

Next steps!

If you are interested in taking GCSE Astronomy you can start to find out more by:

- visiting the Edexcel website (www.edexcel.com/gcse2009). This will give you up-to-date information about what you will be studying and how you'll be assessed
- talking to the Head of Science at your school who will be able to describe the course in detail and advise you of what you need to do next when it comes to your options
- finding out what is happening in the world of astronomy by visiting websites such as the Royal Astronomical Society (www.ras.org.uk) or the NASA website (www.nasa.gov).

Astronomy Question:

The nearest planet to the Earth most of the time is:

Astronomy Answer:

(c) Venus

Edexcel

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About Edexcel

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Edexcel GCSE Astronomy



STUDENT GUIDE

Is this the right subject for me?

If you are fascinated by the night sky and our continuing exploration of the Universe then this GCSE Astronomy course is the subject for you.

This course will allow you to:

- begin to understand the movements of the bodies in our Solar System in more detail, explaining many of the cycles in the night and daytime sky.
- learn about how scientists, since ancient times, have used imagination, measurement, and scientific methods to explore the Universe in which we live.

What do I need to know, or be able to do, before taking this course?

All you need to know should have been covered within a Key Stage 3 science course, for example the basic arrangement of the Earth-Moon-Sun system and how this affects us on Earth. You should have some idea of how the movements of these bodies produce effects such as night and day, the phases of the Moon and the seasons. You will probably know something about the group of planets orbiting the Sun which we call the Solar System. And you will also have learned the basic mathematical skills needed to perform the simple calculations involved in GCSE Astronomy.

What will I learn?

The material in this course is divided into four topics.

Topic 1 – Earth, Moon and Sun

As well as studying each of these three bodies individually, this topic looks at the interactions between them that cause the cycles of night and day, months and years. You will learn that they are also responsible for the more spectacular events, such as lunar and solar eclipses.

Topic 2 – Planetary systems

This topic begins with the detailed study of our own planetary system – the Solar System. It will focus on the planets which orbit the Sun, comets and meteors and the story of how planets were discovered.

Topic 3 – Stars

This topic looks at the major constellations in the night sky and how they can be used to find your way around both the night sky and the Earth. Although the stars seem to remain the same for millennia, they follow a very slow cycle of birth and death. This topic looks at the process of 'stellar evolution', covering stages such as nebulae, red giants, supernovae, neutron stars and black holes.

Topic 4 – Galaxies and Cosmology

Although the early parts of this course focus on our position in the Earth-Moon-Sun system and within the Solar System, we now know that our Sun is just one of billions of stars within the Milky Way galaxy. This topic covers how this was discovered and what it means for our place in the Universe.

How will I be assessed?

Unit 1: Understanding the Universe Examination	Unit 2: Exploring the Universe Coursework
<p>You will be assessed through one two-hour examination paper in June containing the four topics listed previously.</p> <p>The paper has a variety of different question types such as multiple-choice questions, short and extended-answer questions, and graphical and data questions.</p> <p>The paper is not tiered – it covers all grades from A* to G.</p>	<p>You will be assessed on the quality of the astronomical observations you complete during the course.</p> <p>You will choose two observational projects, one completed with the naked eye and the other using simple astronomical instruments such as a sundial, a telescope, binoculars or a camera.</p> <p>You will be given a list of possible projects from which to choose. Your observations will be assessed on the quality of their design, observations, analysis and evaluation.</p>

What can I do after I've completed the course?

By studying GCSE Astronomy you will be developing important scientific skills as well as extending the range of areas where you use these skills. It is an excellent accompaniment to any GCSE Science course, as well as linking closely with the astrophysical sections within the AS and A2 Physics courses.

Along with the study of AS and A2 Mathematics, these can form the foundation for studying astronomy and astrophysics at university.

Astronomy Question:

The nearest planet to the Earth most of the time is:

- (a) Mercury
- (b) The Moon
- (c) Venus
- (d) Saturn