

5+
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3 ÷ 2

KS2 Maths.
Statistics, Data, Mathematical Operations

Cycling Detectives

Data collection, use of averages, percentages, interpreting, presenting and presenting data using graphical methods

READY CURRICULUM LINKS & SESSION OUTCOMES

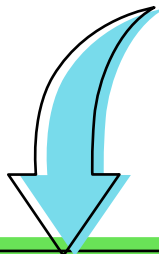
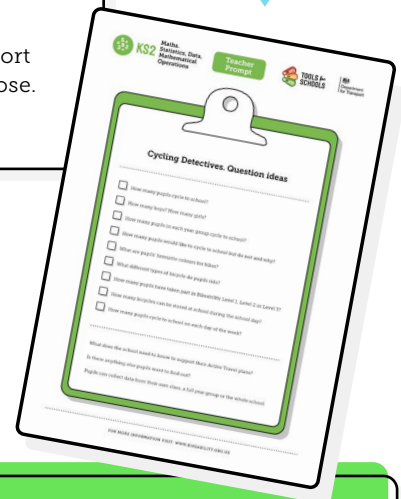
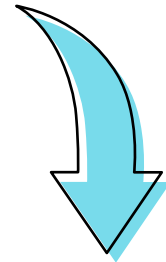
Maths: Statistics: interpret, present and or construct data using appropriate graphical methods, including bar charts, pictograms, tables and/or time graphs.

Averages, percentages, mathematical operations

This learning resource supports pupils to:

- Plan and design appropriate data collection methods

- Interpret and present data
- Understand the cycling habits of the school population and contribute to school Active Travel Plans where appropriate
- There is a Pupil Resource with a school example provided to support this learning resource if you choose.



SET WHAT YOU WILL NEED

- **Cycling Detectives. Question ideas. Teacher prompt.**

PEDAL WHAT TO DO

- Introduce the learning activity and agree the information about cycling habits in the school community to be collected.
 - Discuss and plan data collection methods (questionnaire/hands up/face to face interviews).
 - Pupils can use the data collected to meet learning objectives i.e. calculation of averages, distances, conversions, percentages, use of addition, subtraction, division and multiplication.
 - Pupils discuss and agree effective data presentation methods i.e. line graphs, bar charts, pictograms and pie charts.
 - Pupils share data with key staff in school such as Active Travel coordinator, Eco Council, Head Teacher etc).
- You can use the school example provided, instead of collecting data from your own school if you choose.**

TO MAKE THIS LEARNING ACTIVE



Encourage pupils to **stand and draw** the mountain/landscape in the air using their Magic 'Bicycle-Pencil with a fine pincer grip, creating **large exaggerated movements**, stretching high and wide and moving from side to side where needed.

DID YOU KNOW?



There are companies who create 'eco-friendly' bike oil, it is biodegradable and non-toxic to avoid water pollution, free from palm oils and comes in recyclable bottles. Good job!



KS2

**Maths.
Statistics, Data,
Mathematical
Operations**

**Teacher
Prompt**



**TOOLS for
SCHOOLS**



Department
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Cycling Detectives. Question ideas

-
- How many pupils are there in total in school?
 - How many pupils cycle to school?
 - How many boys? How many girls?
 - How many pupils in each year group cycle to school?
 - How many pupils would like to cycle to school but do not and why?
 - What are pupils' favourite colours for bikes?
 - How many pupils have taken part in Bikeability Level 1, Level 2 or Level 3?
 - How many bicycles can be stored at school during the school day?
 - How many pupils cycle to school on each day of the week?
-

What does the school need to know to support their Active Travel plans?

Is there anything else pupils want to find out?

Pupils can collect data from their own class, a full year group or the whole school.



KS2

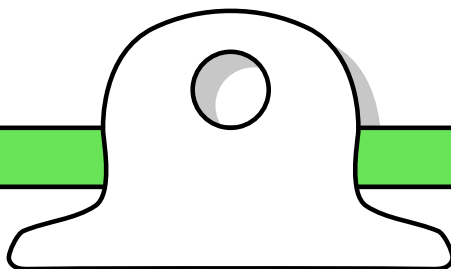
**Maths.
Statistics, Data,
Mathematical
Operations**

**Pupil
Resource**



**TOOLS for
SCHOOLS**

 Department
for Transport



Cycling at Kingswell Primary School

There are 200 pupils in total at Kingswell Primary School, 100 girls and 100 boys. 175 pupils can ride a bicycle. In total 25 pupils cycle to school, 13 girls and 12 boys.

Each year group has the following number of pupils who cycle to school;

Reception	1 girl
Year 1	1 girl and 1 boy
Year 2	2 girls and 1 boy
Year 3	2 girls and 2 boys
Year 4	0 girls and 3 boys
Year 5	3 girls and 2 boys
Year 6	4 girls and 3 boys

When asked, 64 pupils of the pupils who did not cycle to school said they would like to cycle to school but they either did not have bicycles, lived a long way from school or had never ridden on a road before and did not feel confident enough.

On Monday	25 pupils cycle to school
Tuesday	20 cycle to school
Wednesday	10 cycle to school
Thursday	12 cycle to school
Friday	24 cycle to school

When asked about their favourite colours for a bicycle pupils answered red, black, green, blue, silver and pink.

- 38 prefer red
- 50 prefer black
- 35 like green bicycles best
- 48 like blue bicycles best
- 24 said pink was their favourite
- 5 like silver bicycles best of all.

At Kingswell Primary School all of year 5 and year 6 have taken their Bikeability Level 1 and Level 2 that is 35 pupils in total.

Kingswell School want as many pupils as possible to cycle to school and have had some new bicycle storage racks fitted. They will hold 80 bicycles in total with space for 80 helmets too.