

Simple machines: levers and ramps

energy-forces

What you need: 30 cm ruler or stiff card strip · pencil, triangular block or thick eraser (pivot) · small load (cloth bag of coins, metal washers or 100 g mass) · plank or stiff board for ramp (about 40–60 cm) · classroom books or blocks (to raise one end of the plank and set platform height) · sticky tack (optional, to seat the pivot) · scrap of card or small tray so the load can slide on the ramp

Words to use

Simple machine · Lever · Ramp · Effort and load

Our question

Does moving the pivot change how hard you must push to lift the same load?

I predict...because...

What we found out

Our ramp comparisons: straight lift or ramp, and steeper or gentler

Which pivot place made the load easiest to lift?

When the push felt easier, did your hand move further or less far?

