

Y8 - Knowledge organiser – 8.5 – Contact Forces & Pressure



Forces 1

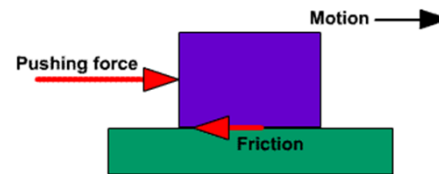
- **Deformation:** object changing shape due to a force.
- Forces can stretch or compress objects.
- **Tension:** force extending or pulling apart.
- **Compression:** force squashing or pushing together.
- Forces are measured in Newtons, N
- **Contact force:** a force that is formed when objects are touching.

Resultant forces 2

- **Resultant force:** single force that can replace all acting forces, and still have the same effect.
- **If the resultant force = 0, there is no change in speed.**
- **Equilibrium:** when the opposing forces are balanced.

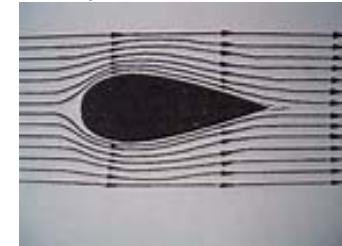
Friction 3

- Force opposing motion.
- **Caused when two objects rub together.**
- The faster the motion, the greater the friction force.
- Can be reduced by lubrication.
- An example of a contact force



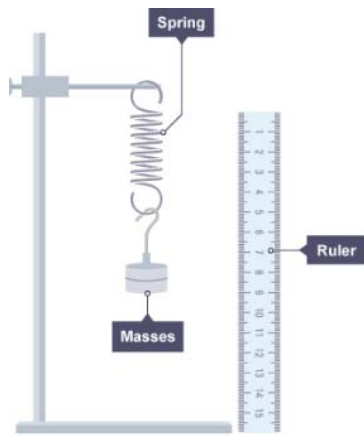
Fluid resistance 4

- **Fluid:** a liquid or a gas.
- **Drag:** force opposing motion in fluids
- Can be reduced by streamlining the shape.



Hooke's Law 5

- The extension of a spring) is proportional to the force applied.

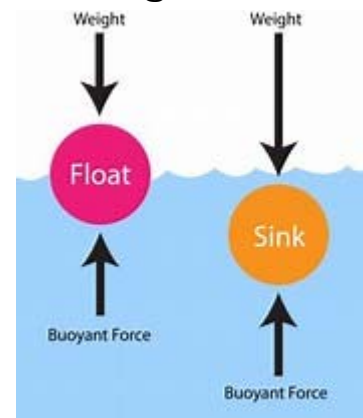


Pressure 6

- Acts in a fluid.
- Acts in all directions.
- Increases with depth because of the weight of the fluid.
- Results in upthrust.
- The ratio of force to surface area, measured in N/m^2 .

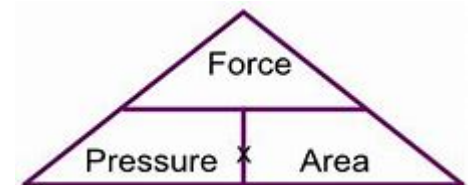
Floating or sinking 7

- Objects sink or float depending on the forces acting.



Hydraulics 8

- Hydraulic systems involve an incompressible liquid.
- The difference in areas means the size of the force get bigger.



K.O.1

1. Name 3 forces.
2. What force pushes up in water?
3. What does the stomach do?
4. Name the air sacs in our lungs.
5. What is recycling?
6. Why is recycling important?
7. How are humans adding to the greenhouse effect?
8. How can we reduce the greenhouse effect?
9. What state of matter does conduction happen in?
10. What happens to particles in a solid when you heat them up?