Cubes, Cones and Spheres: Finding 3D Shapes Hiding in Everyday Objects

A gentle guide to helping your child in Reception recognise and name 3D shapes in the world around them, moving from flat shapes to solid objects.

What are 3D shapes?

In Reception (the first year of primary school), children begin learning about 3D shapes. While 2D shapes are flat, like a drawing of a circle on paper, 3D shapes are 'solid' objects that we can hold in our hands. Your child will be introduced to names like the sphere (like a ball), the cube (like a dice), the cylinder (like a tin of beans), the cone (like a party hat), the cuboid (like a cereal box), and the pyramid. These are part of the EYFS (Early Years Foundation Stage) curriculum, which is the set of standards for children from birth to age five.

What happens in the classroom?

Teachers encourage children to explore these shapes through play and touch. Instead of just looking at pictures, children handle real objects to feel their properties. They learn about 'faces' (the flat or curved surfaces), 'edges' (where two faces meet), and 'corners' (the pointy bits). By touching a sphere, they feel it is curved and can roll; by touching a cube, they feel the flat faces and sharp corners. This hands-on approach helps them understand how objects occupy space in the real world.

What this means for your child

It is very common for children to confuse 3D shapes with 2D ones. For example, they might call a sphere a 'circle' or a cube a 'square'. This is a natural part of learning. By focusing on the physical feel of the object, your child is building a foundation for maths in Key Stage 1 (Years 1 and 2). They are learning to describe the world accurately, which helps their communication skills and their ability to solve problems as they grow.

Simple ways to help at home

You can turn shape-finding into a playful game. While tidying up or shopping, ask your child if they can find something 'shaped like a cylinder' (like a cardboard tube) or a 'sphere' (like an orange). Encourage them to close their eyes and feel an object to guess what it is. Is it pointy like a cone or flat like a cuboid? Keep it light and fun; there is no need for formal lessons or drilling. Every family is different, so just fit these moments into your daily routine.

Common questions

Parents often ask if their child must get every name right immediately. The answer is no; the goal is exploration and familiarity. You might also wonder if you need special equipment. You don't—your kitchen cupboards and toy boxes are full of perfect examples. If you are unsure which specific terms your child's teacher is using this term, or if your child has SEND (Special Educational Needs and Disabilities) and needs a different approach, a quick chat with the class teacher is the best way to get tailored advice.

Sources

- Department for Education, Statutory framework for the Early Years Foundation Stage
- GOV.UK, National curriculum in England: early years foundation stage