Solutions

Cosmic coordinate drawing
Planet comprehension

Mercury
1. 4,900 km
2. 88
3. 58
4. -173°C to 427°C
5. Sun-scorched and wrinkly.
   Extension activity – teacher check.

Venus
1. 462°C caused by its thick carbon dioxide atmosphere.
2. 225
3. 243
4. Volcanoes. Some of them are up to 240 km in diameter.
   Extension activity – teacher check.

Earth
1. 12,742 km
2. Nitrogen and oxygen
3. -88°C and 58°C
   Extension activity – teacher check.

Mars
1. About 40 minutes longer than Earth.
2. Red. It is due to the atmosphere being oxidised into its iron rich surface.
3. Volcano. Called Olympus mons and it is 25 km tall.
4. Two, called Phobos and Diemos.
5. 687
   Extension activity – teacher check.

Jupiter
1. Hydrogen and helium.
2. 1000
3. 67. Ganymede, Callisto, lo and Europa.
4. It has a cracked, icy shell believed to cover an ocean of liquid water.
5. -108°C
   Extension activity – teacher check.

Saturn
1. Six
2. Billions of pieces of water ice.
3. 100,000km wide and less than a kilometre thick.
5. Methane exists in all three forms and it is considered a possible location for life to evolve.
   Extension activity – teacher check.
Uranus

1. 17 and a quarter hours.
2. 84
3. Its atmosphere is a smoggy mix of hydrogen, helium and methane.
4. 27
5. With a tortured surface of deep fault canyons, terraced layers and a chaotic variation in surface ages and features.

Extension activity – teacher check.

Neptune

1. 49,528 km
2. Wracked by fierce winds and giant storms.
3. 164.8 years
4. 5 composed of ice particles and dust grains.
5. 14. The largest is Triton.

Extension activity – teacher check.

Pluto

1. Dwarf
2. 2,370 km
3. 1930. It was discovered by Clyde Tombaugh.
4. Two very different icy worlds with complex and unexpected geology.

Extension activity – teacher check.