



How Designers Create New Products and Ideas

KS2 DESIGN & TECHNOLOGY

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What Do Designers Actually Do?

Designers are problem-solvers who create things we use every day—from chairs and bottles to apps and clothes. But they don't just magically come up with ideas. They follow a careful set of **steps** to make sure their designs are useful, safe, and fun. Whether designing a new school desk or a video game, most designers follow the same basic process.

Step 1: Understand the Problem

Before making anything, designers must first understand what problem they're trying to solve. They ask questions: Who will use this? What do they need? What's wrong with what already exists? A designer creating a new water bottle might notice that children struggle to open existing bottles, so they decide to fix that problem.

Think of it like being a detective—you need to gather clues before you can solve the mystery.

Step 2: Research and Explore

Designers study existing products, watch people using things, and learn what experts say. They visit shops, read reviews, and sometimes interview real users. This **research** helps them understand what works and what doesn't.

Step 3: Brainstorm and Sketch Ideas

Now comes the creative part! Designers draw rough **sketches** and write down **lots** of wild ideas. They don't worry about whether ideas are perfect—quantity matters at this stage. A designer might sketch **20 different bottle shapes** without judging any of them.

Think of it like throwing spaghetti at the wall—you're seeing what sticks before deciding on your final dinner menu.

Step 4: Choose and Develop the Best Idea

After brainstorming, designers pick their **strongest idea** and develop it further. They create more detailed drawings and think about how it would actually work. They consider materials, costs, and whether it's safe to use.

Step 5: Build a Prototype

A **prototype** is the first working version—like a rough draft of a design. It might be made from cardboard, plastic, or wood. The prototype helps designers test whether their idea actually solves the problem. Does the bottle cap open easily? Is it comfortable to hold?

Step 6: Test and Get Feedback

Designers let real people use their prototype and watch what happens. They ask questions and take notes. Sometimes the prototype works perfectly. Sometimes people struggle with it, and designers learn what needs improving.

Step 7: Improve and Refine

Based on feedback, designers make **changes**. They might redesign the cap, adjust the size, or choose a different material. This cycle of testing and improving might happen **several times** before the design is ready.

Step 8: Prepare for Production

Once the design is perfect, designers write detailed instructions showing factories how to make thousands of copies. They create technical drawings, choose materials, and plan how products will be manufactured safely and affordably.

Think of it like writing a recipe so detailed that anyone could follow it and make the exact same cake every single time.

Why Does This Process Matter?

Following these **8 steps** means products work better, last longer, and actually solve real problems. It saves money by catching mistakes early, and it keeps people safe. The next time you use something clever—like a pencil with an eraser on top or a backpack with a built-in water bottle—remember that someone followed this careful process to create it.