Challenge 1: Use a scale to get the weight of these common objects in grams:

| An Orange/apple/durian |  | A Paul Jennings book set |  |
| :--- | :--- | :--- | :--- |
| A classroom chair |  | A container of counters |  |
| A (full) school milk box |  | A full school bag |  |
| An iPad/tablet |  | 10 new pencils |  |

Challenge 2: In teams figure out how much you weigh on Earth (use a scale to measure the pull of Earth's gravity on your own body). Then, using what you know about division or multiplication, work out what you would weigh on other planets.

Use these ratios to help work them out in your maths book (they have been rounded to make the maths easier!)

Earth's moon: $1 / \mathbf{6}^{\text {th }}$ (divide your Earth weight by 6 )
On Mars you weigh 4/10ths of your Earth weight (divide your weight by 10, multiply by 4)

Jupiter 2.5/1 (multiply your weight by 2.5 )


Neptune 1.2/1 (divide your weight by 10 , then multiply by 12 )

| Name | Earth weight | The Moon | Mars | Jupiter | Neptune |
| :--- | :--- | :--- | :--- | :--- | :--- |
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Challenge 3: Even in these modern times babies' weights are still measured in 'pounds' (lbs) and 'ounces' (oz). Use a calculator to convert these weights to kilograms and grams. Watch your place value!

1 pound $=0.45$ Kilogram, or 454 grams (roughly) - about the weight of a block of butter
1 ounce $\mathbf{=} \mathbf{2 8 . 4}$ grams (roughly). There are 16 ounces in a pound.


| Random baby names | Baby weight <br> in lbs \& oz. | Ounces (Pounds $\times 16=$ ounces) <br> Then ounces $\times 28.5=$ grams | Grams <br> Oz $\times 28$ | weight <br> in kg |
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| David (for example) | 10lbs 6oz | $\mathbf{1 0 \times 1 6 = 1 6 0 + \mathbf { 6 = 1 6 6 . 1 6 6 \times 2 8 . 4 = }}$ | ${ }^{4700 \mathrm{~g}}$ | 4.7 kg |
| Leonie | 7lbs 7oz |  |  |  |
| Wayne | 9lbs 2oz |  |  |  |
| Timothy | 8 lbs 10 oz |  |  |  |
| Margaret | 6lbs 9oz |  |  |  |
| Marie | 7lbs 11oz |  |  |  |
| Karinne | 8 lbs 3 oz |  |  |  |

