get in for each person & £60 to get there so its $30 \times 10 = 300$
 $+ 60 = 360$

So children
 have to pay
 the extra £160
 $£160 \div 30 = (\text{children}) = 5.333$

Questions for Robyn:

Robyn could be encouraged to improve her response by asking the following questions:

- How does the total number of first and second choices for the Space Science Show compare with the choices for the Growlets Zoo and Prison Museum?
- You have added the number of first and second choices. You have not taken into account whether these were mainly first or mainly second choices. How reasonable is this approach?
- Could you have made a case for either of the other two destinations?

Task accomplished

- **Representing:** Produces summary data on first and second choices
- **Analysing:** Uses a weighting system based upon both first and second choices. Calculates cost per child accurately.
- **Interpreting and evaluating:** Interprets and evaluates the summary data and makes a reasoned decision on which trip to go on, taking everything into account.
- **Communicating and reflecting:** Clearly describes their decision making process and their methods.

Sample response: Ollly

Ollly counts the number of first and second choices for each venue and weights these accordingly. He correctly chooses the Space Science Show then goes on to correctly calculate the cost of travel and entry and the cost per person. His work is clear and easy to follow.

A Day Out

First choice 2 points } Tally
 Second choice 1 point }

200						29
200	 	 	 	 	 	30
Space Show						31

1) I made a tally and saw there first choice they got 2 points and there second choice they got 1 point and the result I got is the space show was most popular.

2) 30 people - £10 entrance per person

$$\begin{array}{r}
 30 \times 10 = 300 \\
 \underline{200} \\
 \text{£}100
 \end{array}$$

The school fund pays for the first 200.

Teachers 9
 Free!

$$\begin{array}{r}
 10 \text{ miles} \\
 \times \text{£}6 \text{ pound per mile} \\
 \hline
 \text{£}60
 \end{array}$$

£160

Pupils pay - 5.33 each

Questions for Ollly:

Ollly could be encouraged to improve and extend his response by asking the following questions:

- To what accuracy would it be reasonable to present the cost?
- Can you suggest how someone might make a case for one of the other destinations?
- You have given a reasonable weighting of 2 points for first choice and 1 point for second choice. Would your decision have been the same if you had given different weightings e.g. of 3 points and 2 points?