

Steel Rods, Tubes, and Flat Stock

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Materials & Stock

Mild steel rod, tube and flat stock is the everyday structural material of the metal workshop, for frames, brackets, jigs, axles and homework pieces. It welds, cuts, bends, drills and finishes in ways no other material matches.

Key Features

- Rods from 3 to 50 mm diameter
- Tube diameters 10-50 mm with wall thicknesses
- Flat and angle sections in all sizes
- Bright or black finishes
- Mild steel grades for forming

Typical Uses in the Workshop

- Build frames, trolleys and structures
- Turn axles, studs and machine parts
- Fabricate brackets, jigs and gates
- Practice cutting, drilling and welding

Safe Operation

1. Mark the cut with a centre punch and scribe
2. Cut with a hacksaw, band saw or chop saw
3. Deburr and file the ends
4. Drill pilot holes before larger sizes
5. Weld with the correct settings

SAFETY NOTES

- Wear gloves - cut ends are sharp
- Eye protection when cutting and grinding
- Do not machine thin stock without support
- Handle long lengths with care
- Keep the stock racked safely upright

Maintenance & Consumables

- Oil stock to prevent rust
- Store rod upright in a rack
- Sort sections by size and finish
- Check for rust and scale before use
- Keep offcuts for small jobs

Specification & Buying Notes

Stock bright mild steel flat bar, rod and tube in the sizes the projects use; black steel is cheaper for rough work. Buy from a steel supplier for budget lengths.