## Forces - Speed KEY LEARNING

A journey takes less time if your speed is fast.


You travel a large distance if your speed is fast.


Calculating speed - All four of these show the same thing!

$$
\begin{gathered}
\text { speed }=\text { distance/time } \\
\text { speed }=\frac{\text { distance }}{\text { time }} \\
\text { speed }=\text { distance } \div \text { time }
\end{gathered}
$$



## Keywords

Speed: How much distance is covered in how much time.
Average speed: The overall distance travelled divided by overall time for a journey.

## Forces - Gravity KEY LEARNING

Gravity is a non-contact force.
Non-contact force: One that acts without direct contact.
Gravity is an attractive force. It acts between all objects that have mass.


All objects produce a gravitational force. This is very large for huge masses such as planets.
Gravity holds planets and moons in orbit around larger planets and stars.

| Key Learning Questions | Year 7 Forces |
| :--- | :--- |
| Which speed is fastest? <br> a. $10 \mathrm{~m} / \mathrm{s} \quad$ b. $10 \mathrm{~m} / \mathrm{min} \quad$ c. $10 \mathrm{~cm} / \mathrm{s}$ <br> Which speed is fastest? <br> a. $100 \mathrm{~cm} / \mathrm{s}$ b. $10 \mathrm{~m} / \mathrm{s} \quad$ c. $500 \mathrm{~cm} / \mathrm{min}$ <br> Complete this equation: <br> Speed $=$$\div$ | $10 \mathrm{~m} / \mathrm{s}$ |
| We travel 100 m in 5 s. What is our average speed? | $10 \mathrm{~m} / \mathrm{s}$ |
| We travel 12 m in 3s. What is our average speed? | Distance $\div$ |
| What force keeps Earth orbiting the Sun? | $100 \mathrm{~m} \div 5 \mathrm{~s}=20 \mathrm{~m} / \mathrm{s} \div 3 \mathrm{~s}=4 \mathrm{~m} / \mathrm{s}$ |

