



## 12 ATAR Physics

### Gravity Investigation Part 1 - Research

Name: \_\_\_\_\_

#### Exoplanets

Consider the following information:

An exoplanet or extrasolar planet is a planet outside our solar system that orbits a star. The first evidence of an exoplanet was noted as early as 1917 but was not recognised as such. However, the first scientific detection of an exoplanet was in 1988. Shortly afterwards, the first confirmed detection was in 1992. As of 1 February 2018, there are 3,728 confirmed planets in 2,794 systems, with 622 systems having more than one planet.

The distance to typical exoplanets is measured in light-years. The light-year is a unit of length used to express astronomical distances. As defined by the International Astronomical Union (IAU), one light-year is the distance that light travels in vacuum in one Julian year. Because it includes the word "year", the term light-year is sometimes misinterpreted as a unit of time.

Using the web links shown below, make notes about exoplanets and the physics used to find these planets and to determine their characteristics.

Use the exoplanet Ross128b as a good example of an earth-like planet. Make notes on the method of discovery of this exoplanet, as well as any critical data used to help understand the planetary dynamics of Ross128b.

**Note:** You will be allowed to use your notes in the quiz section of this investigation.

<https://exoplanets.nasa.gov>

<https://edition.cnn.com/2017/11/15/world/new-earth-size-exoplanet-life-potential/index.html>

<https://www.youtube.com/watch?v=bnKFAS30X8>

**End of part (1)**

## Notes