Stars

Eventually, some stars exploded, producing clouds containing heavy elements from which other stars and planets orbiting them could later condense. The process of star formation and destruction continues.

Increasingly sophisticated technology is used to learn about the universe. Visual, radio and x-ray telescopes collect information from across the entire spectrum of the electromagnetic waves, computers handle data and complicated computations to interpret them, space probes send back data and materials from remote parts of the solar system and accelerators five subatomic particles energies that simulate conditions in the stars and in the early history of the universe before stars formed.

Stars condensed by gravity out of clouds of molecules of the lightest elements until nuclear fusion of the light elements into heavier ones began to occur. Fusion released great amounts of energy over millions of years.
Solar System

Mathematical models and computer simulations are used in studying evidence from many sources in order to form a scientific account of the universe.
Models

The stars differ from each other in size, temperature, and age, but they appear to be made up of the same elements found on Earth and behave according to the same physical principles.

Unlike the sun, most stars are in systems of two or more stars orbiting around one another.

Every object exerts gravitational force on every other object. The force depends on how much mass the objects have and on how far apart they are. The force is hard to detect unless at least one of the objects has a lot of mass.
Gravity
Gravity
Solar System

Light from the nearest star takes a few years to arrive. The trip to that star would take the fastest rocket thousands of years.
Astronomical scale

The Sun is many thousands of times close to the Earth than any other star. Light from the Sun takes a few minutes to reach the Earth.
Astronomical scale

Technology is essential to science for such purposes as access to outer space and other remote locations, sample collection and treatment, measurement, data collection and storage, computation and communication of information.

Telescopes reveal that there are many more stars in the night sky than are evident to the unaided eye, the surface of the Moon has many craters and mountains, the Sun has dark spots and Jupiter and some other planets have their own moons.
Solar System

Something can be "seen" when light waves emitted or reflected by it enter the eye.
Waves
Solar System

The Sun is a medium sized star located near the edge of a disc-shaped galaxy of stars, part of which can be seen as a glowing band of light that spans the sky on a very clear night.

The rotation of the Earth on its axis every 24 hours produces the night-and-day cycle. This turning of the planet makes it seem as though the Sun, Moon and stars are orbiting around the Earth once a day.
Day & night
Gravity

Telescopes magnify the appearance of some distant objects in the sky, including the Moon and the planets. The number of stars that can be seen through telescopes is dramatically greater than can be seen by the unaided eye.
Solar System

Stars are like the Sun, some being smaller and some larger but so far away that they look like points of light.

The patterns of stars in the sky stay the same, although they appear to move across the sky nightly, and different stars can be seen in different seasons.
Gravity
Solar System

A large light source at a great distance looks like a small light source that is much closer.

Magnifiers help people see things they could not see without them.
Cell Functions
Cells & Organs
Atoms & Molecules
Solar System

There are more stars in the sky than anyone can easily count but they are not scattered evenly and they are not all the same in brightness or colour.
Solar System

The Sun can only be seen in the daytime but the Moon can be seen sometimes at night, sometimes during the day. The Sun, Moon and stars all appear to move slowly across the sky.
Gravity
Solar System

telescopes ***the sun and stars*** ***observations of the sky***

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