

8Ja – Drag act

Word	Pronunciation	Meaning
air resistance		A force that tries to slow things down that are moving through the air. It is a type of friction, and is also called drag.
balanced forces		Two forces that are the same strength and working in opposite directions.
drag		Air resistance and water resistance are both also called drag.
streamlined		Something that has a smooth shape to reduce the air resistance or water resistance.
water resistance		A force that tries to slow things down that are moving through water. It is a type of friction, and is also called drag.

8Jb – Tracks and trains

Word	Pronunciation	Meaning
pascal		A unit for pressure. $1 \text{ Pa} = 1 \text{ N/m}_2$
pressure		A way of saying how spread out a force is.

8Jc – Floating trains

Word	Pronunciation	Meaning
attract		Pull towards.
bar magnet		A straight magnet shaped like a small bar.
cobalt	<i>cO-balt</i>	A metal that is a magnetic material.
core		A solid bar inside an electromagnet, usually made of iron.
electromagnet		A coil of wire with electricity flowing in it.
iron		A metal that is a magnetic material.
maglev		Trains that use electromagnets to make them float (or levitate), above the tracks and move along are called maglev trains.
magnet		Something that can attract magnetic materials.
magnetic material		Material that is attracted to a magnet; iron, cobalt, nickel and steel are all magnetic materials.
magnetism		A non-contact force.
nickel		A metal that is a magnetic material.
non-contact force		A force, such as magnetism or gravity, that does not need to be touching something to have an effect.
north pole		One end of a magnet. This end points north if the magnet is free to move.
permanent magnet		A magnet that keeps its magnetism – it does not depend on electricity.
repel		Push away.

8Jc – Floating trains (continued)

Word	Pronunciation	Meaning
south pole		One end of a magnet. This end points south if the magnet is free to move.
steel		A mixture made mainly from iron; it is a magnetic material.

8Jd – Finding the way

Word	Pronunciation	Meaning
compass		A magnetised piece of metal that can swing around – it points north.
magnetic field		The space around a magnet where it can affect magnetic materials or other magnets.
north-seeking pole		The end of a magnet that points north if the magnet can move freely. Often just called the north pole.
plotting compass		A small compass used for finding the direction of a magnetic field.
south-seeking pole		The end of a magnet that points south if the magnet can move freely. Often just called the south pole.

8Je – Change your attitude/What next for transport?

Word	Pronunciation	Meaning
ailerons		Flaps on the ends of an aeroplane's wing, that help to control it.
biceps muscle		The muscle on the front of the upper arm that makes the arm bend.
distance multiplier		A lever where the load moves further than the effort.
effort		The force put on something, especially a lever.
force multiplier		A lever where the load is bigger than the effort.
fulcrum		A point about which something turns. Another name for a pivot.
lever		A simple machine that can increase the size of a force, or increase the distance the force moves.
load		The weight or force on something.
pivot		A point about which something turns. Another name for a fulcrum.
radius bone		The bone between the elbow and wrist that the biceps muscle pulls on.
sustainable		A way of living that does not use up non-renewable resources or harm things in our surroundings. Something that is sustainable allows things to continue into the future.