

● What are the different fields of science and what are they concerned with?

One field of science is... chemistry, which is concerned with / deals with / studies... the composition / components of matter / substances / chemicals such as elements / molecules / ions and their properties... physics, which studies... physical laws / laws of nature / forces such as heat, motion, gravity, magnetism, electricity... subatomic particles such as protons, neutrons and electrons... biology, which deals with / studies... organisms / plants and animals / life / the composition / building blocks... of life, such as cells, chromosomes, genes, DNA, proteins and amino acids.

● What is the procedure for conducting / doing an experiment?

First, you need to have a hypothesis / an idea... that you want to prove. Second / next, you have to test this hypothesis / do an experiment... It's important to record all of your results very accurately / precisely... Sometimes you may have to do the experiment more than once to test / check your results. If the experiment confirms / shows your hypothesis you can say it proves it.

● What is some of the equipment you might need for an experiment?

You would need... a lab / laboratory where you can do / conduct the experiment... a microscope to look at very small objects like cells... an electron microscope to look at subatomic particles... a beaker to measure and pour substances / chemicals... a test tube to mix chemicals and watch / study reactions... a Bunsen burner to heat chemicals... a stopwatch to measure time... Petri dishes to breed and study bacteria / fungi / micro-organisms ... a lab coat to protect your clothes... a computer to store and calculate results / run tests.

● What benefits does science bring?

Science... increases our understanding / knowledge of the world... shows how the world / universe / natural phenomena work(s)... is the most reliable way of showing what is true or false... can be applied to make our lives more convenient / better... improves living conditions in the form of technology or medicine.

● What is the difference between discovery and invention?

Discovery means coming across something that already exists (e.g. the law of gravity) while invention refers to creating something new (e.g. a telephone).

● Who were some famous scientists and what did they discover or invent?

One famous scientist was... Isaac Newton, who first developed the idea of gravity and the laws of motion... Robert Boyle developed Boyle's law, which describes

the relationship between volume and pressure of gases. Nicholas Copernicus was the first person to theorize that the Earth revolved around the Sun. Galileo Galilei later proved this with a telescope... Marie Curie developed the theory of radioactivity and discovered new elements, polonium and radium... Albert Einstein developed the theory of relativity, which described the nature of gravity in relation to space and time.

● What were some of the most significant inventions in human history and why?

Some of the most significant inventions in human history are... the wheel because it allowed people to transport goods or themselves quickly and over great distance with less effort... penicillin because it kills bacteria and has saved lots of lives... X-ray technology because it allows us to look inside the human body... the internal combustion engine because it improved / quickened transportation / allowed people and goods to travel even further... the telephone because it allowed people to communicate over long distances... the computer because it allows people to calculate difficult equations / sums quicker / store lots of information... the internet because it connects people all over the world / allows people to communicate with others across the world and create virtual realities / enables people to access a huge quantity of information quickly.

● Which invention can you not live without?

The invention I cannot live without is... my computer because it allows me to play games / use the internet / communicate with friends / do my schoolwork... my mobile because I can be in contact with friends and family all the time... my iPod / MP3 player because it stores all my music... my digital camera because it allows me to keep a record of my life / I love taking photographs... television because I need it to relax / I love television shows.

● What have been some of the most dangerous or least helpful inventions in history?

An example of... the most dangerous / least helpful invention is... the nuclear bomb because it can only cause destruction... television because it wastes a lot of time and stops people learning... guns because they are used to kill people... plastic because it pollutes the environment.

● How has digital technology changed our lives?

Digital technology... has made it easier to communicate... can store lots of information, so it is easier to conduct research or create images or work with sound and pictures on a computer... has improved the quality of audio and video recording... has given people more access to information... has reduced the cost of sending and storing information.

