Grams and Kilograms: Reading a Weighing Scale in Year 2 Maths

In Year 2, children learn to read a weighing scale in grams (g) and kilograms (kg). Until now they have mostly compared how heavy things are by feel or by balancing them. Now they start reading the numbers on a scale, including the spaces between the marked numbers. This guide explains what that means, what it can look like in class, and some simple, playful ways to explore it at home.

What it is

This is part of the maths topic called measurement, which is about how long, heavy or full things are. The National Curriculum is the framework of subjects that schools in England teach, and it sets out what children should learn in each year group. Year 2 is the second year of Key Stage 1 (the stage that covers Years 1 and 2). For measuring mass, the curriculum asks children to choose and use standard units, such as grams and kilograms, and to use scales to measure. Mass is how much 'stuff' something contains. Many people say 'weight' for the same idea in everyday speech, and the curriculum uses 'mass/weight'. A gram is a small unit, and a kilogram is 1,000 grams. The curriculum does not say exactly how schools should teach the in-between marks, so the approach can vary between classrooms.

What happens

In class, children often start by holding objects and guessing which is heavier, then checking with a balance. Next, they meet a scale with numbers on its dial or display, usually marked in steps. The new skill is reading the spaces between the numbers. For example, if a dial has marks at 0, 100 and 200 grams, a pointer sitting halfway between 100 and 200 shows 150 g. Children learn to count the steps, work out what each small step is worth, and then read the pointer. Teachers often show this with a few real objects, such as a pencil case, a tin or a bag of pasta. Children predict first, then read the scale and record the result, perhaps in a simple table or on a drawn line. Teachers use different approaches, so the method in your child's class may look a little different.

What it means for your child

Most children find this a step up rather than a problem. The big change is moving from 'heavier' or 'lighter' to an exact number, which gives a more precise answer. Children who are still getting used to counting in steps of 2, 5 or 10, or who are learning English, may need more time to work out what the marks stand for. That is normal and part of learning. Some children find pointers hard to follow, while others enjoy the hands-on nature of weighing. If your child seems unsure, remember that this skill builds gradually, with plenty of practice. Your child's teacher is the best person to tell you where they are and what will come next.

How you can help at home

Keep it playful and short. Cooking is an easy way in. If you have kitchen scales that show grams and kilograms, let your child weigh flour, pasta, rice or a bag of carrots. Ask them to guess first, then read the scale together. You could also go on a 'heavier or lighter' hunt around the house and check your guesses on the scales. Look at the in-between marks together with questions such as, 'The pointer is halfway between 100 and 200. What could that be?' If your child finds dials hard to read, a digital scale may be easier, so ask the school which type they use. Always keep things safe: use dry, everyday items, keep

small objects away from little children, and avoid anything your child could choke on. Let your child lead, and stop before they tire.

Questions parents often ask

Does my child need to know exact conversions? Not in Year 2. The formal work on changing between grams and kilograms comes later, in Year 4 of the National Curriculum, although schools may introduce ideas earlier. Knowing that 1,000 grams make a kilogram is a helpful fact, not a test. Why do children estimate first? Estimating helps them think about size before they measure, which makes the reading feel meaningful. Is weight the same as mass? In everyday talk the words are often used interchangeably, but the curriculum uses 'mass/weight'. What if my child's school does it differently? That is normal. Schools choose their own teaching methods within the National Curriculum, so ask your child's class teacher how they introduce scales.

Sources

- Department for Education, 'National curriculum in England: mathematics programmes of study' (GOV.UK). Key Stage 1 measurement statements for Year 2, and Year 4 statements on converting metric units including gram and kilogram.
- Department for Education, 'National curriculum in England: framework document' (GOV.UK). Explains Key Stages and year groups.
- Department for Education, 'Mathematics guidance: key stages 1 and 2' (GOV.UK, non-statutory guidance). Supporting advice on teaching measurement.