

Human rights – one step at a time

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SCIENTIX LEARNING SCENARIO

Title

Human rights – one step at a time

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Summary

Emigration, a growing phenomenon caused by worldwide political instability, has raised new issues in democratic societies. Integration, inclusion, and ensuring refugees basic human rights, whilst respecting their cultural identity, pose a problem that requires careful planning.

Through this learning scenario (LS), students will learn the importance of respecting human rights and will engage in strategies as active citizens to help minimise (some of) the problems refugees face when they reach a foreign country. This LS will combine STEM subjects (maths, economics, and biology) with non-STEM subjects (mother tongue, English as a second language, social studies, and physical education) through interdisciplinary work.

Keywords

Human rights – Emigration – SDGs – Social responsibility – Active change

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Overview

<i>Subjects</i>	Interdisciplinary lessons: English, mother tongue, social studies, maths, biology, economics, physical education, ICT, school library, outdoor learning.
<i>Topics</i>	Human Rights
<i>Age of students</i>	16–18 years old
<i>Preparation time</i>	English – 1 hour for research and preparation Mother tongue (in this lesson, Portuguese is the mother tongue used) – 1 hour for research and preparation Social studies – 1 hour for research and to establish contacts Maths – 1 hour to define the sequence of the class Biology – 1 hour for research and preparation Economics – 1 hour for research PE – 1 hour for research ICT – 1 hour for research School library – 1 hour for research Outdoor learning – up to 3 hours
<i>Teaching time</i>	English – 7 hours Mother tongue – 4 hours Social studies – 3 hours Maths – 2 hours

	<p>Biology – 2 hours Economics – 2 hours PE – 3 ICT – 5 School library – 5 hours Outdoor learning – up to 6 hours</p>
<p><i>Online teaching material</i></p>	<p>Internet connection, collaborative tools such as Google: https://www.google.com/?gws_rd=ssl YouTube: https://www.youtube.com/ Canva: https://www.canva.com/pt_pt/ KialoEdu: https://www.kialo-edu.com/ Jamboard: https://jamboard.google.com/ Genially: https://genial.ly/pt-br/ Teams: https://www.microsoft.com/pt-pt/microsoft-teams/log-in Microsoft Forms: https://www.microsoft.com/pt-pt/microsoft-365/online-surveys-polls-quizzes Microsoft Office: https://www.office.com/ Padlet: https://padlet.com Wakelet: https://wakelet.com/ Coggle: https://coggle.it/ Apps for good: https://www.appsforgood.org.pt/AppsForGood/Home</p>
<p><i>Offline teaching material</i></p>	<p>Student notebooks to write the argumentative text. Traditional clothing and accessories from different countries.</p>
<p><i>Resources used</i></p>	<p><i>Bang Bang Club</i> trailer: https://www.youtube.com/watch?v=y5HXXh7LEKI Pulitzer prize photos: https://www.pulitzer.org/prize-winners-by-category/217 Fake news quiz: https://www.theguardian.com/newswise/2021/feb/04/fake-or-real-headlines-quiz-newswise-2021 Spotting fake news: https://www.lib.sfu.ca/help/research-assistance/fake-news https://www.youtube.com/watch?v=xf8mjbVRqao&ab_channel=JohnSpencer The media is out of control: https://www.youtube.com/watch?v=vUq4euU1D_g Pros and Cons of the Media: https://www.kialo-edu.com/p/d0847030-e8dd-4695-8ae1-de61a364eb2f/89722 Trailer of the film <i>Flee</i>: https://www.youtube.com/watch?v=ymjdfiaKItI Human Rights are being denied: causes, consequences, and possible solutions: https://jamboard.google.com/d/1w1BPSNndf5hg3S_4WvqjR3g09pfSqijCByZyG4IJBqY/edit?usp=sharing Malala's speech: http://www.ufrgs.br/pediatria/Repositorio/ppsca/bibliografia/direitos-da-crianca/discurso-de-malala-yousafzai-no-premio-nobel-da-paz/view Game to introduce Sustainable Development Goals (SDGs): https://stairwaytosdq.eu/en/act/180-let-s-meet-all-the-sdgs SDGs: https://sdgs.un.org/goals</p>

<https://unric.org/pt/objetivos-de-desenvolvimento-sustentavel/>
Portuguese Commission for Refugees
<https://cpr.pt/>
Local authorities:
<https://www.cm-stirso.pt/>
<https://santotirso.cruzvermelha.pt/>
<http://www.if-santotirso.pt/>
Creating a questionnaire (refugees needs)
<https://www.microsoft.com/pt-pt/microsoft-365/online-surveys-polls-quizzes>
Hormones that trigger customer engagement
<https://jeanmarcbuchert.medium.com/4-kinds-of-hormone-that-trigger-customer-engagement-aac6fc9af64c>
Analysing Hormones
<https://padlet.com/sandrambragam/8ci8xvinivsymen>
Marketing techniques:
<https://www.analyticssteps.com/blogs/most-effective-marketing-techniques>
Apps for good platform:
<https://www.appsforgood.org.pt/AppsForGood/Home>
Peer revision criteria:
https://www.mindtools.com/pages/article/newTED_07.htm

Aim of the lesson

In the previous school year, through project-based and interdisciplinary work, students were able to create their own dairy farm. The c is called *AVELAC* and one of its purposes is to work on social issues. So, this LS aims to continue to raise students' awareness of social problems. It is a call for action on the issue of human rights issue.

Trends

Problem-based learning: students get fact-based tasks and problems to solve and they mainly work in groups. This kind of learning usually transcends traditional subject boundaries.

Collaborative learning: a strong focus on group work and interaction.

Lifelong learning: learning is a continuous process over a lifetime.

STEM: increased focus on science, technology, and mathematics subjects in the curriculum.

Outdoor learning: learning outside of the school building in the 'real' environment.

Game-based learning: learning is mixed with games or game mechanisms.

Student-centred learning: students and their needs are at the centre of the learning process.

Peer learning: students learn from their peers and give each other feedback.

Assessment: the focus of assessment in shifting from 'what you know' (informal learning) to 'what you can do'.

Bring your own device (BYOD): students access knowledge through their own (mobile) devices. This means learning anytime, anywhere.

Visual search and learning: by using visual representations in their learning, students will enhance their cognitive abilities and creative productions.

Cloud-based learning: students will develop and strengthen their reflection abilities and as their learning motivation.

21st-century skills

Learning and innovation skills:

- Critical thinking and problem solving: students will explore ideas and discuss and consider otherpoints of view to try to help solve a problem.
 - Communication: students will work on their reading, writing, speaking, and listening skills toengage in productive discussions.
 - Collaboration: students will complete activities while working in pairs or groups.
- Creativity: creativity is important to strength the mind and increase students' learning.

Information, media, and technology skills:

- Media literacy: students will access and analyse media messages and reflect and create.
- ICT literacy: students will use ICT tools effectively and efficiently during the lessons.

Life and career skills

- Social and cross-cultural Skills: students will interact with others and work in teams.

Key subjects:

- Global awareness: students will learn about international and intercultural issues and they will have the opportunity to open their eyes to how decisions can impact the lives of people around the globe.
- Entrepreneurial literacy: students will face problem-solving, flexibility, and adaptability, using initiative, self-awareness, and resilience, mandatory 'skills' to be competitive in the markettoday.

STEM strategy criteria

Elements and criteria	How is this criterion addressed in the learning scenario?
Instruction	
Personalisation of learning	In this LS, students will perform the tasks according to theirskills and aptitudes.
Problem and project-based learning (PBL)	To become aware of the problems involving human rights, students will work on a project that willhelp minimise settling difficulties for the refugees.
Inquiry-based science education (IBSE)	This LS provides the opportunity for students to investigate problems, develop explanations, search for possible solutions, and test out ideas.
Curriculum implementation	

Elements and criteria	How is this criterion addressed in the learning scenario?
Emphasis on STEM topics and competencies	STEM topics and competencies are taught with non-STEM topics through interdisciplinary work.
Interdisciplinary instruction	Cross-disciplinary teaching will be used to ensure students understand the purpose of the interdisciplinary project they are working on.
Contextualisation of STEM teaching	Students will use different expertise to build a well-structured response to an emerging problem.
Assessment	
Continuous assessment	Formative evaluation moments are created to improve students' work. This involves peer revision and teacher feedback.
Personalised assessment	Students' achievements will dictate the need for instant and constant feedback from peers and the teacher and the adjustment of activities.
Staff professionalisation	
Highly qualified professionals	The teachers involved in the LS are highly qualified professionals in different subjects.
Existence of supporting (pedagogical) staff	The school's Pedagogical Council supports interdisciplinary projects.
Professional development	The school encourages and promotes staff participation in professional development actions.
School leadership and culture	
School leadership	School leadership supports innovative approaches in the classroom and implementing STEM topics in the curriculum.
High level of cooperation among staff	Staff are encouraged to support each other and work together and are given space and some time to do so. Additionally, the LS will be carried out by multiple teachers.
Inclusive culture	The school environment is open and validating for all. We respect our colleagues' ideas and share success.
Connections	
With other schools and/or educational platforms	The activities carried out in this LS could be shared with other neighbouring schools or virtually with other vocational schools. The LS can be presented to other schools/colleagues from other schools at a school visit, workshop (<i>Fórum Educa</i>).
With universities and/or research centres	An expert in refugees will be invited for a seminar.
With local communities	Students will engage with the community during the outdoor activity.
School infrastructure	
Access to technology and equipment	The school has internet access, and one computer and one projector per classroom. Each member staff has a laptop and students are encouraged to bring their own device (laptop).

Elements and criteria	How is this criterion addressed in the learning scenario?
High-quality classroom materials	The teachers share and discuss teaching materials, and staff are encouraged to create personalised teaching resources for students. The teaching materials are in line with the school curriculum.

Lesson Plan

Name of activity	Procedure	Duration
Warm-up activity or predicting – English class	The media and global communication (ESL) Students watch the trailer of the film <i>Bang Bang Club</i> and try to predict the content of the lesson. Possible questions for teacher-class interaction: Where does the action take place? Who are the main characters? What do they do for a living? Can you describe the context they work in? Do you think the media has any impact on these situations? Explain.	10 minutes
A picture is worth a thousand words – English class	In small groups, students browse through the Pulitzer Organization site, choose one of the pictures that had a huge impact on society, and try to find out about the context it took place in (country, description of the conflict or problem, and the outcome) Then group members are switched, and every student presents the group's findings to a different group.	50 minutes
Information and disinformation – English class	Possible questions for teacher-class interaction: Not everything you see or listen to in the media is reliable, so how do you spot fake news? Students identify whether the pictures they are being shown are fake or real. They then read the text and watch a video on how to spot fake news. In pairs, students create an infographic with the top rules for spotting fake news using a design tool like Canva, Adobe Express, Vengage, Easil, or Pixrl. Students' work is presented and discussed in class and posted on the school's social media sites.	2 hours
Pros and cons of the Media – English class	<i>'Fake news, biased reporting, and agenda-driven news organisations litter today's journalistic landscape, making it almost impossible to distinguish between myth and reality.'</i> Students read this controversial sentence and participate in a class discussion on an argument mapping and debate site like Kialo Edu or Loomio. As a follow-up, students write an argumentative text, stating their opinion on the impact the media has on teenagers. After finishing their assignments, they review their peers' work. Students' final version is displayed on the class board.	3 hours
Warm-up activity – Portuguese class	Literature: Padre António Vieira and the political speech. Students watch the trailer of <i>Flee</i> and then discuss the problems that are portrayed in the film (emigration). Possible questions for teacher-class interaction: Where is he fleeing from? Why? How did he get out of the country?	10 minutes

	Where is his family? Why did he conceal his story from his companion?	
Evidence that Human Rights are being denied – Portuguese class	The teacher brings several newspapers (national and international) to the class. Students read the headlines and contribute to a class digital interactive whiteboard like Jamboard, clickUp, Miro, or Mural called <i>Human rights are being denied: causes, consequences, and possible solutions</i> .	50 minutes
Let's talk politics! – Portuguese class	Students read parts of Malala Yousafzai's speech delivered during the Nobel Peace Prize Award Ceremony at the Oslo City Hall in Norway on 10 December 2014. Then, they identify the internal structure of the text and evidence of textual genre. They post their conclusions on a shared space like Wakelet, Padlet, or Lino. As a follow-up, students comment on each other's spaces and discuss the importance and impact of a well-structured political speech and of global policies.	2 hours
SDGs – Are you getting the message? – Social studies class	Global culture Students play the game about SDGs, acknowledging the importance of being agents of change.	1 hour
SDGs – Does that mean anything to you? – Portuguese class	Students browse the internet to find out what the Sustainable Development Goals are. In small groups, students choose three goals that concern our country the most and try to relate their choices with goal number 17. Students create a small presentation on a presentation tool like Genially, Prezi, Canva, or Renderforest to be shown and discussed in class and then shared on the school's social media.	2 hours
What can we do about it? – Social Studies class	Students attend a seminar by a national organisation for the refugees, if available. During the seminar, students focus on regional problems and on what can be done to help improve these people's lives.	1 hour outdoor
Let's roll up our sleeves! – Social studies class and outdoor learning	The class is divided into groups and each group will try to find information about the nationality of refugees in the area, how many there are, where they are staying, and organisations that are helping them. They must seek information online, at the town hall, 'Juntas de Freguesia', the church, and the Red Cross. The social studies teacher goes with the students to these institutions. They complete a Word document shared on Microsoft Teams or other learning management system. Topics: Nationality/Age/Languages/Former occupation/Skills/Contact. They set up a second meeting so that the interviews can be conducted in the presence of a member of staff of each institution.	30 minutes+ Up to 3 hours
Facing real problems! – English class	Students do a think-pair-share activity to create a questionnaire on paper or using an online tool like Google Forms, Microsoft Forms, or EU Forms. The questions address the problems refugees face when they get to another country (language, accommodation, education, jobs, health care access, documentation etc.). It is important to be clear about the concepts of quantitative and qualitative variables.	1 hour

Outdoor learning	Students interview the refugees living in their town. If that is not possible, an online survey will be conducted instead.	up to 3 hours
Analysing real data – Maths class	Statistics Students analyse the data collected through the interviews. They observe the quantitative and qualitative variables. They calculate percentages, mean, median, mode, and standard deviation. The results will be used in ICT class to create an app and a short video.	2 hours
We are driven by hormones! – Biology class	Regulations In groups, students read the article and identify the hormones that trigger customer engagement and the strategies to stimulate engagement. Each group works on one hormone and does some research on it: the organ where it is synthesised, how it is transported to its target organ, and its action and impact on the organism. They share their work on a space like Wakelet, Padlet, or Lino using the topics mentioned above plus stimulation options to be later used in the video. Students comment and write suggestions on their colleagues' posts.	2 hours
Reaching farther! – Economics class	The market In pairs, students browse through well-known marketing campaigns online and are asked to identify the most common and effective techniques. These techniques will be used to create a video that draws people's attention to the problems refugees have to face. They complete an online diagram maker like Coggle, Miro, Mural, ClickUp, or Lucidspark using techniques and suggestions to be used in the video. They present their diagrams and discuss them in class.	2 hours
Let's get into the groove! – Physical education class	Dance Students are divided into groups and browse the internet to watch videos of folk dances from the countries of origin of the refugees. Then they create a small routine involving traditional moves from the different countries (including their own country). Their performance is recorded and used in ICT class to create the video.	3 hours
Yes, I can...do something about it! – ICT class and school library	Image and sound editing The class is divided according to the students' preferences. One group creates a video to draw people's attention to the problems refugees have to face. This involves filming, editing, creating subtitles, and content creation with the purpose of being a marketing success. The video can be created on any free phone app (BYOD). The other group creates the necessary information to participate in the <i>Apps for good</i> program. The app students create is addressed to refugees in Portugal. Using their geographical location and personal information, refugees can access information that can provide solutions to the problems that were referred to in the interviews. The video and the app are presented in class and students engage in the <i>Thinking Hats</i> (Annex) activity to give peer feedback and improve the work. After the final adjustments, the video is posted on the school's social media sites and the app submitted in the platform.	5 hours + 5 hours

Assessment

This LS offers various opportunities for formative and summative assessment. Peer review alongside with teacher feedback is used in almost every activity. This means that students will be involved in each other's work and offer suggestions to improve the work. Summative assessment will also be carried out with using rubrics. We will use rubrics available online to assess the paper writing assignment (pier.Macmillan.yale.edu), the students' Video, and the pp presentation (Eberly Center for Teaching Excellence).

https://drive.google.com/file/d/12Lwj_F45dgdvtvcAMQp7NA6KBZauK9c11/view?usp=sharing

<https://drive.google.com/file/d/1DF5MzhdVx3-NGZLFFQJna6P8cHjxbXMw/view?usp=sharing>

Student feedback

After posting the video on the school's social media and submitting the app, a class assembly will be held with the teachers from the different subjects and the students to assess the project. Students will be asked about the process (activities and topics dealt with in the different subjects) and the products created (importance in refugees' lives). They will also be asked about the impact this LS had on their attitude towards human rights and emigration.

Teachers' remarks

This LS hasn't been fully implemented yet.

About Scientix

Scientix, the community for Science Education in Europe, promotes and supports a Europe-wide collaboration among STEM (science, technology, engineering, and mathematics) teachers, education researchers, policymakers, and other STEM education professionals. If you need more information, check the [Scientix portal](#), or contact either the Scientix National Contact Point or Scientix Ambassadors [in your country](#).

Annex

Thinking hats: <https://www.betterevaluation.org/methods-approaches/methods/six-thinking-hats>

"The Six Thinking Hats method encourages participants to cycle through six different ways of thinking, using the metaphor of wearing different conceptual "hats".

Developed by Dr Edward de Bono, the "Six Thinking Hats"™ technique is a framework designed to promote holistic and lateral thinking in decision-making and evaluation. Conducted alone or in group meetings, participants – project members, key decision-makers and stakeholders – are encouraged to cycle through different modalities of thinking using the metaphor of wearing different conceptual "hats".

This approach seeks to combine the strengths of a range of different mental "states" which individuals instinctively tend towards – from rational and positive perspectives to emotional and intuitive, or from optimistic to pessimistic - by prompting participants to consider the same problem through a full spectrum of thinking styles in coming to a common agreement on a decision or shared purpose.

Six "hats" are available to use, each identified by a different colour symbolic of a different style of thinking, and each dictating a unique mode of analysis. These include:

White hat: "Information". Objectively consider available information, focusing only on data available, where gaps in existing knowledge exist, and what trends can be extrapolated from the information to hand.

Red hat: "Emotions". Identify emotional reactions, judgments, suspicions and intuitions in oneself and others, separate from the objective data itself.

Black hat: "Negatives". Raise and consider any potential flaws, risks, challenges and fears in a

decision or plan in order to preempt them and avoid the dangers of over-optimism.

Yellow hat: “Positives”. Identify all optimistic, constructive aspects and suggestions regarding a decision or plan, with an eye towards building confidence and enthusiasm at the outset.

Green hat: “Creativity”. ‘Blue-sky’ thinking. Consider abstract thinking, digressions, alternative proposals, and provocative statements.

Blue hat: “Overview”. Consider the entire thinking process itself, i.e. ‘metacognition’. Review and assess the six hats session thus far, identify places where a specific modality of thinking needs expanding, revisiting, or balancing.

In a Six Thinking Hats session, each of these hats is “worn” by participants, the process guided by a facilitator familiar with the method. These hats may be metaphorical, or even physical, and each change of “hat” indicates the next stage of the session. By the end of a successful Six Hats session, a particular decision or evaluation will thus have been considered from a range of viewpoints.”

Source: <https://www.betterevaluation.org/methods-approaches/methods/six-thinking-hats>