

DIGITAL CULTURE

Technology for sustainability

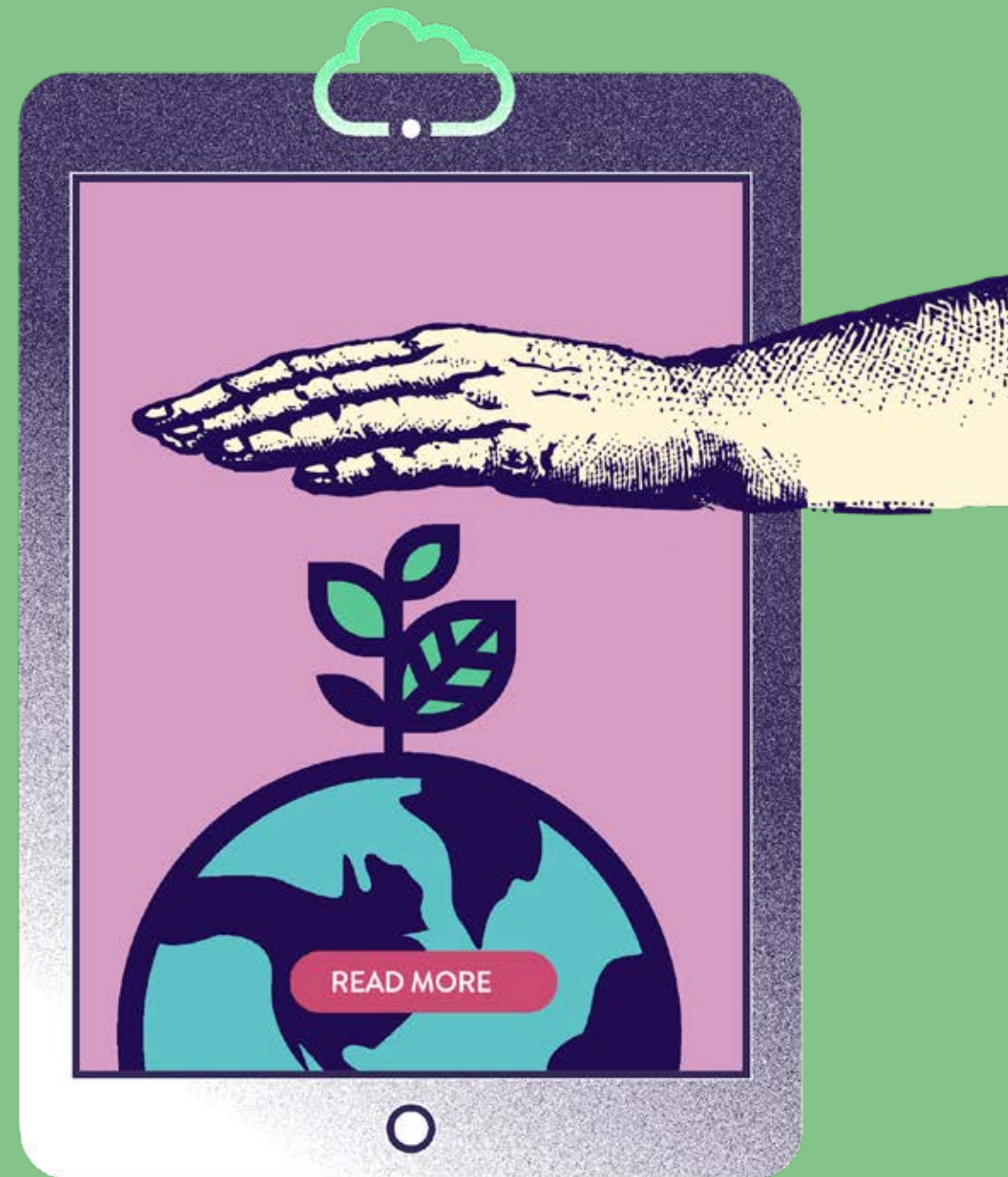
Dealing with the climate emergency using digital tools.

UNIT_9

“We owe it to ourselves and to the next generation to conserve the environment so that we can bequeath our children a sustainable world that benefits all”.

Wangari Maathai

(Biologist, environmentalist and political activist)



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1 AIMS

- > To learn about the diversity of areas and issues linked to the climate crisis
- > To reflect on concepts of climate change through the digital environment
- > To strengthen the skills to research online issues related to sustainability and science
- > To understand the influence of the climate emergency on daily life and actions, as well as the potential to act on it
- > To encourage environmental awareness and a critical spirit in environmental matters

2 CONTENTS



- The keys to climate change through digital tools and video games
- Main causes and consequences of climate change. Climate-focused video games
- Climate science online
- The digital scientific community dedicated to climate. International organisations
- The United Nations Sustainable Development Goals (SDGs)
- Online mobilization against global warming
- The campaigns of international environmental organizations. The Fridays for Future movement

3 CLIL CONTENTS

**CONTENTS / COGNITION / COMMUNICATION / CULTURE**

- > Analysing climate change through digital tools
- > Climate science online
- > Digital scientific community on climate
- > Designing environmental campaigns



3 CLIL CONTENTS



COGNITION / COMMUNICATION / CULTURE / CONTENTS

- > Analysing and linking climate change issues with entertainment
- > Understanding information from different sources and presenting it on different supports
- > Designing campaigns with a global scope

3 CLIL CONTENTS

**COMMUNICATION / CULTURE / CONTENTS / COGNITION**

- > Listening skills: listening for understanding and listening for specific information
- > Writing for specific purposes: reporting on popular science
- > Key vocabulary: ecological footprint, online campaign, circular economy, activism

3 CLIL CONTENTS



CULTURE / CONTENTS / COGNITION / COMMUNICATION

- > Understanding climate and climate change as a global and cultural phenomenon
- > Understanding the role and work of global institutions in the world





4 ASSESSMENT



ASSESSMENT CRITERIA / ASSESSMENT TOOLS

Teachers will assess the students' ability to:

- > Understand the impact of people on climate
- > Design presentations which convey the importance of climate issues



4 ASSESSMENT



ASSESSMENT TOOLS / ASSESSMENT CRITERIA

- > Teacher's rubrics
- > Assessment of presentations and reports
- > Assessment of group work in and out of class



5 GRADED RESOURCES



5.1. ACTIVITIES FOR 1st and 2nd ESO

LESSON 2

1st ESO In small groups choose one of the infographics from the [European Environment Agency](#) to make a new infographic or poster about the same topic in your city or home. Present to you class answering these questions: What are the similarities and differences between the original and your version? What can you do to improve the situation in your city or home?

2nd ESO In 4 groups: each group chooses an international organization, [UNFCCC](#), [FAO](#), [EPA](#) or [IUCN](#) to explore their social media profiles and select the most relevant topics on climate change through videos and images. Then do a 'Who is who?' of these organizations and make a digital presentation with three prominent people in them.

European Environment Agency



United Nations
Climate Change



Food and Agriculture Organization
of the United Nations



United States
Environmental Protection
Agency



5 GRADED RESOURCES



5.1. ACTIVITIES FOR 1st and 2nd ESO

LESSON 4

1st ESO Learn a bit about Sustainable Development. Then, in pairs take turns to calculate your own Ecological Footprint. Make a screenshot or copy your results to compare them with your classmates. Create an action plan to improve your Ecological Footprint.

2nd ESO Visit the Ecological Footprint website to investigate which are the keys to the ecological footprint. You can watch this video to learn more about it. Then, in groups, prepare an environmental campaign with short videos or pictures to convince the school to reflect on its ecological footprint. You can use tools such as Piktochart or Infogram.



5 GRADED RESOURCES



5.1. ACTIVITIES FOR 1st and 2nd ESO

LESSON 5

1st ESO With your teacher, visit the UN website on **Biodiversity and Climate Change**. Read the information and watch the video. Then, in groups, work on the biodiversity adapting an **Ecosystem Diorama** to your area.

2nd ESO Have a look at the many **things you can do to help save the planet.**
Then, with your teacher read about **the new deal for animals and people.**
Individually or in pairs, make a **photobook** or **presentation** on wildlife,
highlighting endangered species and ways of avoiding human impact.



5 GRADED RESOURCES



5.1. ACTIVITIES FOR 1st and 2nd ESO

LESSON 6

1st ESO In groups, choose an NGO dedicated to the environment (WWF, Greenpeace, Birdlife International, Friends of the Earth, etc.) and make a poster or digital presentation with the resources they use to spread their claims: photographs, videos, interviews, social media, among others. Present to the class and explain what the main goal of your NGO is.

2nd ESO Compare the activist discourses of institutions such as Amnesty International, Unicef or Human Rights Watch. In groups, make a selection of audio-visual resources to share with your school. Make an online presentation or posters to hang on the walls of your school.



5 GRADED RESOURCES



5.2. ACTIVITIES FOR 3rd and 4th ESO

LESSON 1

3rd ESO Learn about some [Climate Change Facts](#) explained by young people. Search, on the [STEAM platform](#), for video games related to climate change. Choose the examples which show more responsibility with the preservation of the environment and detect the actions of destruction of ecosystems. Then analyse [The Climate Trail](#) game in depth.

4th ESO Visit the [Science Focus Magazine](#) and watch the video on [The way we use the land](#) in order to find an idea to create a videogame with a climate change challenge in your country. Think about the characters, the enemies, the missions and the rewards. Use the [Gamesonomy](#) website to get further ideas on the type of game. If you want a further challenge, make it real and [create your videogame](#).



STEAM®

Science Focus
THE HOME OF BBC SCIENCE FOCUS MAGAZINE

ipcc
INTERGOVERNMENTAL PANEL ON
climate change

gamesonomy

5 GRADED RESOURCES



5.2. ACTIVITIES FOR 3rd and 4th ESO

LESSON 2

3rd ESO You are going to become scientists for a day and find out about research in Europe and, especially, in your region. In groups design different infographics to show the research on climate change being carried out by different institutions ([EEA](#), [Max Plank](#), [CREAF](#), [BC3](#), [CEAM](#), among others). Try using [Canva](#) for your presentation.

4th ESO Research and action. Study the research carried out in our region by the [Global Change Unit UV](#) and make virtual profiles of local scientists. After that, check out some [stories and games](#) designed to create awareness about climate change. Write a short review of the games or projects you engage with.

European Environment Agency



MAX-PLANCK-GESELLSCHAFT



CREAF

bc³

BASQUE CENTRE
FOR CLIMATE CHANGE
Klima Alaketa Ikerka
Sustainability, that's it!



SCRATCH

5 GRADED RESOURCES



5.2. ACTIVITIES FOR 3rd and 4th ESO

LESSON 3

3rd ESO In groups, work on the process of producing a video presentation and making proposals on **Sustainable Development Goals** (SDGs) focused on **water** or health and the Mediterranean. Use **Biteable** or any other video editor of your choice. Upload your videos to **Flipgrid** so your classmates can watch and rate them.

4th ESO With your teacher, watch the video on **gender equality and Sustainable Development Goals**. Then, using female characters, design a comic focused on gender equality and sustainability. You can do it on paper or **online** (try **this link** too). You can get some ideas from these **comics**.



5 GRADED RESOURCES

5.2. ACTIVITIES FOR 3rd and 4th ESO

LESSON 4

3rd ESO Do you know what a **water footprint** is? Calculate your water footprint following this **model**. In groups, compare your results and create a joint action plan to reduce your water consumption. Present to the class and decide on the best practices.

4th ESO In groups choose one of the following topics:

a) Visit this website on **circular economy** and watch the video about the topic.

Prepare videos and posters to explain what the circular economy is and how it could be adapted to your local reality.

b) Watch the **video** and learn about the **programmed obsolescence** of technology. Make a summary of the key points.

When you finish look at your classmates' projects and try to find similarities or connections between both topics.



5 GRADED RESOURCES



5.2. ACTIVITIES FOR 3rd and 4th ESO

LESSON 5

3rd ESO Write a newspaper article or a blog entry about the relationship between **biodiversity**, **climate change** and health, both in your immediate environment and in developing countries. You can write your article and use an online **newspaper generator**. And you can create a blog on **Wordpress**.

4th ESO Using **Scratch** or other presentation tools, prepare informative resources on these topics: **Global Food Security**, local production and the **challenge of not wasting food**. Focus on the power you have as citizens to change these trends.



5 GRADED RESOURCES



5.2. ACTIVITIES FOR 3rd and 4th ESO

LESSON 6

3rd ESO Learn about environmental group campaigns like **Climate Justice**.

Then, in pairs choose one of the following options:

a) make a timeline of **campaigns** with **Tiki-Toki**.

b) prepare a podcast about the history of **environment** movements.

4th ESO Analyse **Fridays for Future** and the Greta Thunberg phenomenon on **Twitter** and **Instagram**. In groups, prepare a protest campaign about an environmental challenge in your city or region: write a manifesto, send a news piece to the media, design an image with **Canva**; make a short video to broadcast with **Biteable** or other tools and, if possible, arrange an in-person meeting, similar to FFF concentrations.

GREENPEACE

GREATIST

The Guardian



6

INCLUSION



RESOURCES FOR SPECIAL NEEDS STUDENTS



Websites

National Geographic Climate Change for kids

Climate Reality Project

European Space Agency

How to talk to your kids about climate change



6 INCLUSION



RESOURCES FOR SPECIAL NEEDS STUDENTS



Videos

Greta Thunberg. Draw my life

Climate tales videos from NASA

Climate change: Earth's giant game of Tetris

Climate change (according to a kid)

Can wildlife adapt to climate change?

European Environment Agency

Why is biodiversity so important?



Climate Kids



7 OTHER LEARNING RESOURCES



Videos

[**Greta Thunberg COP24**](#)

[**Greta**](#)

[**EEA Circular economy**](#)

[**Sustainable Development Goals \(SDG\)**](#)

[**WHO: The SDG Health Price Tag**](#)

[**Unicef**](#)

[**Julia Roberts; Harrison Ford; Liam Nelson**](#)



Website

[**Using videogames to fight climate change**](#)

[**Climate Change in Europe**](#)

[**From linear to circular economy**](#)

[**Food Loss and Waste reduction**](#)

DIGITAL CULTURE

Technology for sustainability

Dealing with the climate
emergency using digital tools.

UNIT_9



GENERALITAT
VALENCIANA

Conselleria d'Educació,
Cultura i Esport

TOTS
A UNA
veu