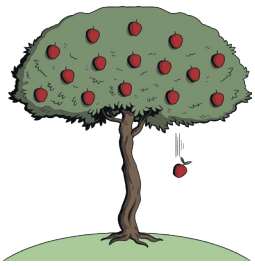
Forces and Motion

1. Answer the questions about each scenario shown below.

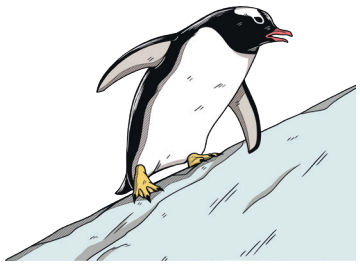


a) Name the force that causes the apple to fall to the ground.

_____

b) Name the force that slows down the parachutist when he opens the parachute.

_____



c) Name the force that stops the penguin slipping on the ice.

_____

2. Tick **one** box in each row of the table to show if the forces in each scenario are balanced or unbalanced.

Scenario	Balanced	Unbalanced
A train travelling at a steady speed.		
A ball bouncing off a wall.		
A stationary football on the grass.		
A horse jumping over a hedge.		
A submarine descending at a steady speed.		

3. Circle **one** word in each box to complete the sentences below.

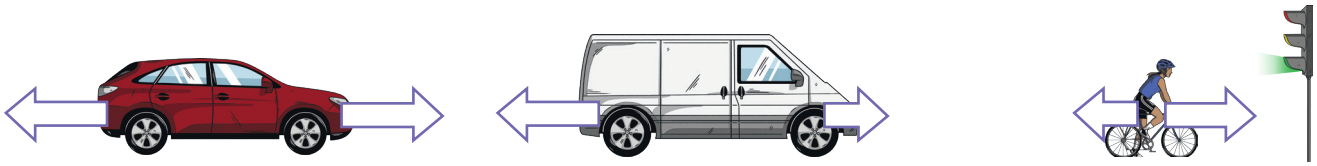
A stationary object will remain at rest if the forces acting on it are **balanced.** / **unbalanced.**

An object will continue to move at a constant speed if the forces on it are **balanced.** / **unbalanced.**

An object will change speed, direction or shape if the forces are **balanced.** / **unbalanced.**

BEYOND SCIENCE

Look at the force arrows on the picture below.



4. Tick **one** box in each row of the table to describe the motion of each vehicle.

Vehicle	Stationary	Constant Speed	Accelerating	Decelerating
car				
van				
bike				

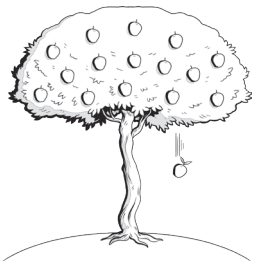
5. Name **two** forces represented by the force arrows in the picture above.

1. _____

2. _____

Forces and Motion **Answers**

1. Answer the questions about each scenario shown below.



a) Name the force that causes the apple to fall to the ground.

gravity/gravitational force

b) Name the force that slows down the parachutist when he opens the parachute.

air resistance/drag

c) Name the force that stops the penguin slipping on the ice.

friction

2. Tick **one** box in each row of the table to show if the forces in each scenario are balanced or unbalanced.

Scenario	Balanced	Unbalanced
A train travelling at a steady speed.	✓	
A ball bouncing off a wall.		✓
A stationary football on the grass.	✓	
A horse jumping over a hedge.		✓
A submarine descending at a steady speed.	✓	

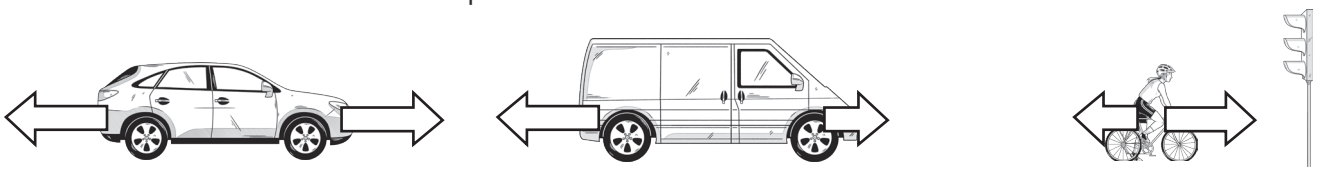
3. Circle **one** word in each box to complete the sentences below.

A stationary object will remain at rest if the forces acting on it are **(balanced.)** / **unbalanced.**

An object will continue to move at a constant speed if the forces on it are **(balanced.)** / **unbalanced.**

An object will change speed, direction or shape if the forces are **balanced.** / **(unbalanced.)**

Look at the force arrows on the picture below.



4. Tick **one** box in each row of the table to describe the motion of each vehicle.

Vehicle	Stationary	Constant Speed	Accelerating	Decelerating
car		✓		
van				✓
bike			✓	

5. Name **two** forces represented by the force arrows in the picture above.

Any two from:

- **thrust/driving force**
- **friction**
- **air resistance/drag**