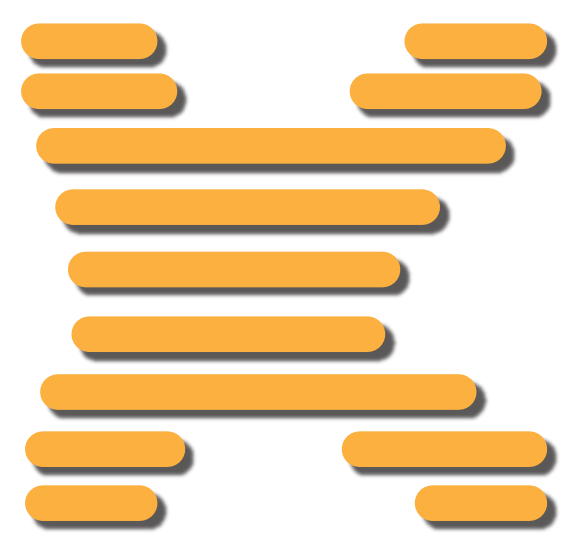


Low-Cost Experiments in STEM Education



Tim Eisenhardt | Gymnasium an der Hamburger Straße | Bremen



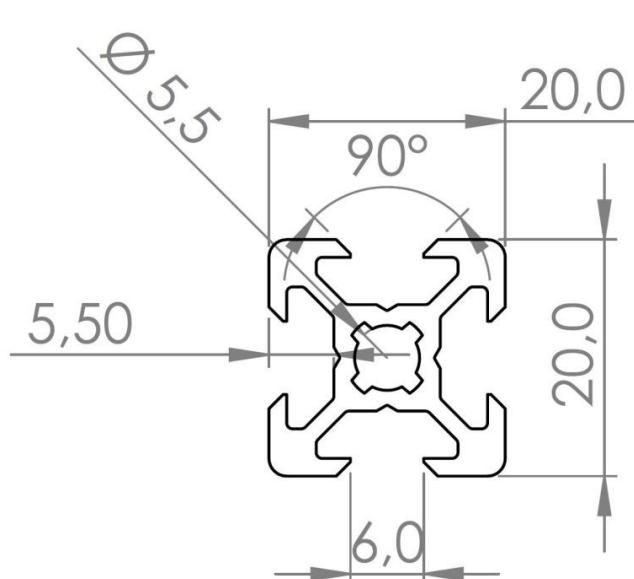
kopylab

Labify the World

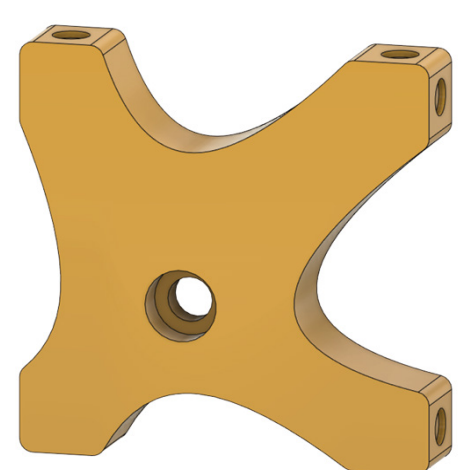
We aspire for every student to experience and explore the wonders of nature, no matter where they go to school. To make this happen, we're crafting experimental kits that can be produced globally, at a low cost, with a 3D printer and easily obtainable standard parts. A lab you can copy.

Our first milestone, a full-fledged optical bench, acts as a proof of concept. It goes to show that by working together, we can make science education more sustainable and more hands-on at the same time.

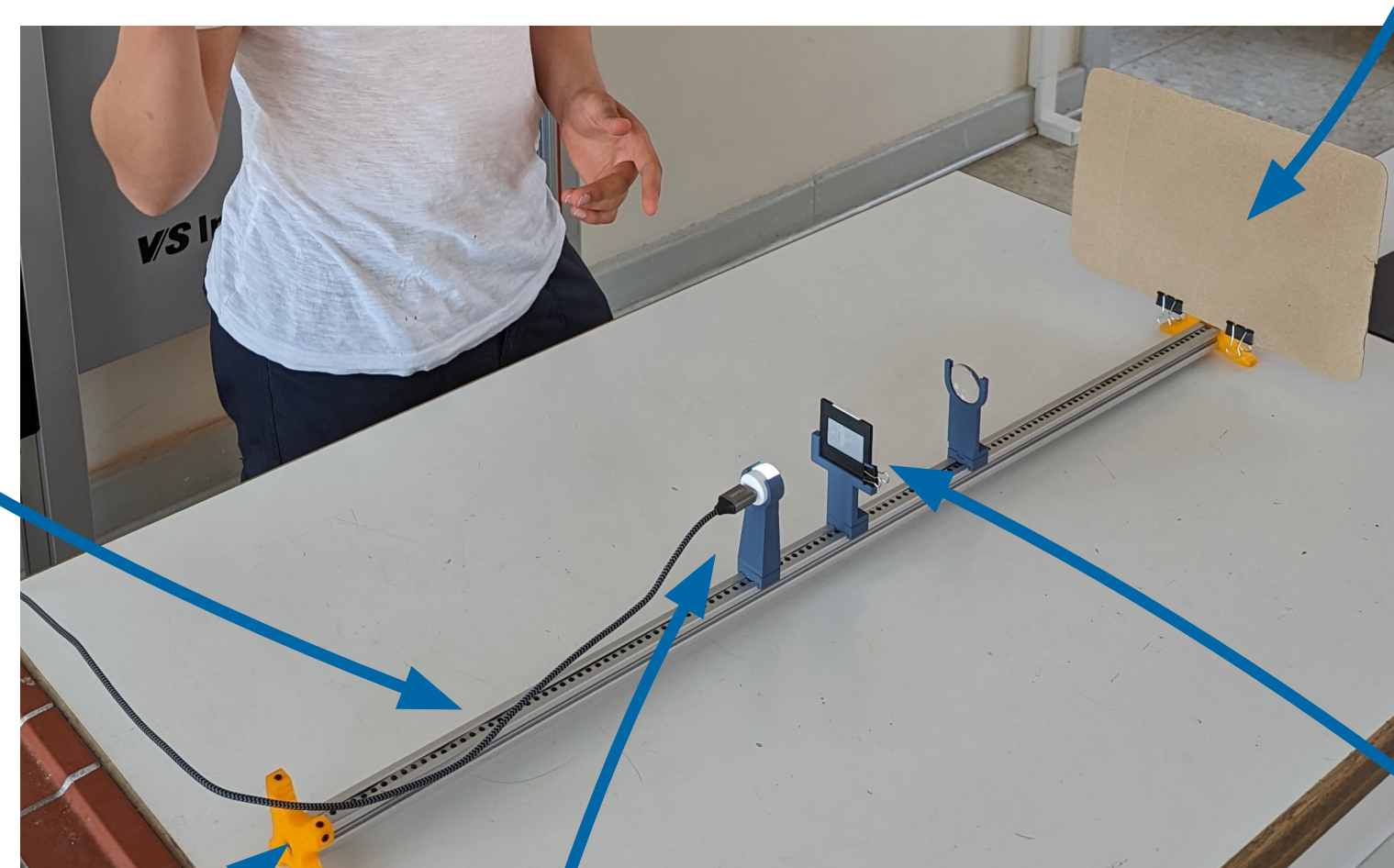
This is the backbone of our optical bench. The outer part is a V-slot aluminium extrusion. They offer an array of handy functions – and their design is in the public domain, so the parts can be purchased for a bargain anywhere. The inner part is just plain old perforated steel tape. It makes the magnetic components stick to the bench.



Using cardboard instead of acrylic glass saves 2 Euros per set. We strive to keep the costs as low as possible without sacrificing functionality – this way more people can afford to copy our lab designs.



Asymmetric feet, 3d-printed from recycled, biodegradable plastics. Tilt the optical bench, and it transforms into a marble run with two different slope angles. Tilt it again, and you get an elevated track for carts carrying smartphones. The smaller foot's shape also inspired our logo.



All electric components – ever – can be powered by standard USB voltage. This way, teachers and students can rely on affordable standard parts that they might already have at home, and it also ensures safety.

Remember slides? Actual, optical slides? They won't break the bank nowadays. We've created a custom image for projection experiments, as well as a grid pattern, to delve into the world of wave optics.

