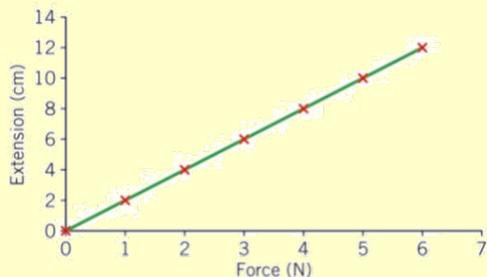


Physics 1.1: Forces

Section 1: Introduction to Forces

1	Forces	A push or pull upon an object
2	Newtons	Forces are measured in Newtons (N) using a Newton meter
3	Interaction pair	This is formed when a force exist between objects.
4	Forces can...	Deform objects, change their speed or change their direction of motion
5	Examples of forces	Gravity, friction and air resistance.
6	Contact force:	A force that acts when an object is touching somethings such as friction
7	Non-contact force:	<i>Magnetic, electrostatic or gravitational</i> force that acts when objects are not in contact



▲ This graph shows how the extension of a spring changes as you pull it.

Section 2: Squashing and Stretching

8	Deform	To change shape
9	Compress	To squash into a smaller space
10	Stretch	An object can be stretched if you exert a force on it
11	Reaction Force	The support force provided by a solid surface, like a floor
12	Extension	The amount by which an object gets longer when a force is applied.
13	Tension	A stretching force
14	Elastic Limit	The point beyond which a spring will not return to its original length when the force is removed
15	Hooke's Law	A law that says that if you double the force of an object, the extension will double.

Section 3: Drag forces and Friction

16	Friction	The forces that resists movement because of contact between surfaces
17	Lubrication	A substance that reduces friction such as grease or oil
18	Water Resistance	The force on an object moving through water that causes it to slow down
19	Air Resistance	The force on an object moving through air that causes it to slow down
20	Drag Force	The force acting on an object moving through air/water that causes it to slow down
21	Streamlined	An object that has been shaped to reduce resistance to motion from water or air

Section 4: Forces at a Distance

22	Magnetic Forces	The forces between two magnets or a magnet and a magnetic material
23	Electrostatic Force	The force acting between electrically charged objects
24	Field	A region where an object feels a force b
25	Weight (N)	The force of the Earth on an object due to its mass
26	Mass (kg)	The amount of matter an object is made up of
27	How to calculate weight	Weight (N) = mass (kg) x gravitational field strength (10N/kg)



Section 5: Balanced and Unbalanced

28	Balanced (forces)	Forces acting on an object that are the same size but act in opposite directions
29	Unbalanced (forces)	Opposing Forces acting on an object that are unequal
30	Equilibrium	When the forces acting on an object cancel each other out
31	Driving Force	The force that is pushing or pulling something
32	Resistive Force	Any force that acts to slow down a moving object

