# The Big Bang Theory

## Year 10 science – earth and space sciences

### Australian curriculum Learning objectives

* [ACSSU188](http://www.australiancurriculum.edu.au/Elements/ACSSU188)[[1]](#footnote-1): The universe contains features including galaxies, stars and solar [systems](http://www.australiancurriculum.edu.au/Glossary?a=S&t=systems)[[2]](#footnote-2) and the Big Bang [theory](http://www.australiancurriculum.edu.au/Glossary?a=S&t=theory)[[3]](#footnote-3) can be used to explain the origin the universe.

### Resources required

* [*What Caused the Big Bang?*](http://www.youtube.com/watch?v=uabNtlLfYyU&feature=fvwrel)*[[4]](#footnote-4)* captioned online video and [*Big Bang briefly*](https://www.universalsubtitles.org/en/videos/OzuJ6HLdrkT7/info/big-bang-briefly/)*[[5]](#footnote-5),* captioned online video plus facilities to watch these.
* Access to laptops
* [School Science UK website – the Big Bang theory](http://resources.schoolscience.co.uk/STFC/bang/bang.htm)[[6]](#footnote-6)
* Museum Victoria’s [Astronomy and Astrophysics activities](http://museumvictoria.com.au/pages/7585/vce-astronomy-astrophysics-student-activities-1-10.pdf)[[7]](#footnote-7).

Lesson outcome: students identify the Big Bang theory as a key theory used to explain the origin of the universe and research evidence that backs up this claim.

#### Lesson outline:

1. Intro activity: students mind map their initial thoughts to the question, ‘What theories exist to how the world was created?’
2. Discussion: teacher facilitates the Big Bang Theory as the most commonly accepted scientific theory.
   1. Teacher-led discussion of the evolution of the Big Bang - project interactive timeline as an aid from the School Science UK website.
   2. Teacher introduces and plays the two short videos while students make notes on the theory. NB: the video *Big Bang Briefly* must be played with default size. Captions will not appear if screen size changed to Full Screen.
3. Students can be given activities from the Museum Victoria to complete as teacher chooses.

### Homework/extension

Students use the [‘Taxis in space’ article](http://www.abc.net.au/science/articles/2011/07/21/3273374.htm)[[8]](#footnote-8) from the ABC’s website as a guide to write their own article for a science audience on the Big Bang theory.

### Opportunity for further activity

Students create a digital story on the Big Bang theory and compare it to the formation of a star.

1. http://www.australiancurriculum.edu.au/Elements/4ae6af0e-bfb2-417c-a2e9-9e4600a2dbe5 [↑](#footnote-ref-1)
2. http://www.australiancurriculum.edu.au/Glossary?a=S&t=systems [↑](#footnote-ref-2)
3. http://www.australiancurriculum.edu.au/Glossary?a=S&t=theory [↑](#footnote-ref-3)
4. http://www.youtube.com/watch?v=uabNtlLfYyU&feature=fvwrel [↑](#footnote-ref-4)
5. https://www.universalsubtitles.org/en/videos/OzuJ6HLdrkT7/info/big-bang-briefly/ [↑](#footnote-ref-5)
6. http://resources.schoolscience.co.uk/STFC/bang/bang.htm [↑](#footnote-ref-6)
7. http://museumvictoria.com.au/pages/7585/vce-astronomy-astrophysics-student-activities-1-10.pdf [↑](#footnote-ref-7)
8. http://www.abc.net.au/science/articles/2011/07/21/3273374.htm [↑](#footnote-ref-8)