

About your Biology and Geology ESO 3 book



Biology and Geology 3 is organised into two **blocks**. Each content block is divided into **units**.

BLOCKS

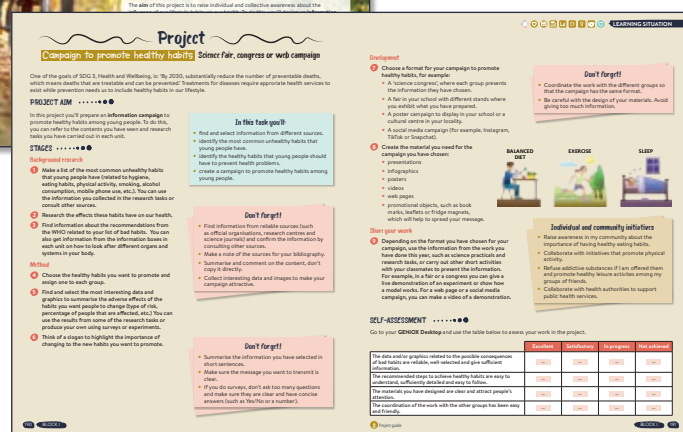
The **basic knowledge areas** are covered in two blocks called **The human body and health** and **Geological processes and hazards**. The content is dealt with in the units of each block as well as in the **Work on your key competences** tasks at the end of each unit.

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

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.

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.

Fact
You've probably heard someone say they're 'on a diet' if they're trying to lose weight. What does it mean to be 'on a diet'? Can you be 'on a diet' if you're not trying to lose weight?

Textbook fact
The term **diet** refers to the quantity and type of food consumed daily by a person.

Textbook fact
There are no 'bad' foods, only bad eating habits. Food that is healthy and balanced provides the necessary energy and structural materials in the right proportions. The food web is a tool to help design a healthy, balanced diet. The food web distributes the nutrients according to the function they fulfil in our bodies.

Inferring the food web
The colours indicate the different functions. What do you think the different colours represent? What do you think you should consume more of? What do you think you should consume less of?

Energy function: Group I: cereals and pulses
Structural function: Group II: oils and fats
Regulatory function: Group III: vitamins and minerals
Water and exercise: Group IV: meat, eggs, fish, poultry and seafood
Group V: fruits, veg.
Group VI: fruits, veg.

Activity
In small groups, discuss if a varied diet is always a balanced diet. Read the information on the right about food. Think of your favourite foods. Write three reasons why these foods are so important. Take turns to present and identify the mistakes made by the students when they describe a healthy diet. Look at the food web and identify which foods we should consume the most of. With a classmate look at the charts below and discuss why the data are unbalanced.

| Country | 1200 | 1500 | 1800 | 2000 | 2010 |
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| Lebanon | 100 | 100 | 100 | 100 | 100 |
| Syria | 100 | 100 | 100 | 100 | 100 |
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| Afghanistan | 100 | 100 | 100 | 100 | 100 |
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| Bangladesh | 100 | 100 | 100 | 100 | 100 |
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| Japan | 100 | 100 | 100 | 100 | 100 |
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| India | 100 | 100 | 100 | 100 | 100 |
| Brazil | | | | | |

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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 Biology and Geology 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
- Competence in science, mathematics, engineering and technology (STEM)
- Digital competence
- Personal and social competence and learning to learn
- Civic competence
- Entrepreneurial competence
- Competence in awareness and cultural expressions

FOCUS ON

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

OTHER SYMBOLS

- 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
- 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.

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 objectives established by the UN for **global development within planetary boundaries**.

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

