

lever

a type of simple machine consisting of a rigid beam pivoting around fulcrum that is used to transmit force

mass

a measure of the amount of matter that an object contains; the unit of this within the SI system is the kilogram (kg)

metals

solid materials, typically hard, opaque, ductile, malleable and shiny; they feature good electrical and thermal conductivity

non-ferrous

a material containing no, or minimal iron

pearlite

a phase of carbon steel and cast iron consisting of ferrite and cementite formed into distinct layers (or lamellae) on slow cooling from austenite

polymer

a giant molecule
based on carbon

pulley

consists of a wheel and an
axle arranged by itself or in
conjunction with others to
operate as a simple machine

scalar

any measure that
has a magnitude
only

screw

a form of simple
machine used to
translate rotary motion
into linear motion

steel

an alloy of iron and up to 2%
carbon, often with additions of
other alloying elements such as
manganese, silicon, chromium,
nickel and molybdenum

stiffness

the resistance of an elastic body to deflation by an applied force

thermoplastic

a polymer that can be softened by heating

thermoset

a polymer that can be set by heating but cannot be softened by reheating

timber

an organic material consisting of thin-walled tubes made of cellulose; the cellulose 'tubes' are bound together with a weak glue called lignin

toughness

the ability of material to resist the propagation of cracks; it is often identified as the area under a stress-strain graph

vector

any measure that
has a magnitude and
direction
