Primary educator lesson plan

Mathematics: Journeys to school

Lesson overview

The class will use simple charts and graphs to record and analyse data about journeys.

Aim

To collate, present and interpret data using different charts linked to a local and national issue.

Preparation

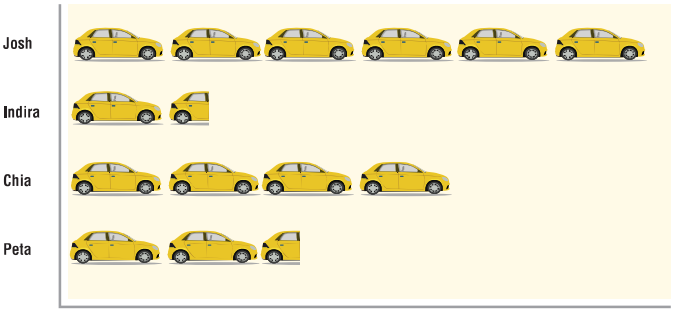
Print out the pictogram, bar chart and pie chart worksheets on pages 2–4 with enough copies for each child to have a worksheet. Children can also work in small groups.

Lesson outline

1. Pictogram chart

Provide a simple chart like the one given here and on page 2 to show the number of days students were driven to school in a month.

One car on the chart represents one return journey to and from school. Half a car means the student made a single journey either to or from school.

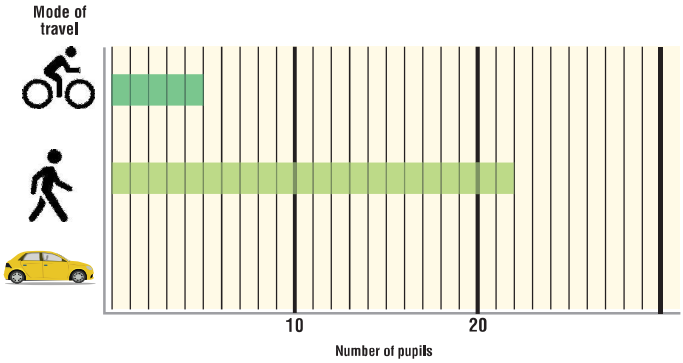


Provide the following questions:

a. Which child was driven to school the most? (Answer: Josh)
b. How many return journeys did Peta make? (Answer: two and a half)
c. How many more times did Josh travel to school by car than Indira? (Answer: four)
d. How many return journeys did the children make by car in total? (Answer: 14)

2. Bar chart

The bar chart shows how the children in class 4W travelled to school during Road Safety Week.



Provide the following questions:

a. How many children walked to school? (Answer: 22)
b. How many more children walked to school than cycled? (Answer: 17)
c. If 30 children were in the class how many were driven to school? Draw and colour a column on the bar graph to show your answer (Answer: 3)

3. Pie chart

The pie chart shows how 120 students at Greenfields School travelled to school yesterday.

Provide the following questions:

a. How many students took the bus to school? (Answer: 40)
b. What fraction of students weren't driven to school? (Answer: 5/6)
c. What percentage of students walked to school? (Answer: 50)

Extension

Students can collate and present their own data by conducting a survey of how many in the class travelled using which modes of transport that day (e.g. walked, cycled, car, school bus, public bus/train). Look at averages (mean and mode) and ask students to calculate both for the class results. See if they can come up with their own data analysis questions.

Differentiation

Further questions can be incorporated for the addition and subtraction of fractions and percentages linked to the interpretation of the two charts.

Discussion

Discuss with the class how this data can be useful for road safety education, for example if lots of students are driven to school, that means lots of traffic at the school gate and increased risk for people walking and cycling. How could you encourage parents/carers to walk/cycle their children rather than drive to school (if it's safe)? Is there anything that could/should be changed on local roads to help more people walk and cycle.

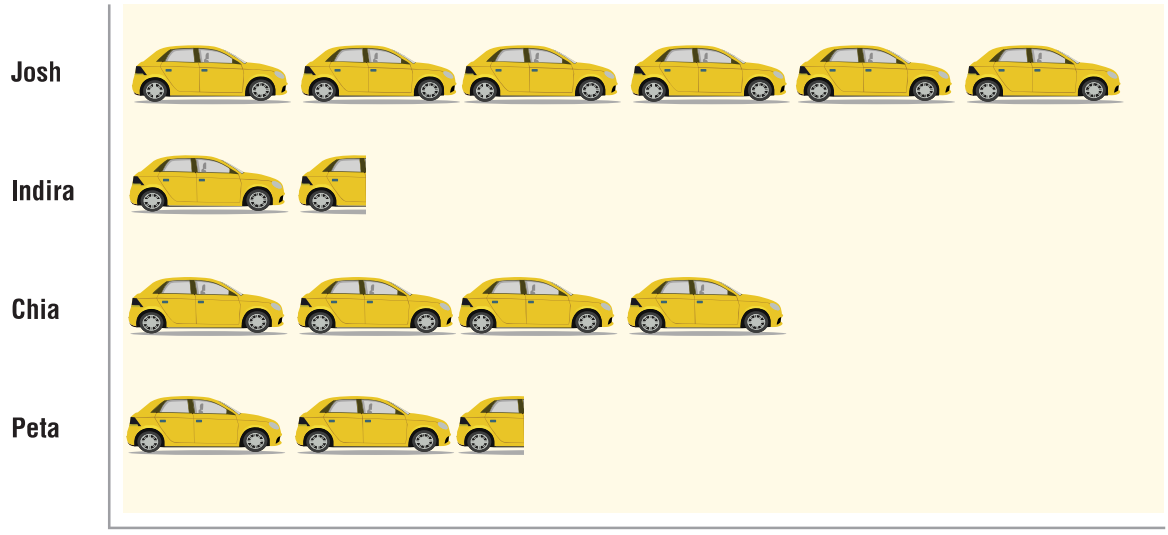
SUPPORT MATERIALS

Mathematics: Journeys to school

1. Pictogram chart

The chart shown below shows the number of days students were driven to school in a month.

One car on the chart represents one return journey to and from school. Half a car means the student made a single journey either to or from school.



Key:

 = one return journey to school

 = one single journey to or from school only

Answer the following questions:

a. Which child was driven to school the most?

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b. How many return journeys did Peta make?

.....

c. How many more times did Josh travel to school by car than Indira?

.....

d. How many return journeys did the children make by car in total?

.....

SUPPORT MATERIALS

Mathematics: Journeys to school

2. Bar chart

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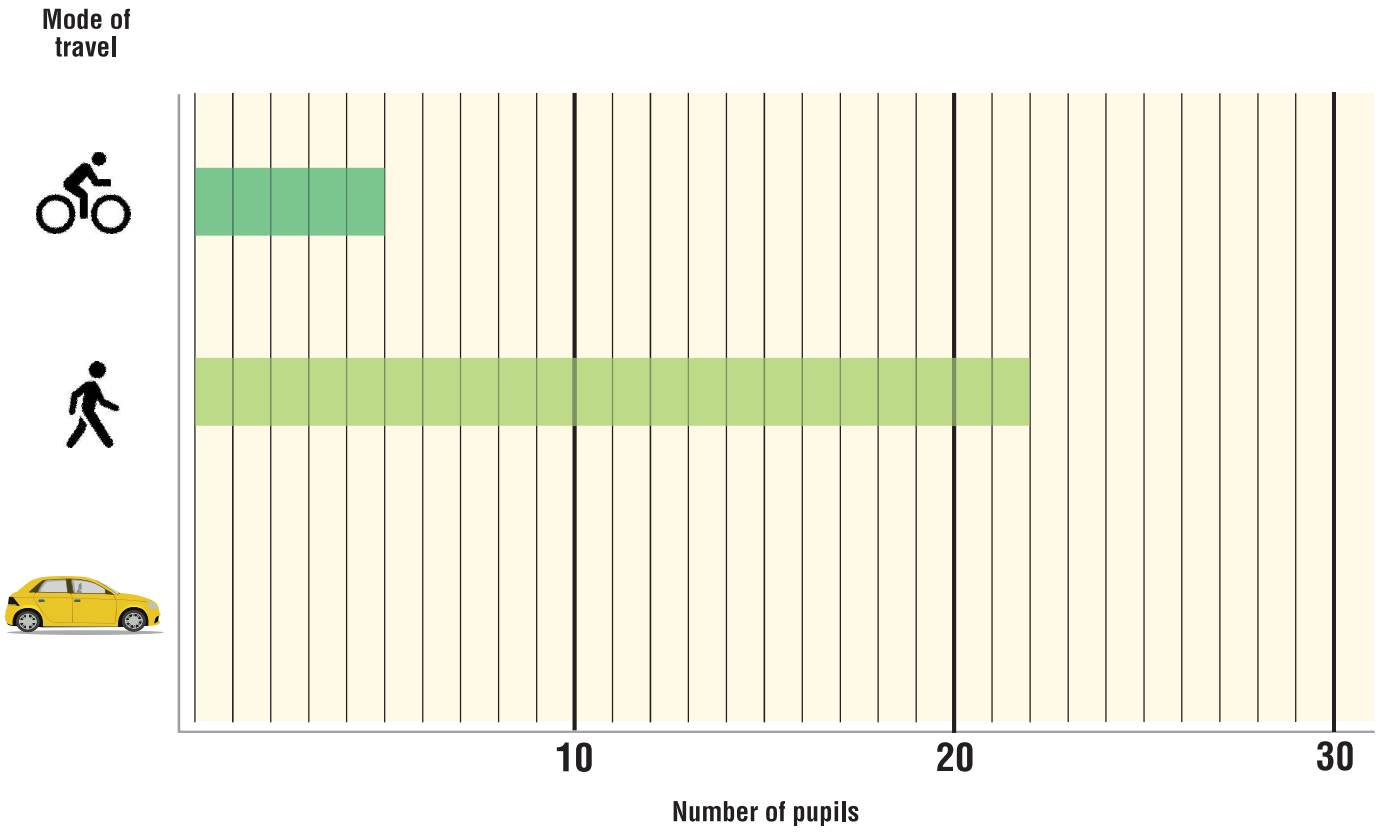

Answer the following questions:

a. How many children walked to school?

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b. How many more children walked to school than cycled?

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c. If 30 children were in the class how many were driven to school? Draw and colour a column on the bar graph to show your answer

SUPPORT MATERIALS

Mathematics: Journeys to school

3. Pie chart

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Answer the following questions:

a. How many students took the bus to school?

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b. What fraction of students weren't driven to school?

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c. What percentage of students walked to school?

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