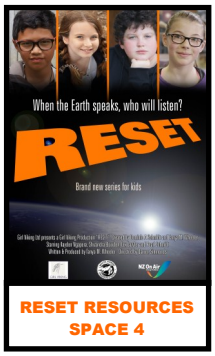
SPACE—LIFE ON MARS:



Mars is the fourth planet in our solar system, and the second smallest after Mercury. Mars has two small moons, Deimos and Phobos. These moons are so small that for a long time, we did not even know that Mars had moons.

It wasn't until 1877 that the discovery of these moons was made by American astronomer Asaph Hall at the US Naval Observatory with the use of a very powerful telescope.

Our Moon has a diameter of 3,474 kilometres. Phobos is so small that its gravity isn't strong enough to make it round, instead it is potato-shaped. Phobos is only about 26 kilometres long and 22 kilometres across. Deimos, is even smaller. It is

15 kilometres long by 12 kilometres across.

ACTIVITY:

1) Find the ratio between Phobos and our moon to see the difference in their sizes. To do this, take the 29 kilometre length of Phobos and count it as 1.
2) To find out how many Phobos moons would fit in our Earth moon, divide the size of the moon by Phobos' size. 3474÷29 = 119.79 so if Phobos is 1, then our moon is almost 120 times bigger. We can show this as a ratio 1:120
3) Use the same formula to work out the ratio between Deimos and our Moon.
4) EXTENSION: Try working out the size ratio between other planets and moons. What about between Mercury and Earth? Or Earth and Mars? What about Jupiter and Earth? This will give you a sense of the scale between the different planets and moons in our Solar System.

Remember: To work these calculations out, look up the sizes of the two things you are comparing. Divide the size of the bigger object (eg Earth) by the size of the smaller object (eg the Moon) to get how many times the smaller moon will fit inside the bigger planet. Write the result as 1:_____ as a ratio.

Mars has a thin atmosphere that is not thick enough to sustain life. There are plans to make a base on Mars, where people will be sent on a one way fact-finding scientific trip to learn more about that planet. Movies like THE MARTIAN are already exploring what it might be like to live on another world, based on what we already know from scientific study vehicles that have already landed there.

ACTIVITY 2:

Find out the answers to the following questions:

1) What is the Mars Rover?
2) Who designed it?
3) What has it been doing?
4) When did it land on Mars?
5) What tools does it have to explore a planet?
6) When do they expect to land people on Mars?