## Can I sort and interpret data in Venn and Carroll diagrams?

## Teaching guidance

## Key vocabulary

Venn diagram, Carroll diagram, region, intersection, describe, explain, categories

## Models and images

Carroll diagrams

|  | odd | not odd |
| :---: | :---: | :---: |
| prime | 23 | 2 |
| not prime | 25 | 14 |


|  | 4 legs | not 4 legs |
| :---: | :---: | :---: |
| mammal |  |  |
| not mammal |  |  |

## Venn diagrams



## Teaching tips

- Ensure children have experience of creating their own categories for sorting numbers, objects, ideas or shapes onto Venn and Carroll diagrams.
- Present children with unusual situations, such as examples in which it is impossible for there to be anything in the intersection of a Venn diagram (e.g. numbers that are divisible by 11, numbers less than 10 ), and ask them to explain why the intersection will be empty.

- When exploring Venn diagrams, discuss the meaning of the section within the rectangle but outside the ellipses (or whatever shapes are used for the set enclosures), and ask children to generate examples that would go into this section.
- Take opportunities to discuss properties of different items that are represented in Carroll diagrams across the curriculum. Information is often presented in this way within geography, history and science.
- Ask children to deconstruct a Carroll diagram and reconstruct it as a Venn diagram and vice versa.

|  | 4 legs | not 4 <br> legs |
| :---: | :--- | :--- |
| mammal |  |  |
| not <br> mammal |  |  |



