

The logo is a circular emblem with a green border. Inside the border, the text "Think Smart Act Green" is written in a white, sans-serif font, following the curve of the bottom half. The center of the logo features a white silhouette of a brain, which is also shaped like a tree with roots and branches. Surrounding the brain are the flags of the participating countries: Portugal, Italy, Spain, the European Union, Sweden, and the United Kingdom.

2021 - 2023



In your hands lies the power to shape the future. As educators, you have the incredible opportunity to inspire and guide the young minds of Europe toward a sustainable and climate-friendly world. We believe that education is the key to creating a brighter future, and that is why we are thrilled to present you with this manual for educators, filled with carefully created lesson plans focused on tackling climate change.

Climate change is one of the most pressing challenges of our time, and it requires urgent action from every sector of society. By incorporating these lesson plans into your classrooms, you are not only equipping students with valuable knowledge and skills, but you are also empowering them to become agents of change. Together, we can ignite a passion for sustainability and shape a European generation that will make a difference.

Let us take a closer look at the exciting topics covered in these lesson plans. Firstly, we address the importance of the blue economy and investments to save our seas. Through engaging lessons, students will understand the value of marine ecosystems, the impact of plastic pollution, and the need for sustainable fishing practices. They will discover the power of collective action in preserving our oceans for future generations.

Next, we turn our attention to infrastructure and roads. By examining sustainable urban planning, eco-friendly transportation systems, and the concept of green cities, students will learn how our built environment can contribute to climate change mitigation.

Furthermore, the lesson plans delve into efficient and environmentally friendly food production. Students will explore sustainable agriculture, the impact of food choices on the environment, and the potential of plant-based diets. They will discover that small changes in our daily food habits can have a profound impact on climate change.

We then explore the vital role of nature and biodiversity in tackling climate change. Students will discover how ecosystems function, the impact of deforestation and habitat loss, and the significance of biodiversity conservation. Through hands-on activities, they will understand the intricate connection between nature and our climate.

We also delve into smart and fast ways to save energy and cut emissions. By teaching students about energy efficiency, renewable energy sources, and sustainable practices, you are instilling in them the importance of responsible energy consumption.

Lastly, the lesson plans introduce students to innovative technologies of the future for a climate-neutral Europe of 2030. From exploring clean transportation solutions to renewable energy advancements, students will envision a future where cutting-edge technologies pave the way toward a sustainable society.

We invite you to embrace these lesson plans and bring them to life in your classrooms. By fostering critical thinking, encouraging open discussions, and engaging students in hands-on activities, you will enable them to become environmental stewards and changemakers.

Remember, the journey toward a sustainable future starts with education. Your commitment to teaching and inspiring the next generation is invaluable. Together, let's empower our students to create a climate-friendly Europe and a better world for all.

Thank you for your dedication and passion for education.

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1. Blue economy investments to save the seas



Lesson Plan “Blue economy investments to save the seas.”

School (s)	IES JOAQUIN TURINA
Improvement Goal	Awareness about the need of sustainable management of everything that the sea offers us.
Action Plan	Development and improvement of new skills, joint strategies, and exchange of good and social practices.
Action Coordinator(s)	Biology + Economy Teachers
Level	1st class of Upper secondary school

A. Planning

1. Necessity - Goals

- Improve vocabulary about sustainability, blue economy, and environmental care.
- Strengthen teamwork.
- Raise awareness of student's care of seas and the need to change to a blue economy.
- Make a change of lifestyle.
- Spread the awareness between partners, friends and families.

2. Actions & Implementation Timeline

- Introductory lesson with a discussion about the current problem and the need to change to a different resources management of the seas.
- Meeting with experts in blue economy resources.
- Study visits of sustainable fishing companies.
- Research about the topic.
- Meeting and exchange with other classes or schools.
- Evaluation of the process and improvement.

3. Resources - tools - research tools

- Human resources: experts and teachers.
- Material resources: computers, digital screens, presentations and documents showing the real dimension of the problem.
- Digital resources: Videos and Films about Ocean and Seas care and Blue Economy, governmental material.

4. Success criteria (for teachers, students, school)

- Clear instructions, good organization, and selection of resources.
- Motivated students with open and critic minds.
- Improve the school's awareness toward the topic.
- Distinguish different kinds of economy systems (sustainable and not sustainable)
- Interest and involvement in the activities and in the lessons.
- Awareness of the topics treated: how do they affect everyday life and what can be done to change the daily habits.
- Convey a cultural, social, and scientific message toward the imminent necessity of changing our economy system toward the seas and oceans exploitation.
- Knowledge and access to sustainable and renewable resources.

2. Infrastructure and roads to tackle climate change



Lesson Plan The mobility of the future: infrastructure and roads to contrast climate change.

School (s)	Gymnasieskolan Spyken, Lund
Improvement Goal	To learn how to travel more sustainably
Action Plan	Show the film to fellow students
Action Coordinator(s)	English teachers
Level	Upper secondary school year 2

A. Planning

1. Necessity - Goals

- To reflect on what sustainable travelling is
- To raise the students' power to impact their family's way of travelling

2. Actions & Implementation Timeline

In groups you are going to work with the theme “The mobility of the future: infrastructure and roads to contrast climate change”, and it is going to end up in a film.

Contents of the film:

- How can you travel sustainably to your destination today?
 - What means of transport do you need to take between Lund central station and your destination?
 - What are the main problems with travelling sustainably to your destination today?
 - Can you measure the carbon footprints?
- What are some possible solutions to the problems?
 - How could the trip be made more sustainable?
- Eco tourism at your destination
 - How eco-friendly is your destination?
 - What is done in the city/region to support eco-tourism?

- School logo
- Erasmus + logo
- The name of the Erasmus + project “Think Smart - Act Green”.
- The names of the participating students

Countries: Austria, Italy, Greece, Portugal, Spain, USA, Thailand, United Arab Emirates

The film should be 3-5 minutes long.

3. Resources - tools - research tools

- Google Maps
- Carbon dioxide calculator
- Film recording device, for example a mobile phone.
- Program for film editing

4. Success criteria (for teachers, students, school)

- Improved awareness of travelling behaviour
- Possibility to impact others’ way of travelling.
- Knowledge about how to travel as sustainably as possible



Lesson Plan “Road Networks in Climate Change”

School (s)	Stiftsgymnasium St.Paul, Aristotelio College
Improvement Goal	Need to Adapt Road Networks in Climate Change
Action Plan	Excursions, class and school interactions, recycling project, Project for Road Networks
Action Coordinator(s)	Anna, Mary, Franz, Isabel ...
Level	first year students of secondary school

A. Planning

1. Necessity - Goals

- improve vocabulary about Road Networks and Climate Change (in mother tongue and in English)
- strengthen teamwork
- raise awareness of student's contribution of Climate Change
- Need to use zero- and low-emission vehicles in the future, e.g. electric vehicles (as long as the electricity is produced from renewable sources)
- make a change of lifestyle
- spread the awareness

2. Actions & Implementation Timeline

- introductory lesson with a discussion (plan B: bigger meeting with headmaster, school management, teachers and some other students)
- students create e-maps with bike lanes for "smart" commuting
- meeting with experts
- study visit of companies to become aware of transport systems in road transport and the environmental impact of freight and passenger transport (new technologies, applications on mobile phones) meeting and exchange with other classes or schools
- evaluation of the process and improvement

3. Resources - tools - research tools

movies: documentary film documentary film about mobility of the future e.g. shorturl.at/fjqCV

websites: regional governmental sites and others, e.g. shorturl.at/kswAG, shorturl.at/nrSUV, shorturl.at/mryTX,

experts

sponsors

4. Success criteria (for teachers, students, school)

- clear instructions and good organization
- motivated students with open minds
- students use bicycles or public transports more for their commuting
- improve results in evaluation
- - improvement of the transport system - school buses of the school
- simulation of the route to school through "green" commuting
- find a sponsor for the project
- use governmental educational material

Instructions: students and teachers follow the steps in the above scenario as suggested. The following steps are recommended to be completed by each school that will implement the educational scenario.

3. Efficient and environmental food production to tackle climate change



What will be the optimal food production in 2050?

Why talk about Sustainable Food?

Food is essential to life. It also forms an important part of our cultural identity, and plays an important role in the economy. People are aware that the food they eat is an important factor affecting their health, but what is less well known is the impact producing and consuming food has on the world's resources. Alongside the cars we drive and the energy we use to heat our houses, the food we produce and consume has a significant impact on the environment through, for example, greenhouse gas emissions, the use of land and water resources, pollution, depletion of phosphorus, and the impact of chemical products such as herbicides and pesticides. (Link: [EIPRO Report](#)) (European Commission 2019)

This needs to be solved for us to be able to keep on living on earth.

Product:

During the exchange week in Lund your [group](#) will create a poster picturing what a sustainable food production could (or should) be like in 2050.

How to go about it:

Your group has been assigned a certain issue/topic within the 'Sustainable Food Production Theme'. Make sure you know what it is about and focus your research on that topic.

Start by watching/reading some of the links below for inspiration or find sources on your own. NOTE, always make a critical evaluation of sources.

Choose the sources you find most inspiring and create a poster with picture(s) and attention grabbing text(s).

You are to present and explain your poster at the end of the week.

Good Luck!

Sources

[Sustainable Food - Environment - European Commission](#)

[What is sustainable food?](#)

[Food Sustainability](#)

[Sustainable Food Practices: Choices & Importance](#)

Short videos:

[Can we create the "perfect" farm? - Brent Loken](#)

[Vertical farms could take over the world | Hard Reset by Freethink](#)
[FAO Policy Series: Sustainable Food and Agriculture](#)

[Why do we need to change our food system?](#)

[Future Food | The Menu of 2030](#)

[Which type of milk is best for you? - Jonathan J. O'Sullivan & Grace E. Cunningham :](#)



Lesson Plan Local Sustainability Actions

School (s)	Gymnasieskolan Spyken, Lund
Improvement Goal	To increase knowledge about local sustainability actions
Action Plan	Show films to fellow students
Action Coordinator(s)	English teachers
Level	Upper secondary school year 2

A. Planning

1. Necessity - Goals

- Improve English vocabulary concerning sustainability
- Raise awareness for what local sustainability policies look like.
- Help students highlight their own impact on the environment

2. Actions & Implementation Timeline

In groups of 3-4, you are going to make a short film about actions taken towards sustainability in Sweden. Your films are going to be approx. 5 minutes long.

Research topics

- National and political initiative concerning the Sustainable Development Goals
 - What do the different political parties do?
 - How does Sweden take action in international politics?
- Local municipality projects concerning the Sustainable Development Goals
 - What do the different political parties do?
 - What other actors are there for a green society in Lund?
- Local school projects concerning the Sustainable Development Goals
 - What is being done at Spyken?
 - How does Spyken spread their work?
- Young people's views on how to be sustainable on a personal level
 - How do young people in Lund look at the climate change?
 - What do young people of Lund do to affect local policies?
- The advantages of second-hand shopping

- What is gained through second-hand shopping on different levels: climate, business, personal, other?

In your films you should introduce yourselves and then present your findings. You can use roleplays, recorded interviews, presentations, photos, animations, films etc.

3. Resources - tools - research tools

- Materials from local, regional and national sustainability plans
- Recording device, for example a mobile phone
- Program for editing films

4. Success criteria (for teachers, students, school)

- Improved awareness of sustainability actions in the students' local area and country
- A will for students to make a change

4. Nature and biodiversity to tackle climate change



Lesson Plan “Nature and biodiversity to tackle climate change”

School	I.E.S. Joaquín Turina
Improvement Goal	Raising awareness of the effects of climate change and researching solutions to stop it
Action Plan	Comprehensive learning and promotion of research skills, communication and environmental awareness; excursions; civics, digital and multilingual competences.
Action Coordinator (s)	Biology and English teachers
Level	4th year students of compulsory secondary education

A. Planning
1. Necessity - Goals
<ul style="list-style-type: none">- Improve vocabulary concerning biodiversity and climate change (in mother tongue and in English).- Encourage and strengthen teamwork rather than individual.- Raise awareness about the lack of concern of human beings for environmental degradation.- Change their way of life to make it less harmful to the environment.- Spread this awareness among their friends and contacts on social media.
2. Actions & Implementation Timeline
<ul style="list-style-type: none">- Introductory lesson: brainstorming and discussion on the concepts of diversity, biodiversity, greenhouse effect, climate change.- Screening of the documentary “Before the flood” (2016)

- In groups, elaboration of a list of daily activities that generate CO₂, both in English and in their FL.
- Meeting with experts.
- Excursion to a nearby natural environment, such as a forest, a nature reserve or a wetland to study biodiversity; document their observations through photographs, notes, and drawings.
- Writing a research article about the experience; analysis of individual and collective actions that can contribute to the protection of biodiversity and the mitigation of climate change.
- Recording a series of Instagram/TikTok videos in English to exchange conclusions with other classes.
- Final evaluation of the process, focusing on peer assessment.

3. Resources - Tools - Research tools

- Digital resources: Documentary films such as “Before the flood” (Disney+ / 2016) and “David Attenborough: A life on our planet” (Netflix / 2020); governmental websites; vlogs; online articles; TikTok / Instagram.
- Human resources: teachers and experts.
- Material resources: computers, presentations.
- Real visit to a natural reserve.

4. Success criteria (for teachers, students, school)

- Clear instructions for the students and a good organization.
- Motivated students with a desire to learn and become aware of this issue.
- Knowledge of what climate change is and why it occurs.
- Group and collaborative work.
- Convey a message with a list of measures to help everybody reduce and balance their CO₂ emissions.

5. Smart and fast ways to save energy and cut emissions



Lesson Plan “Smart and Fast Ways to Save Energy and Cut Emissions.”

School (s)	IES JOAQUIN TURINA
Improvement Goal	Raising awareness about the need of a balance between the three “e’s”, namely, energy, ecology and efficiency.
Action Plan	Development and improvement of new skills, joint strategies, and exchange of good and social practices.
Action Coordinator(s)	Biology + Economy Teachers
Level	1st class of Upper secondary school

A. Planning

1. Necessity - Goals

- Improving vocabulary about sustainability economy, consumerism and environmental care.
- Strengthening teamwork.
- Raising awareness about the scary future they, and their children, will have in a very near future if we don’t take real action.
- Making a change of lifestyle.
- Spreading the awareness between partners, friends and families.

2. Actions & Implementation Timeline

- Introductory lesson with a discussion about the current problem and the need to change to a different resources management of energy.
- Meeting with experts in sustainable resources economy resources: Speech by Professor Francisco Javier García Montes, guided visit to Torrepalma solar plant, and visit to INTA, guided by Fernando Isorna Llerena, Energy laboratory Head and expert on hydrogen as renewable energy
- Visit to “El Acebuche” lynx breeding centre in Doñana National Park in order to emphasize the importance of preserving biodiversity if we want to save energy and cut emissions.
- Researching about the topic.

- Meeting and exchanging ideas with the Andalusian Ministry of Industry, Energy and Mines.
- Evaluation of the process and improvement.

3. Resources - tools - research tools

- Human resources: experts and teachers.
- Material resources: computers, digital screens, presentations and documents showing the real dimension of the problem.
- Digital resources: Videos and Films about the progressive destruction of the planet because of the climate change provoked by global warming.

4. Success criteria (for teachers, students, school)

- Clear instructions, good organization, and selection of resources.
- Motivated students with open and critic minds.
- Improving the school's awareness towards the topic.
- Distinguishing different kinds of economy systems (sustainable and not sustainable).
- Interest and involvement in the activities and in the lessons.
- Awareness of the topics treated: how they affect everyday life and what we can do to change our daily habits.
- Conveying a cultural, social, and scientific message towards the urgent need of changing our economy system
- Knowledge and access to sustainable and renewable resources.



Lesson Plan “plastic”

School (s)	Gymansieskolan Spyken, Stiftsgymnasium St.Paul, Aristotelio College
Improvement Goal	Awareness of the plastic waste problem
Action Plan	excursions, class and school interactions, recycling project
Action Coordinator(s)	Anna, Mary, Peter, Maria, Franz, Isabel ...
Level	first year students of secondary school

A. Planning

1. Necessity - Goals

- improve vocabulary about sustainability (in mother tongue and in English)
- strengthen teamwork
- raise awareness of student's contribution of waste
- recycle more in school and at student's home
- make a change of lifestyle
- spread the awareness

2. Actions & Implementation Timeline

- introductory lesson with a discussion (plan B: bigger meeting with headmaster, school management, teachers and some other students)
- students collect their own plastic waste during one week and bring it to the school -> documentation of the waste
- meeting with experts
- study visit of sustainable companies, recycling centers or landfill
- research about the topic
- meeting and exchange with other classes or schools
- evaluation of the process and improvement

3. Resources - tools - research tools

movies: UN documentary film about circular economy “ Closing the Loop”

websites: regional governmental sites and others, e.g. www.recyclenow.com ,
www.erp-recycling.org , www.which.co.uk , www.recyclewithclarity.com

experts

sponsors

4. Success criteria (for teachers, students, school)

- clear instructions and good organization
- motivated students with open minds
- students reducing their own waste
- improve results in evaluation
- improve the school's recycling system
- distinguish different kinds of plastic (if they are recyclable or not in order to only buy recyclable plastic)
- find a sponsor for the project
- use governmental educational material

6. Innovative technologies of the future for a climate neutral Europe by 2050



Lesson Plan

School (s)	Básica e Secundária Dr. Ângelo Augusto da Silva
Improvement Goal	<i>Acquisition, development and improvement of new skills, joint strategies and exchange of good practices</i>
Action Plan	Growing Shoots and Cress
Action Coordinator(s)	Teachers involved in the project
Level	Any level

A. Planning

1. Necessity - Goals

- Stimulate the cultivation of seeds to produce shoots of various plant species for domestic consumption.
- Promoting production and widespread consumption in the school's own canteens and later in the students own homes.

2. Actions & Implementation Timeline

1. Material



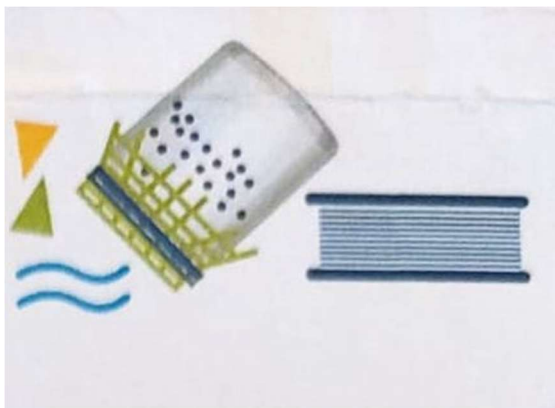
2. Wash two tablespoons of alfalfa seeds, removing any debris;



3. **Place the alfalfa seeds in a glass jar, cover with a cup of cold filtered water and cover with a mesh or perforated lid and soak for eight hours or overnight;**

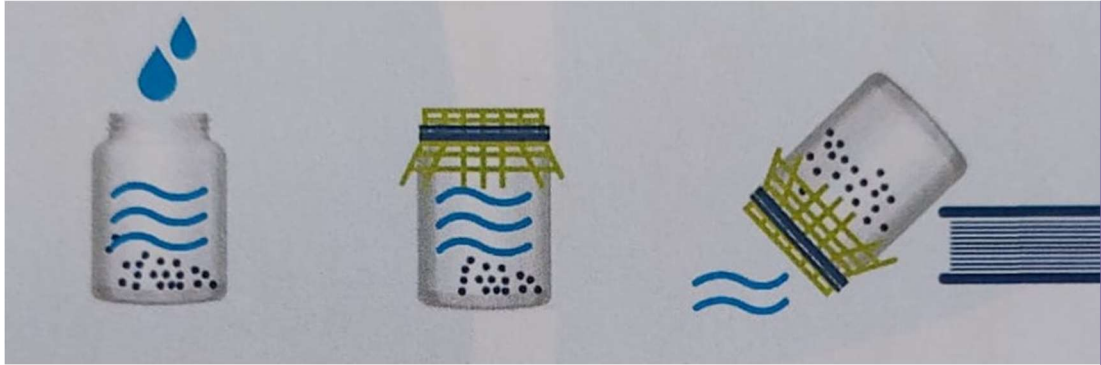


4. **Keep the glass in an airy place and without much incidence of sun;**
5. **Drain all water from alfalfa seeds;**
6. **Turn the jar over a bowl at an angle so that all the water from the alfalfa seeds can drain and the air can circulate;**



After about eight hours of draining, rinse and drain again;

7. **Repeat washing and draining two to three times a day;**



9. Small buds should start to form in about three days. As soon as shoot tails appear, move the shoot container to indirect light for green leaf growth. Avoid direct sunlight.
10. Continue rinsing and draining two to three times a day for two more days, or until the shoots grow to about three inches;



11. When the seeds germinate and reach the desired length, drain well, consume or transfer to a container and leave in the fridge.
12. Don't forget to wash the sprouts well before consuming them!

3. Resources - tools - research tools

Alfafa Seeds
Glass jar
Bowl
Water
Germinator

4. Success criteria (for teachers, students, school)