Scooter or skateboard

NEW July 2024

Year level: 5

Statistical focus: summary investigations

Approximate number of lessons: 1 - 2

Learning goals

- Explore summary and comparison situations with discrete numerical data
- Plan how to collect primary data
- Write descriptive statements to answer the investigative question

Resources

- Tools for recording

Activity

❓ PROBLEM:

Discuss:
- Do more children scooter or skate to school (in our class)?
- Are there any other travel methods that need to be considered? For example, bike, walk, walking school buses, car, other?
- What does other include?

As a class decide what we will find out about, e.g., do we want to find out about all travel modes, or just if they scooter, skateboard or other. As a class, decide to look at all travel modes.

Pose an investigative question to explore: **How do the students in our class travel to school?**

As a class, make predictions of outcomes and what they expect to find out. Record these predictions to discuss at the end of the lesson.

Discuss:
- Are there any other variables that need to be considered, for example the time of year, weather, how long it takes to travel to school, where they live, day of the week, boys/girls?
- Are there any ethical issues for displaying the data?

Agree to explore a second investigative question: **How long does it take for students in our class to get to school?**

📋PLAN:

Decide how the data will be collected, discussing options for collecting data.

What survey questions will we need to ask to answer our investigative questions.

For the investigative question: **How do the students in our class travel to school?**
- What survey question would we ask to collect data to answer this investigative question?
- Look at the CensusAtSchool **questionnaire** (this is the 2023 questionnaire Q 14, Figure 1) and decide if they will use the survey question from the CensusAtSchool questionnaire.

For the investigative question: **How long does it take for students in our class to get to school?**
- What survey question would we ask to collect data to answer this investigative question?
- Look at the CensusAtSchool **questionnaire** (this is the 2023 questionnaire Q 15, Figure 1) and decide if they will use the survey question from the CensusAtSchool questionnaire.
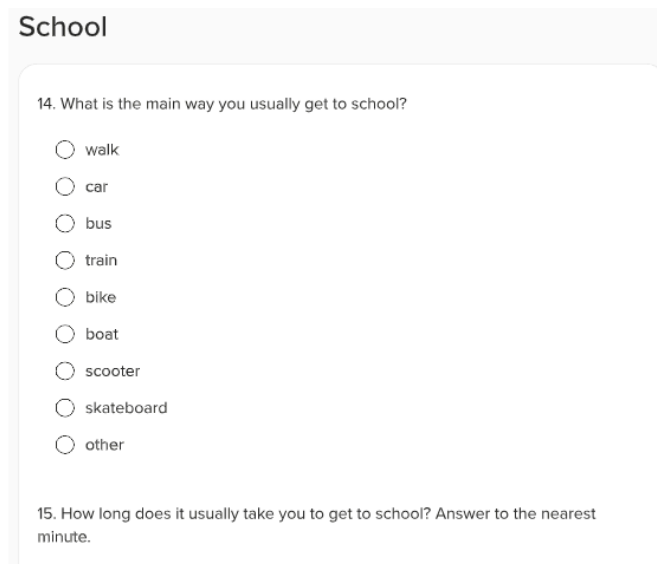

Figure 1: Survey questions 14 & 15 2023 CensusAtSchool questionnaire

How will we collect/record the data?

- E.g., Students could be asked orally as a class, or they could complete their own data card answering the two survey questions.

⫴DATA:

Collect the data from the class. This could be using a spreadsheet, a google form, or a data card.

Each student answers the two survey questions.

Data collection notes

The data needs to be available for analysis.

This could be using statistical software or physical data cards.

Statistical software

Collecting the data using a spreadsheet or a google form. This allows the data to be in a spreadsheet, which can then be copied into statistical software, e.g., **CODAP**.

See **Y5 Exploring our World 3 - Using CODAP** for a lesson to introduce using CODAP.

Using data cards

Students can fill in their **data cards**, these can be copied overnight so each group has a copy.

Alternatively, students fill in their data card, and then they make X copies, with X being the number of groups you want to work with the data cards. The data cards are then shared amongst the groups in the class. For example, there might be 5-6 groups within the class that work with the data cards.

ılıANALYSIS:

Discuss: What is the best way to display the collected data?
A tally chart, frequency table, bar graph, dot plot? How would we display mode of transport, how would we display time taken to get to school?

Students can write descriptive statements about the data visualisations. What do they notice?

☀CONCLUSION:

Answer the investigative questions. Choose the best statements from their analysis to support answering the investigative questions.

Refer back to initial predictions - did the data match their original predictions? What did they notice or surprise them about the data collected?

Extending the activity

Discuss other possible variables for data collection - day, weather, time of year, where they live, how close they are to school, attend before/after school care. Does the mode of transport impact on the time taken to get to school?

Make comparisons of data at different times of the year, for example Term 1 or Term 3.
Compare data to other Year 5 classes in the school and or other year levels. Will the data look different for junior students? How can we share our findings with others and what recommendations could we make?

How can we link our findings to other learning areas, for example Enviro/Sustainability, Writing.

Data Detective Poster

Data cards - copy enough for each student to have 5-6 data cards each - one page holds 28 data cards

Travel mode		Travel mode		Travel mode		Travel mode	
Time to school		Time to school		Time to school		Time to school	
Travel mode		Travel mode		Travel mode		Travel mode	
Time to school		Time to school		Time to school		Time to school	
Travel mode		Travel mode		Travel mode		Travel mode	
Time to school		Time to school		Time to school		Time to school	
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