School survey task: Rubric

A class wanted to raise money for their school trip. They could raise money by selling raffle tickets for a Wii Game System.
Before they decide to have a raffle they wanted to estimate *how many students in the whole school would buy a ticket.* They decided to do a *survey* to find out first.

The school has 600 students in years 1–6 with 100 students in each year.

1. How many students would you survey?
   How would you choose them? Explain your answers.

2. Shannon got the names of all 600 students in the school and put them in a hat. Then she pulled out 60 names.
   What do you think of Shannon's survey? Explain your answer

3. Jake asked 10 children at an after-school meeting of the computer games club.
   What do you think of Jake's survey? Explain your answer.

4. Adam asked all of the 100 children in year 1.
   What do you think of Adam's survey? Explain your answer.

5. Raffi asked 60 of his friends. What do you think of Raffi's survey?
   Explain your answer

6. Claire set up a booth outside the tuckshop/canteen. Anyone who wanted to stop and fill out a survey could. She stopped collecting surveys when she got 60 kids to complete them. What do you think of Claire's survey? Explain your answer.

(See next page for Rubric)

The four coded levels of this rubric are similar for each part of the task and therefore examples are presented for each level for each part.

Code 1 Responses	Misinterpretation of the task or answers with no justification.
1. Suggested survey	Choose them all because the more raffle tickets they sell the more money they get.
2. Shannon, 60 from hat	Bad, too many people.
3. Jake, 10 from computer club	Good, so you could play it.
4. Adam, 100 in year 1	Bad, none might not buy any.
5. Raffi, 60 friends	Good, more money for them.
6. Claire, 60 volunteers	Good, first in best served.
Code 2 Responses	Suggestion of biased methods or positive appraisal of them.
1. Suggested survey	50 students that I meet. You would survey them all.
2. Shannon, 60 from hat	Bad, he could pick the wrong people.
3. Jake, 10 from computer club	Good, to give them a hint to buy one.
4. Adam, 100 in year 1	Good, because it is fair.
5. Raffi, 60 friends	Good, because they are his friends
6. Claire, 60 volunteers	Good, it is their own choice.
Code 3 Responses	Suggestions based on one or two reasonable factors but missing the importance of random selection; or partial recognition of good and bad aspects of proposed methods
1. Suggested survey	You would survey 60 children, 10 from each grade so you could see an average for each grade.
2. Shannon, 60 from hat	Good, there's a lot of people.
3. Jake, 10 from computer club	Bad, it's not broad enough. Not sure, because not many different people would go there.
4. Adam, 100 in year 1	Bad, too many people. Not sure, because that's only one class but he surveyed the most people.
5. Raffi, 60 friends	Good, you get a lot of answers. Not sure, it depends how many of his friends have different opinions.
6. Claire, 60 volunteers	Good, you just have enough. Not sure, because people who thought it was a bad idea wouldn't bother.
Code 4 Responses	Suggestions include a random component and recognition of bias in other proposals.
1. Suggested survey	Put all 600 student names in a hat and draw out 60 names. 10 from each grade, 5 boys and 5 girls picked at random.
2. Shannon, 60 from hat	Good, because it's a good random way to survey.
3. Jake, 10 from computer club	Bad, not enough people and selectively picked.
4. Adam, 100 in year 1	Bad, not enough different age groups.
5. Raffi, 60 friends	Bad, they would probably say the same thing.
6. Claire, 60 volunteers	Bad, some kids might go twice.

The five different suggestions in questions 2–6 of the School Survey Task are not equally difficult for students to analyse. Across the middle school years, students are likely to find Jake's suggestion of 10 children at a computer club meeting the easiest to dismiss. This is because there are two difficulties with his idea: the sample size is too small and the group is likely to be biased. The next easiest to criticise is Adam's suggestion of choosing all year 1 children. The most difficult suggestion for students is Claire's idea of using volunteers, with few students likely to see the difficulty that those volunteering are likely to have strong opinions on the topic of the survey. Teachers need to be aware of the subtleties associated with students' conceptions of fairness when considering Claire's alternative.