

# Space Knowledge questions for AQA GCSE Physics

Specification Knowledge questions on space. I have converted every line of the space specification into a question.

## Our Solar System

How many stars are within our solar system?

What is this star called?

What orbits around our sun?

Write down the names of the 8 planets in order from the Sun.

Give the name of a dwarf planet.

Give some examples of things that orbit our planet.

Which galaxy is our solar system a small part of?

Explain how the sun was formed? What is a nebula?

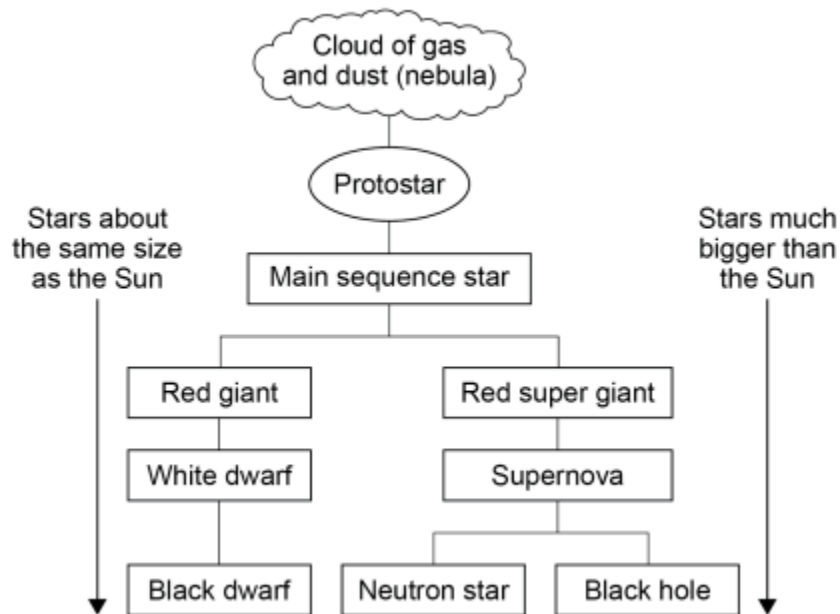
Explain what happens at the start of a stars life cycle?

Explain how a fusion reaction prevents a star from collapsing?

## The Life Cycle of a Star

What is the life cycle of a star determined by?

Make sure you learn the following sequences of events.



Watch this excellent video showing the life cycle of a star - <https://www.youtube.com/watch?v=PM9CQDIQI0A&t=13s>

What produces all the naturally occurring elements?

Where are elements heavier than iron produced?

How are elements distributed across the universe?

How do fusion processes lead to new elements?

## Orbital Motion, natural and artificial satellites

What is the difference between a natural and an artificial satellite?

How are they able to remain in a circular orbit?

What are the similarities and differences between planets, their moons and artificial satellites?

How can an object that is moving in a circular orbit be at a constant speed but changing velocity? Hint → Which one is a vector?

Why must the radius of an orbiting object change if its speed changes? Use the term 'force of gravity' in your answer.

## Red Shift

There is an observed increase in the wavelength of light from most distant galaxies. What is meant by 'observed increase in the wavelength'?

How does this increase in wavelength depend on the distance to the galaxy?

What is redshift evidence of?

What does redshift support?

What does the big bang theory suggest in terms of the beginning of the universe?

What did observations of supernovae since 1998 suggest?

Give two examples of things that are not fully understood about the universe.