

Harry Potter book investigation (mass)

You will need:

A set of the Harry Potter books

An item of known mass (tin of beans, pack of pasta etc)

Weighing scales

Recording sheet

The investigation *(points for discussion are in italics)*

Record how many pages there are in the first Harry Potter book. *How do we know how many pages are in the book? Do we use the final page number or also include any additional pages at the beginning/end of the book?*

Hold the book and an item of known mass. *How much heavier/lighter does the book feel?*

Record an estimate of the mass of the book then use the scales to check.

Record the number of pages in the second Harry Potter book. *Do you think this will be heavier than the first book? Why?* Use the scales to find the mass and record this on the sheet.

Continue to do this for the remaining books, encouraging discussion about the number of pages and how this may affect the mass. *Will a book with fewer pages always be lighter? How many pages do you think are needed to make a difference to the mass?*

If you have 2 or more different sets of books (paperbacks, hardbacks or different editions) you can repeat this activity on different worksheets to make comparisons. You could also compare the Harry Potter books with a different book series, to investigate the differences and similarities.

The results of this activity can provide further opportunities for estimating, discussing and calculating:

How much heavier than the first book is the last book?

What is the total mass of the series?

If there was a book 8 which had 475 pages, what mass do you think it would have? My book has a mass of 420g. How many pages do you think it has?