Engineering in the News

Monday 16 November 2026

Born to Engineer

Three stories, one debate, one challenge: a 10-minute tutor time session

Raindrops can fling microplastics into the air

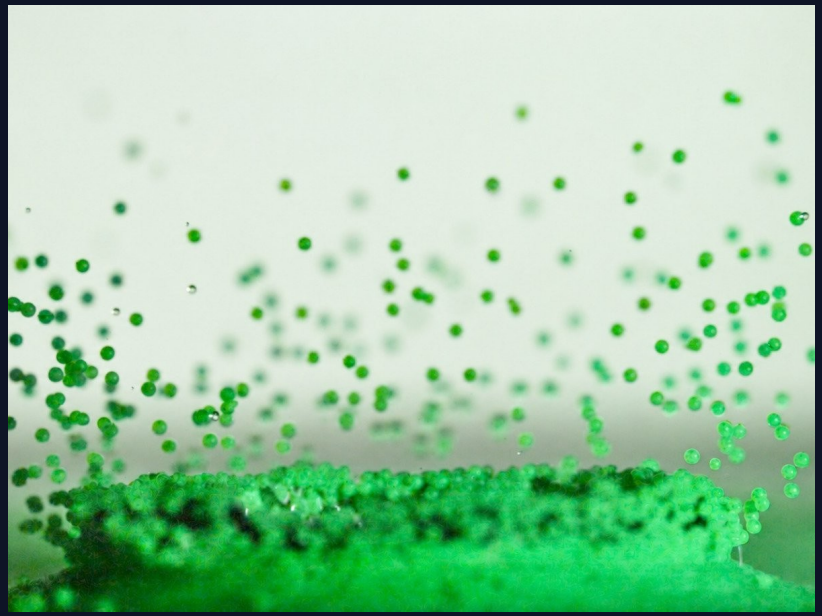


Image: University of Oxford Department of Engineering Science

- Engineers at Oxford, UCL and UNAM filmed drops hitting water covered in plastic particles
- The splash and a thin upward jet both threw plastic into the air
- One ejected droplet carried around 100 particles

The science behind it

Kinetic energy, $\frac{1}{2}mv^2$: a 2.55 mm drop at 3.4 m/s carries about 5×10^{-5} J (GCSE and A-level Physics)

Jobs behind the story

Fluid dynamics engineer · Environmental engineer

The Iron Bridge: cast iron crosses the Severn



Image: Colin, Wikimedia Commons, CC BY-SA 4.0

- Opened on 1 January 1781, described as the world's first iron bridge
- One 30 m arch made of five cast-iron ribs, about 378 tons of iron
- Builders joined the castings with dovetail joints borrowed from carpentry

The science behind it
Forces in structures: an arch turns the weight above into compression, and cast iron is strong when squeezed (GCSE Physics, D&T materials)

Jobs behind the story
Civil engineer · Structural engineer

Now hiring: the engineers of 2076



Image: NASA (public domain)

- For its 50th birthday, the Royal Academy of Engineering wrote nine job adverts for 2076
- Experts imagined homes in orbit with plants, artwork and lighting that follows our body clocks
- Space will need structural, nuclear and biomedical engineers, not only aerospace

The science behind it

Pressure = force ÷ area: air inside a habitat pushes about 101,000 N on every square metre of wall (GCSE Physics)

Jobs behind the story

Structural engineer · Biomedical engineer

Five-minute debate

Pick a statement. Argue for it or against it.

1. Lab experiments alone are enough to act on microplastic pollution.
2. Old structures should be kept even when they can no longer do their original job.
3. The most important engineering jobs of 2076 will be in space, not on Earth.

Two-minute challenge

How hard does the Iron Bridge push on the ground?

1. Turn 378 tons of iron into kilograms (take 1 ton as about 1,000 kg)
2. Work out its weight with W = mg, using g = 9.81 N/kg
3. The arch rests on two ends. Share the weight between them.

Answer

About 3.7 MN

378,000 kg × 9.81 ≈ 3,700,000 N, so roughly 1.85 MN at each end

More stories: borntoengineer.com/stem-news
Supports Gatsby Benchmark 4: linking curriculum learning to careers.