

Science

We come across science in everyday things in the world around us, both living and non-living. Studying Science in school can help you to understand the importance of science in our lives and in the environment.

What will I learn in Science?

The Science course covers the three sciences:
Biology, Chemistry and Physics.

Biology is the science of living things.

You will learn about:

- plants and animals including humans
- the environment and how to care for it.

Chemistry deals with the composition of substances and their properties.

You will learn about:

- the materials that make up the world around us
- how materials can change and be changed.

Physics is the science of matter and energy and how they interact.

You will learn about:

- forces and energy
- how things work.

How will I learn Science in school?

Some of the things you may do with your teacher and classmates are:

- work as part of a group
- go on field trips • use computer-based resources
- carry out experiments and investigations
- try your best at homework and assignments.

How can I learn more about Science outside of school?

Some of the things you may do are:

- watch science programmes on television

- keep up to date with the science stories in the news
- use the Internet, which is a huge source of science explanations and experiments. Ask your teacher for a list of websites.

How will I know how I am getting on?

As you progress in Science you will learn to work like a scientist. You will learn how to plan and carry out experiments and investigations and make sense of the results. As you do your coursework you will be able to see how you are getting on by looking back at earlier experiments and investigations. Your teacher will also tell you how your skills have improved.

What is the Science Junior Certificate exam like?

In Junior Certificate Science you will be examined in two ways:

- coursework - during the three years of the Junior Certificate you report on the investigations that you carry out in class. These reports count for 35% of your Junior Certificate marks
- written examination - you will answer questions on the science topics that you have studied and on the skills (e.g. science investigation skills) that you have developed.

You can take the exam at Higher or at Ordinary level. When the time comes to decide, your teacher will help you choose the level that suits you best.

Is learning Science anything like what I did in primary school?

In primary school you learned about living things, energy and forces, materials, and about care for the environment. You also explored the world around you and learned to work like a scientist. In Junior Certificate Science you will use and develop these science skills.

Will Science have anything to do with other subjects I will be studying?

Science links with many of the other subjects you will be studying. You will use some of the things you learn in Mathematics to analyse and interpret the results of your investigations. In Geography you will study about the environment and soil. In Home Economics you will study about food and the human body.

How will Science be useful to me?

Many of the skills you learn while studying science such as problem solving and investigation skills are very useful outside of school and will be of use to you in whatever job you choose to do.

In third level there are many different types of science courses on offer and many different careers open to science students.

These include becoming a: pharmacist, radiographer, doctor, dentist, technician, psychologist, astronomer, teacher, vet and researcher.

Will Science be very different after Junior Certificate?

After the Junior Certificate, Science splits into four subjects: Physics, Chemistry, Biology and Agricultural Science. Depending on your school, you can choose to do different combinations of these. If you would like to choose any of these subjects in Leaving Certificate, it is important that you take Science as a subject for Junior Certificate.

[Information sourced from ncca.ie]

Science Course

The science course is divided into three segments.

1. Coursework A - This is carried out in school (10%)
2. Coursework B This is where there are a number of investigations carried out in third year (25%)
3. Coursework C A written examination taken at the end of third year (65%)

Examination paper

There are three sections in the exam paper and you have two hours to answer all questions on the paper. The topics covered are as follows:

Biology
Chemistry
Physics

There are a total of nine questions on the paper .

Biology is covered in Questions 1, 2 and 3
Chemistry is covered in Questions 4, 5 and 6
Physics is covered in Questions 7, 8 and 9

Questions 1, 4 and 7 are all questions with 8 short questions. The remainder of the questions are long and require a detailed answer.

The topics covered in the course include the following:

Mocks.ie science revision notes cover all of these topics too!! *Why not test yourself with our revision tool on the exam questions and the course material?*

Biology

Food

Digestion and enzymes

Respiration and the breathing system

The circulatory system

Excretion

The skeletal and muscular systems

The sensory system

The reproductive system

Genetics

Living things

The microscope

Structure and transport in flowering plants

Photosynthesis and plant responses

Plant reproduction

Ecology

Microbiology and Biotechnology

See biology definitions below

Chemistry

Separating mixtures

States of matter

Classification of substances

Atomic structure

The periodic Table

Metals and Non - metals

Chemical bonding

Acids and Bases

Chemical Reactions

The atmosphere

Water

Solutions and crystallisation

Hard and Soft water

Fossil fuel

Plastics

See chemistry definitions below

Physics

Measurement

Density and floatation

Motion: Speed, velocity and acceleration

Force and Motion

Levers and turning effect of a force

Pressure

Work, Energy and Power

Heat and Heat transfer

Light

Sound

Magnetism

Static and Current Electricity

Effects of electricity in the home

Electronics.