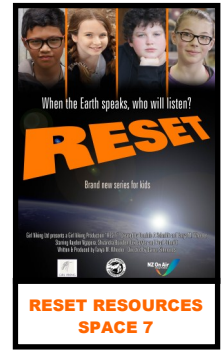


SPACE—NEPTUNE'S REALLY WINDY:

Neptune is the eighth planet in our Solar System. Neptune is very difficult to see from the Earth, and was originally predicted to exist only by mathematics. Neptune's existence was later confirmed with powerful telescopes. Although Neptune looks very pretty with its dark blue colour, it is a very hostile planet with icy winds that rage up to 2,100 kilometres per hour.



ACTIVITY:

- 1) Is -224 degrees Celsius hot or cold. At what temperature does water freeze on Earth? Is anywhere on Earth the same temperature as Uranus? Could we survive there?
- 2) In RESET, we have not yet seen the homeworld of our Earth Goddess alien, but it may be impossible to see from Earth. Scientists and Astrophysicists sometimes use mathematics to work out what is there in space, but invisible to our telescopes. They do this by plotting orbits of planets and asteroids and moons, and working out what objects might be pulling or pushing in space to change those orbits.
- 3) We use the term gravity to refer to the abstract force that attracts objects towards the ground. Different planets have different **gravitational pulls**. Find out the gravity on each of the first eight planets in our Solar System.
- 4) If the gravity on a planet is less than Earth's then we will feel lighter and will bounce and jump higher. If the gravity is a bigger number than Earth's then we will feel heavier and will find it harder to lift our feet or to pick up objects. After working out the gravity on all the Solar System planets and on the Earth's Moon, which planet would you be lightest on? Which would you be heaviest on?
- 5) EXTENSION – If you have access to an online game called UNIVERSE SANDBOX, then you can explore the Universe. By changing the gravity on some of the planets and other objects, you can see how that affects orbits and movement of asteroids, meteors, moons and other objects. Try different things and see what happens. You can speed up the process and watch millions of years flash by. Change the Universe.

THE FIRST RULE OF GRAVITY—APPLES HURT WHEN THEY FALL ON YOUR HEAD

