

P2 + P6 Forces Core Questions

1	What is a force?	A pull or a push on an object
2	What do forces do?	They can change the shape, direction or speed of an object
3	How do we represent different forces on a diagram?	Arrows
4	How do we represent the size of a force in a diagram?	The length of the arrow
5	What apparatus measures force?	Newton meter
6	What is the unit and unit symbol for force?	Newton, N
7	What is a contact force?	A force that acts between objects that are touching
8	What is a non-contact force?	A force that acts between objects that are not touching
9	Give an example of a contact force	Friction, air resistance
10	Give an example of a non-contact force	Weight, magnetic force and electrostatic force
11	What is an interaction pair?	An equal and opposite pair of forces acting between objects
12	What are the sizes of the forces in an interaction pair?	Equal
13	Give an example of an interaction pair	gravitational attraction between 2 objects with mass
14	What is deformation?	A force changing the shape of an object
15	What is compression?	Forces squashing or pushing together
16	What is extension?	A force increasing the length of an object
17	What is a reaction force?	A contact force from a solid surface
18	What is Hooke's law?	As the force on a spring increases so does the extension
19	Describe what is meant by a material's elastic limit	The point beyond which a spring will not return to its original length when the force is removed
20	Describe the shape of the graph for Hooke's law	Straight line graph that goes through (0,0)
21	What is friction?	A contact force that opposes motion
22	What causes friction?	Contact between moving surfaces
23	Give a use of friction	Brakes on a car, walking
24	Give an example of where friction causes problems	Wear and tear in moving parts
25	How can friction be reduced?	Lubrication
26	What is a fluid?	A liquid or gas
27	What is a drag force?	The resistance force caused by the motion through a fluid.
28	Give an example of a drag force	Air resistance, water resistance
29	How do drag forces slow objects down?	Particles from the fluid collide with the moving object providing a resisting force
30	How can drag forces be reduced?	Making an object more streamlined
31	Describe what happens if forces are balanced	An object will remain stationary or will move at a constant speed
32	What is a resultant force?	The overall force when several forces on an object act at once
33	Describe what happens if forces are unbalanced	The object's speed, direction and/or shape changes.
34	What is the size of the resultant force if the forces are balanced?	0N
35	What is Pressure?	The force per unit area acting on a surface
36	What are the units and unit symbol for pressure?	Newtons per metre ² / (N/m ²)
37	What formula links pressure, force and area?	Pressure = Force ÷ Area
38	In a liquid what happens to pressure at increased depth?	It increases