About your Physics and Chemistry ESO 3 book

Physics and Chemistry 3 is organised into three **blocks**. Each content block is divided into **units**.

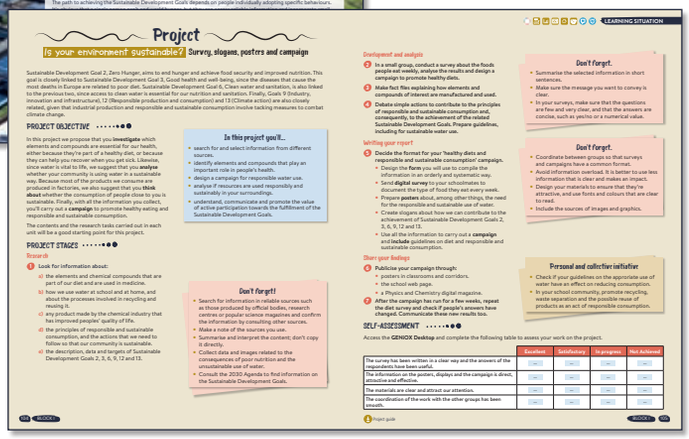
BLOCKS

The **basic knowledge areas** are covered in three blocks called **Matter and how it changes**, **Interaction** and **Road safety for pedestrians, drivers and passengers**. The content is dealt with in the units of each block as well as in the **Work on your key competences** tasks at the end of each unit.

The block introduction includes an overview of the topics covered in the units in that block and the different **learning situations** in each of them. It also contains a brief presentation of the project that comes at the end of the block.

To end each block there's a **Learning situation**. Here you'll carry out a **project** that will allow you to put into practice what you've learned during the block as well as applying your **creativity**, working both **individually** and as part of a **group**.

The **Work on your key competences** tasks at the end of each unit will also help you with this project.



You can access the **Project guide** via your **GENiOX Desktop.** This helps you to carry out the different stages and complete the self-assessment form.

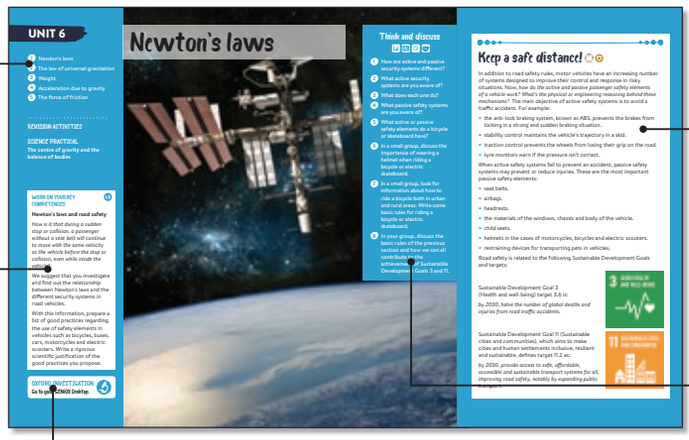
UNITS

Unit introduction

This is composed of a number of elements.

A list of the contents and sections that are in the unit.

An introduction to the **Work on your key competences** task, which is the **Learning situation** LS at the end of the unit.



The introductory texts have been selected to foster **individual growth** (emotional, social and academic) and to encourage you to respond to the **challenges facing the world today**: the achievement of the Sustainable Development Goals, children's rights, gender equality and digital competence. They'll also help you to develop the personal, academic and professional **competences** you'll need in the future.

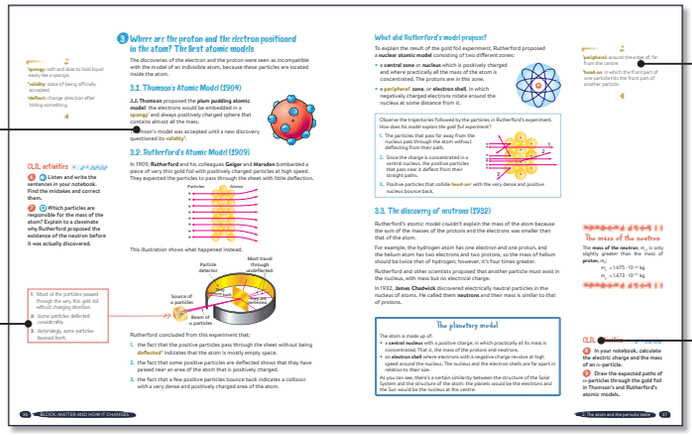
In addition, we suggest that you go to your **GENiOX Desktop** to access **Oxford Investigation**. You can work with this digital resource, which includes tasks and simulators, throughout the unit.

In *Think and discuss*, there are activities that promote reflection on and debate about the content of the text.

Development

These boxes introduce interesting facts or ask questions based on everyday life, experiments or images. This helps you to deduce what content will be covered in the section.

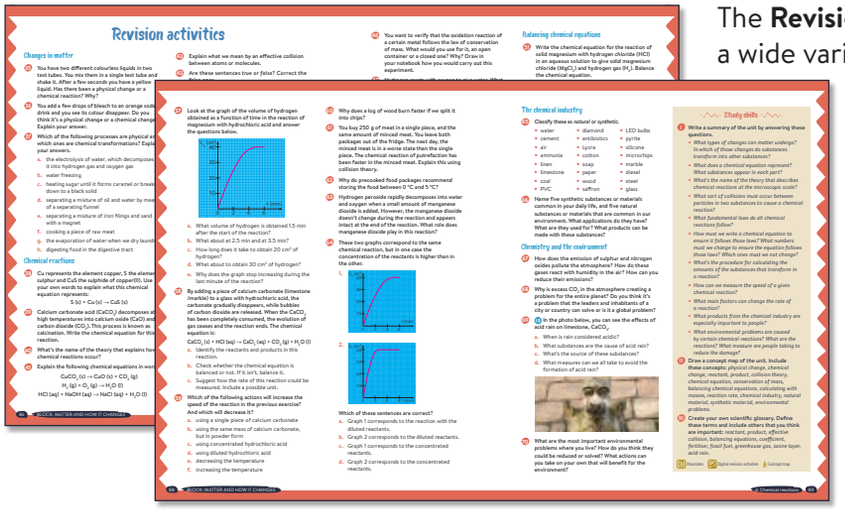
Key content is highlighted.



In the margins, there are **glossary boxes** with definitions of key vocabulary, as well as complementary texts that reinforce or extend the content.

Activities include **listening** and **speaking** tasks. Activities also cover various **key competences** and all activities cover the STEM and plurilingual competences.

Revision activities

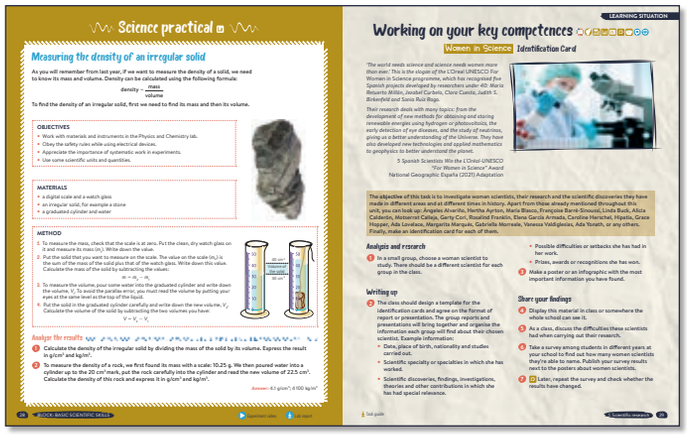


The **Revision activities** are organised by topic. They include a wide variety of different types of activity that cover the different key competences and all of them cover the STEM and plurilingual competences.

In the **Study skills** section, you'll make a summary of the unit, a concept map and a scientific glossary. You'll be able to use all of these resources to **review** the contents of the unit.

Science practical

In this section you'll discover how to use laboratory instruments and carry out experiments following the steps of the scientific method.



Work on your key competences

The **Learning situation** in **Work on your key competences** enables you to put the contents you've studied into practice in an integrated manner, as well as allowing you to relate them to the Sustainable Development Goals.

Throughout the unit there are LS activities, which are connected to the Learning situation.

On your **GENiOX Desktop** there's an **Experiment video** and a **Lab report**, which you can use to write up your experiment and record your results.

There's also a **Task guide**, which includes the self-assessment rubrics.

About your Physics and Chemistry ESO 3 book

Symbols used in your book

Some sections and activities in this book are specifically designed to develop the **key competences** and to **focus on** aspects of your **individual development** and the **challenges of today's world**. The symbols below help you to identify these sections and activities.

Remember that Physics and Chemistry mainly works on the STEM competence. This means that all of the activities in this book develop that competence, as well as the plurilingual competence.

KEY COMPETENCES

- Linguistic competence
- Plurilingual competence
- Competence in science, mathematics, engineering and technology (STEM)
- Digital competence
- Personal and social competence and learning to learn
- Civic competence
- Entrepreneurial competence
- Cultural awareness and expression

FOCUS ON

- Children's rights
- Gender equality
- Physical and emotional wellbeing
- Digital competence
- The world of work
- The Sustainable Development Goals

OTHER SYMBOLS

- LS Learning situation
- Speaking activity
- Group activity and cooperative learning
- Listening activity
- STEAM task (interdisciplinary activity)
- Video
- Downloadable material

The GENiOX Desktop

The **GENiOX Desktop** is a digital space where you can access your **digital book**, as well as a wide range of **resources** in different formats (such as video, HTML and PDF). These will help you with the tasks and processes that are the basis of your learning: observation, analysis, consolidating and expanding your knowledge, study skills and exam revision.

- **Unit presentation**
- **Oxford Investigation,** which works on the contents digitally through tasks, animations and simulators
- **Animations** that help you to visualise processes and mechanisms in a dynamic way
- **Passnotes:** summarised version of each content section with audio
- **Simulators** that allow you to work in a virtual laboratory
- **Experiment video** of the Science practical
- **Digital revision activities** to test your knowledge in an interactive format
- **Concept maps, dictionary worksheets** and **scaffolding worksheets**
- **Weblinks** to expand your knowledge and find information for research tasks

The Sustainable Development Goals (SDGs)

The UN launched the Sustainable Development Goals (SDGs) in 2015 for its member states to adopt. The SDGs aim to end poverty, reduce inequality and injustice and tackle climate change for everyone in the world.

Access your **GENiOX Desktop** to discover the aims of each of the Sustainable Development Goals.

To achieve the Sustainable Development Goals, we need to remember these three things.

- The **deadline**: This is 2030.
- The **targets** and **indicators**: the 2030 Agenda divides each goal into targets and provides indicators to measure progress.
- The **agents of change**: everyone on the planet has a role to play in meeting the Sustainable Development Goals. This includes governments, institutions and the whole of civil society.

These are the 17 goals established by the UN for **global development within planetary boundaries**.