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| Key Area of Astrobiology |
| Exoplanets – how do we detect exoplanets? How can we look for life on exoplanets? |
| Sciences Experiences and Outcomes |
| SCN 3-06a - By using my knowledge of our solar system and the basic needs of living things, I can produce a reasoned argument on the likelihood of life existing elsewhere in the universe.SCN 4-06a - By researching developments used to observe or explore space, I can illustrate how our knowledge of the universe has evolved over time. |
| Prior Learning |
| SCN 3-08a - I have collaborated in investigations into the effects of gravity on objects and I can predict what might happen to their weight in different situations on Earth and in space. |
| Learning Intentions and Success Criteria |
| LI* We are learning about the potential for life to exist in the universe

SC* I can create a simple telescope and explain how it works
* I can use multiple sources information to create a model of a solar system
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| Suggested Learning Activities  |
| 1. Introduction to telescopes:-* Telescopes lesson – parts and lenses. Powerpoint included
* Relevant clips – development of the Hubble telescope, James Webb Space Telescope

<https://www.youtube.com/watch?v=mmguh7eks_U><https://www.youtube.com/watch?v=BIASPc89Sgk><https://www.youtube.com/watch?v=JChDGRhpAwA>2. Exoplanet lesson <http://www.roe.ac.uk/vc/education/secondary/index.html> |
| Resources |
| * Equipment to create a basic telescope
* Resources described in ROE Activity to create exoplanets eg polystyrene boards. Power point included from a school who have trialled it.
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| Safety |
| No major concerns – naked flame with candle in telescopes practical requires caution, long hair tied back, no flammable liquids or materials nearby. |
| Approaches to Assessment |
| * Group work assessment – design of the exoplanet model. Will depend on activity suggested. Calculations are involved.
* Experimental write up of telescopes practical
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