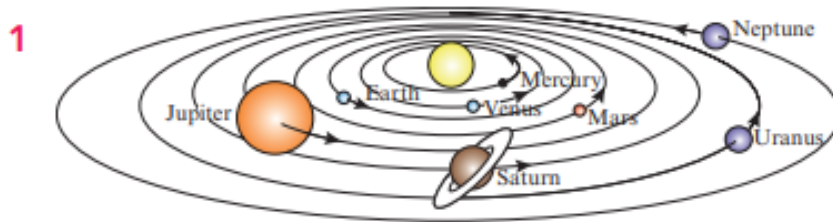


Unit 3 Forces and Energy

Topic 3.2 Formation of the Solar System (Page 48- 50)

Exercise 3.2A Ideas about formation of the Solar System



- 2
- a Hypothesis
 - b Gravity
 - c Scientists use computers to **model** the formation of the Solar System.

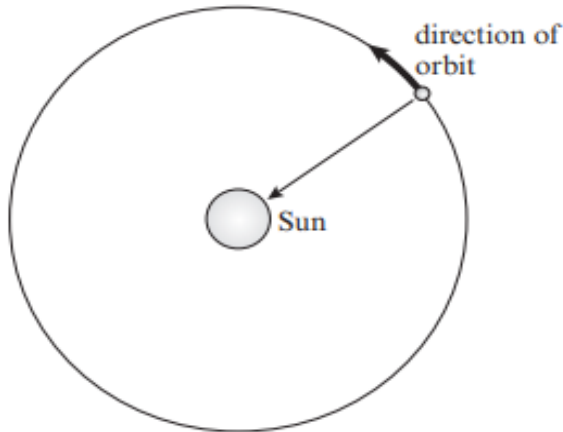
Exercise 3.2B Watching stars being born

- 1 Nebula
- 2 Telescope
- 3 An observation
- 4 Fair tests

Topic 3.3 Movement in Space (Page52- 55)

Exercise 3.3A Travelling through space

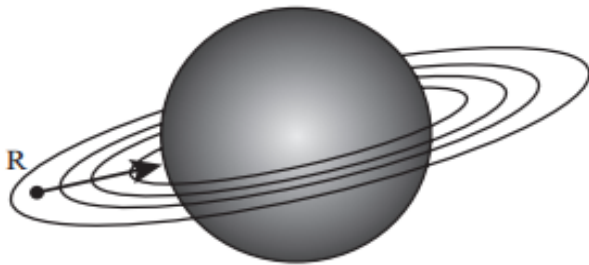
- 1 Arrow should point towards the Sun



- 2 a Vacuum
b Air resistance

Exercise 3.3B Are there forces in space?

- 1 There is no air resistance.
2 Arrow from R toward centre of planet.



Exercise 3.3C Speeding up, slowing down and changing direction

- 1 a To overcome gravity and air resistance.
b Air resistance is a force that slows things down/acts opposite to movement.
2 Path curves towards, but does not touch, Jupiter; extent of curve can be very little or very great; path must not show start of orbit around Jupiter.












Topic 3.4 Tides (Page 55- 56 & 58)

Exercise 3.4A High and low tides

1 Tidal forces from the Sun and Moon.

2 a 12 (hours)

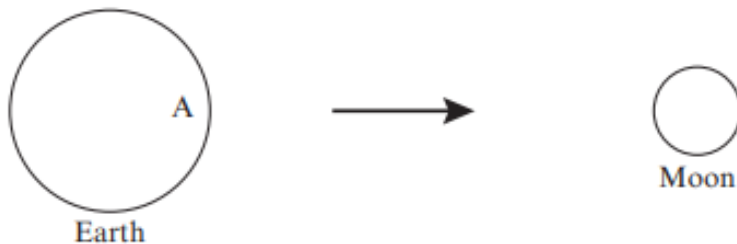
b 6 (hours)

- 3
- | | | | |
|---|---|---|-------------------------------------|
|  |  |  | <input checked="" type="checkbox"/> |
| |  |  | <input type="checkbox"/> |
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| |  | | |
|  | |  | <input type="checkbox"/> |

Exercise 3.4C Forces and tides

1 This force is called a **tidal** force.

2 Arrow pointing from A towards the (centre of) the Moon.



3 High tide, because the gravity from the Moon is pulling the water at A; water will be deeper at A (than at other tide times).

4 20:00 or 8.00 p.m