

FORCES ARROW DIAGRAM CARDS



Cut out the cards. Use the arrows to show forces acting on objects.

WEIGHT (GRAVITY)

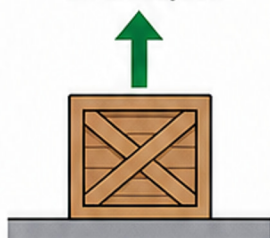
Gravitational force pulling down towards Earth.



Arrow points down.

NORMAL REACTION

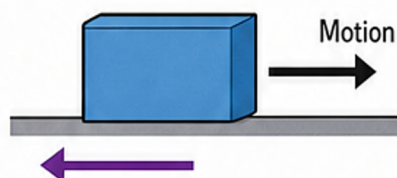
Support force from a surface pushing up on an object.



Arrow points up.

FRICTION

Force that opposes motion or the tendency to move.



Arrow opposite to the motion.

TENSION

Pulling force transmitted through a string, rope or cable.



Arrow points along the string away from the object.

APPLIED FORCE

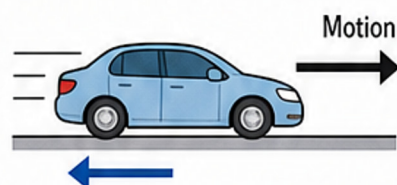
Push or pull force applied by a person or object.



Arrow points in the direction of the push or pull.

DRAG (AIR RESISTANCE)

Resistive force from air acting opposite to motion.



Arrow opposite to the motion.

LIFT

Upward force exerted by air on an object.



Arrow points up.

THRUST

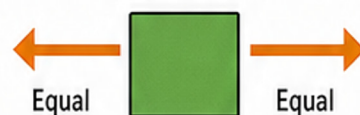
Forward force produced by an engine or propeller.



Arrow points in the direction of motion.

TWO FORCES BALANCED

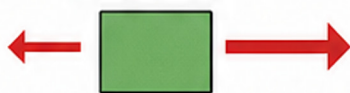
Forces are equal in size and opposite in direction.



Arrows are equal and opposite.

UNBALANCED FORCES

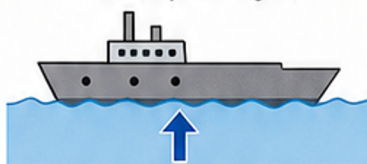
Forces are not equal. The object will change speed or direction.



Arrows are not equal.

UPTHRUST

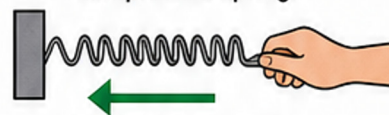
Upward force from a fluid (liquid or gas).



Arrow points up.

SPRING FORCE

Restoring force exerted by a stretched or compressed spring.



Arrow points in the direction of the force.

Use these cards to draw and label force arrow diagrams.