

Testing materials to choose the right one

Grade 6 science (Year 7 · Class 6) · Lab answers

These model answers use the sample table. Your own table may differ slightly, so check the reasoning and the units rather than matching every number.

Level: Grade 6 science (Year 7 · Class 6) · **Curriculum:** MS-PS1-3

Question 1 Conductors

Copper, aluminium and steel light the bulb. **All three are metals.**

Question 2 Magnetic material

Steel is attracted. **Copper and aluminium** conduct but are not magnetic.

Question 3 Hardest material

The nail does not mark the steel strip while the others are scratched. **Steel** is the hardest.

Question 4 Flexible and insulating

Plastic scores 5 and does not light the bulb. **Plastic**; for example a flexible cable cover.

Question 5 Best handle

Steel resists scratches and bends little (rating 2). Wood also scores 2 and is a heat insulator. **Steel or wood**, depending on weight and cost.

Question 6 Reliability

Have several students rate each strip and take the average, and use the same overhang and press with the same force. **Repeat and average.**

Question 7 Improvement

Clamp each strip, hang a fixed mass of 100 g from the free end and measure the sag with a ruler in millimetres. **Measure sag in mm.**