

Read p. 409-419 and answer the following questions.

1. What is the **solar wind**? Why is it significant?
2. What protects us on Earth against the harmful effects of the solar wind?
3. Describe the type of reaction that takes place on the Sun and is responsible liberating great quantities of energy.
4. Name the **inner planets**. What property do they share?
5. Name the **outer planets**. What property do they share?
6. Use the following sets of descriptions to name the appropriate planet.
 - a) - composed of a rock and ice core
- atmosphere is 94% H₂, 6% He
- has a distinctive ring system
- has 18 moons

 - b) - large rocky core, ice mantle and methane ice crust
- spins in the opposite direction to its direction of revolution (retrograde rotation)
- has 1 moon (Charon)

 - c) - iron core which makes up 80% of planet's mass
- extreme day and night temperatures due very thin atmosphere
- 60% of land covered in craters, the rest smooth

- d) - rocky core with a mantle of ice, ammonia and methane
 - atmosphere is 85% H₂, 12% He and 3% CH₄
 - rotates on an axis 90° to the solar system plane
- e) - large quantities of liquid water
 - atmosphere is 78% N₂, 21% O₂ and 1% other gases
 - solid iron-nickel core, molten outer layer and rocky mantle
 - suitable temp range to sustain a wide diversity of life
- f) - large rocky core, inner mantle made up of solid H₂, and outer mantle made up of liquid H₂ and He
 - 2.5 times the size of all other planets combined
 - trace amounts of methane, ammonia, water vapour produce colourful cloud bands
- g) - semi-solid iron-nickel core with a thin crust and mantle
 - thick atmosphere of 96% CO₂, 3.5% N₂ and other gases (including sulfuric acid rain – toxic to humans)
 - high average surface temperature
- h) - rocky core, mantle of ice, ammonia and methane
 - 85% H₂, 13% He and 2% methane
 - has a Giant Dark Spot and 8 moons
- i) - iron-oxides in surface material (gives a red-orange colour)
 - polar ice caps, valleys, canyons, craters, volcanoes
 - thin atmosphere composed of 95% CO₂
 - low temperatures at night

7. How were scientists able to view and gain information about the outer planets?