



ICTeEfs



Prepared by:

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The CARE LEARNING DESIGN METHODOLOGY FOR DEVELOPING STUDENT-DRIVEN LEARNING ACTIVITIES

The important issue of Sustainability Justice can be taught in many different ways and teaching methods. Our suggestion refers in using the CARE design learning method as we believe it is an important tool for deep understanding of sustainability issues and therefore of sustainability justice.

The CARE learning design method can be used by people who choose Learning Design when teaching. Learning Design is a framework that supports learning experiences. In particular, Learning Design is an educational process that uses methods that are centred on the learner and his needs. In the areas of sustainability education, Learning Design aims to achieve educational goals related to the principles of sustainability using technology.

The CARE learning design method includes four stages:

- **Conceptualise**
- **Activate**
- **Reflect**
- **Engage**

Figure.1: The CARE learning design framework.
Kostoulas - Makrakis & Makrakis (2020, p.6)



Stage 1 - Conceptualise

At this stage of the method, learners enter the process of understanding the subject and engaging in the process of creating the educational activity that will be used to teach the subject.

This educational activity should be cross-disciplinary and involve more than teaching subjects to help learners gain a comprehensive understanding of the subject under consideration. Another feature of the above educational process is that it should include the principles of the 17 Sustainable Goals, the 6 pillars of learning and the 10Cs. Finally at this first stage should be specified:

- educational goals
- the basic concepts of the subject
- the practical planning of the activity (time required, materials and resources to be used)

- be consistent with the curriculum

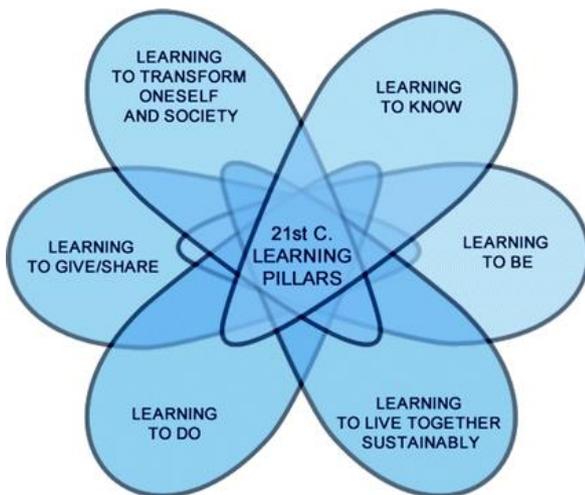


Figure 2: 21st century learning pillars.
Makrakis (2015, p.5)



Figure 3: ICTs as enabling tools for the 10Cs
Makrakis & Kostoulas-Makrakis (2017, p.4)

Stage 2 - Activate

At this stage, which starts at the conceptualisation stage, we aim to activate the knowledge already acquired by trainees and to define the ways in which Executive Function Skills (EFS) training activities will be developed. These educational activities use Information and Communication Technologies (ICTs) and allow learners to exchange views, reflect and intervene in the educational process. The following table is provided and can help organize educational processes at this stage.

Stage 3 - Reflect

This stage is very important because it helps trainees and educators to understand the subject in depth. Reflection takes place in many different stages, namely, before each activity, during its implementation and after its completion. Reflection is even useful after spending some time in training. One way in which this reflection can be done is by giving learners the opportunity to note at each stage the knowledge they have at the moment about the subject under consideration. Other ways include engaging trainees in a forum as well as a discussion between the whole groups.

Stage 4 - Engage

The final stage of the method involves the engagement of trainees to use the theory already taught to produce a result. Engagement takes place in the following areas: Behaviorally, Emotionally, Cognitively, Reflectively, Transformationally. This

final stage is an important part of the method as learners become responsible for their knowledge

Design Principles

When designing a CARE student-driven learning activity we must take into account the data, the needs but also the results we want to achieve in order to be able to create a pleasant and simple lesson but at the same time complete and properly structured. It is therefore necessary to define the design principles on which we will rely to achieve all of the above. We will start with the five design principles mentioned by Drake, O'Hara, Seeman (2015) which are the follows:

Meaningful: This principle refers to the need for the course content to be meaningful. While this may be a necessity, it is easier to include a lot of information or large videos that will discourage learners from watching it to the end.

Engaging: Instructors can provide immediate feedback to their students and encourage them to participate in discussion groups. Such practices probably help students not to stop attending the course.

Measurable: measuring student performance should also be a priority for educators. There is a risk that an educator will not be able to monitor the progress of their students due to their large number and consequently the large amount of data collected.

Accessible: This design principle refers to the ability to be given to learners for easy and unhindered access to content.

Scalable: The lesson should be able to adapt to the large number of students and be designed from small to large. Instructors should consider the above feature when creating content, managing functions and assessing student progress.

GOOD EXAMPLES



ICTeEfs



WORLD DAY OF REFUGEES

JUNE 20th

(SDG10)

Developed by:

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To celebrate the World Refugee Day on 20th June, the theme entitled “Refugees Crossing the Aegean: Learning from History” has been developed adopting the CARE learning design methodology. This event honors both those who are displaced from their homeland and those who altruistically act to help them.

The learning activities developed primarily function as teacher training materials for designing student-driven learning activities applying the CARE methodology. The scenario for this lesson takes place in Lesbos, a small Greek island in the Aegean sea, the birthplace of Sappho (c. 620-570 BC), a lyric poet whose work was very popular in ancient Greece and beyond. Lesbos has been the epicenter of the world raising both positive and negative feelings. The crossing from Turkey to Lesbos is just a few miles, and the shores of Asia Minor are clearly visible from some places in the island.

Lesbos has received an enormous number of people attempting to make the crossing—more than 600,000 from Turkey alone in 2015, which has turned its coastline into a humanitarian crisis zone. The residents, local and international NGOs and volunteers have joined hands to care for arrivals as best they can under many pressures. For many locals, the situation recalls the arrival of thousands of Greek refugees displaced from Asia Minor in 1922.

The learning design scenario constitutes of the following four parts:

Part 1: The Journey of Hope and Death

Part 2: The Moria Refugee Camp in Lesbos Island

Part 3: Connecting Past, Present and Future

Part 4: Simple actions can make a difference

Learning objectives

It is worth pointing out that learning objectives will be emerging and refined along with the development of the learning activities. The overriding learning objectives for this theme are the following:

1. Explore the issue of displacement through history
2. Raise awareness and develop empathy for refugees
3. Develop transversal skills, issues of sustainability justice and the six pillars of 21st c. learning

Suggested age range: 11–15 years old

Subjects: History; Geography; Civics; Languages

Curriculum Standards:

10Cs to be developed: (Communication, Collaboration, Creativity, Critical Thinking, Critical Consciousness, Cross-cultural Understanding, Construction of knowledge, Critical Reflection, Connectivity, Co-responsibility)

Sustainability Justice (Social justice and cultural justice)

Learning pillars to be developed: (Learning to be; Learning to know; Learning to do; Learning to live together; Learning to transform oneself and society and Learning to give/share)

Resources

The content of this lesson celebrating the World Day of Refugees is primarily based on Open Education Resources, mostly in digital form. A key resource also comes from the socio-cultural capital of learners.

Warming-up Before You Begin

- Start from the global and then move to the local by telling learners that in recent years, close to 100 million people worldwide are displaced from their homes because of wars, persecution, climate change and severe economic difficulties.
- Ask learners in your class to fill out the following K.W.H.L.chart (Know; Want; How; Learned). Start with the “K”, “W” and “H” columns (save the “L” column for the end of each of each activity).

- Have students watch the video clip “An Overview of the Refugee Crisis” (<https://www.facinghistory.org/resource-library/video/overview-refugee-crisis>) and ask them to take notes as they watch the video.
- Ask learners to use Google Map and visit the Zaatari Refugee Camp in Jordan, near the Syrian border, where more than 80,000 Syrian people live there. According to the UN, 4.9 million people have been displaced outside Syria since its civil war in 2011.

Reflections

Based on the notes learners have written down, initiate a discussion with the following prompting questions:

- WHO is a refugee?
- Why do refugees leave their own country?
- What is life like in a refugee camp?
- What is it like to be a newly settled refugee in a new country?
- Why do you think this current situation is considered a crisis?
- Why should local/world leaders care?
- Why should individuals care?

At the end, ask learners to complete the “L” column of their K-W-H-L chart (“What did you **L**earn at this point?”). Finally, in pairs or groups, have students compare what they wanted to learn and what they have learned, identifying if there are remaining things to learn.

Note to the teacher:

Developing student-driven learning activities implies that learners’ voice matter. Giving voice to learners can be activated through the K.W.H.L. chart and graphic organizer. The responsibility for framing learning objectives should be, thus, in the hands of both teachers and learners. First by K (learners brainstorm what they already know about the topic). W (Learners brainstorm a list of what they want to learn for the theme or topic they will work on). H (Learners identify strategies or tools they could use to find out what they want to know). L (At the start and end of each key activity, learners identify what they have learned).

The basic KWHL chart can be extended to incorporate two more columns referring to Actions and Questions. A (Learners merge knowledge acquired with action by brainstorm a list of actions they could take, that eventually contributes in developing active citizenship). Q (Learners consider what questions they still have, which could be taken at a later stage in the curriculum extension, turning learning a holistic and lifelong process).

Activity Part 1: The Journey of Hope and Death

In this activity, learners will start thinking about the refugees’ journey from the Turkish shores to the island of Lesbos. A journey with full of hopes but with a risk that some or

all could not reach the end. They are in the hands of traffickers without any sense of human caring, dignity and safety. The Essentials questions are:

- What does it mean to put yourself in someone else's shoes?
- What kinds of behaviors show that you understand someone's feelings?

The overriding learning objectives of this activity are the following:

1. Recognise the similarities and differences of empathy and sympathy
2. Understand the other's situation from their point of view
3. Communicate that understanding back to the other person
4. Critically reflect on own feelings, values, knowledge and actions
5. Develop emotional intelligence and empathy
6. Recognise own and others' stereotypical and prejudicial attitudes

Procedural steps:

Step 1.

Ask learners in your class to fill out the following K.W.H.L.chart (Know; Want; How; Learned). Start with the "K", "W" and "H" columns (save the "L" column for the end of each of each activity).

Step 2

Invite learners as a start in this part of activities to watch the journey of a refugee from his homeland to the Greek islands. <https://www.youtube.com/watch?v=hpEdhE8sOk0> Ask learners to discuss the issue of human trafficking and exploitation.

Step 3

Show the video of a refugee's journey to Lesbos.

https://www.youtube.com/watch?v=DQYdixe_etQ

Ask learners to write words, phrases or questions that come to mind while watching the video in their diaries/journals.

Step 4

For primary school learners, start with the video-clip "How far is 4.1 miles?"

<http://www.pbs.org/pov/4point1miles/video-4point1miles-classroom-clip-behind-the-lens-how-far-is-4-1-miles/> Show Dafni's short video explaining the reasons why she made the 4.1 film. <http://www.pbs.org/pov/4point1miles/video-4point1miles-classroom-clip-behind-the-lens-why-did-you-make-4-1-miles/>

Ask learners to continue writing words, phrases or questions that come to mind while watching the video.

Step 5

Lastly, show the 4.1 trailer to experience the rescue of refugees.

<http://www.pbs.org/pov/4point1miles/video-4point1miles-trailer/>

Lead a group discussion, giving learners time to share their ideas/questions and post them on the board as a mind-map. Based on what learners identified, follow-up the discussion with questions such as:

- What were the motives behind Dafni's mind to make the film 4.1 miles?
- What do you know about refugees' treatment?
- Would you act as Captain Papadopoulos and his crew? Why?
- What were the motives behind Captain's and his crew?
- **Why should we care about refugees?**

Ask learners to develop a chart comparing empathy versus sympathy and give at least two examples in each and discuss.

Step 6

For secondary school learners, show the full film *4.1 Miles* that follows Kyriakos Papadopoulos, the Greek coast guard captain local coast stationed off the Greek island of Lesbos. <https://www.youtube.com/watch?v=hjnj5B2GCvc>

After watching the film *4.1 Miles*, besides the above questions, initiate also a Fishbowl discussion, where learners seated inside the "fishbowl" actively participate in a discussion by asking questions and sharing their opinions, while learners standing outside listen carefully to the ideas presented. Learning to listen and listen to learn can also be supplemented through this discussion. The prompting question for this discussion would be: What should be our personal and collective responsibilities to the refugee crisis? What are some arguments for and against in terms of responsibilities? What are the risks and benefits associated with each argument? How do you think the residents of Lesbos would react to the newly arrived refugees? Why?

Reflection questions

- What comes to mind when you hear the words "migrant" and "refugee"?
- What are some positive and negative representations of migrants and refugees that you have seen in the media?
- What personal experience do you have with these issues?
- Are there refugee and/or immigrant families or communities in your town?
- Do you know of any programs or organizations in your area that support refugees and immigrants?
- What surprised you most about the refugee experience depicted in *4.1 Miles*?
- How did this compare with your previous perceptions of refugees?
- What prompted the refugees to flee their homelands?
- Why are hundreds of refugee boats heading to the small Greek island of Lesbos rather than the mainland of Greece?

- What challenges does that present for the people of Lesbos?
- Would we act as he does, to save the life of stranger? Or would we turn away?"
- How do you think your community would respond to a similar situation like in Lesbos?
- How should your own country respond to the refugee crisis?

At the end, ask learners to complete the “L” column of their K-W-H-L chart (“What did you **learn** at this point?”). Finally, in pairs or groups, have students compare what they wanted to learn and what they have learned, identifying if there are remaining things to learn. Consider incorporating the columns referring to Actions and Questions. A (Learners merge knowledge acquired with action by brainstorm a list of actions they could take, that eventually contributes in developing active citizenship). Q (what questions still remain unanswered or could be raised, which could be taken at a later stage in the curriculum extension, turning learning a holistic and lifelong process).

Note to the teacher:

In Part1 of the activities, the emphasis is on developing empathy. Usually people confuse empathy with sympathy. There is thus need to clarify the differences and similarities between these two concepts. This implies that until learners actually experience these differences, their skills in empathy will probably remain quite limited. Uncovering “Who We Are” is also a challenge that usually is not part of the learning process. Learning to clarify one’s own values is a very critical process in developing active emotional intelligence. This process necessitates envisioning and putting ourselves to “another’s shoes”. This approach not only helps learners to sharpen their own empathic skills, but also to learn more about the others.

As you have noted most of the activities are based on critical discussions using various strategies such as the Think, Pair and Share as well as the Fishbowl discussion strategy. Through these strategies, learners are encouraged to actively participate in a discussion by asking questions and sharing their opinions, while at the same time learners are learning listening and listening to learn.

Activity Part 2: The Moria Refugee Camp in Lesbos Island

This activity follows-up the previous one, exploring life in the refugee camp of Moria that most of the refugee people live there.

The overriding learning objectives for this activity are:

- Understand that human rights belong to everybody
- Understand what discrimination means
- Identify negative and discriminatory behaviour

- Appreciate the benefits of diversity and celebrate difference
- Advocate for equality and human rights

Procedural steps:

Step 1

Ask learners in your class to fill out the following K.W.H.L.chart (Know; Want; How; Learned). Start with the “K”, “W” and “H” columns (save the “L” column for the end of each of each activity).

Step 2

Show the video-clip “Life inside Moria” that depicts the problems facing the residents in this refugee camp. <https://www.youtube.com/watch?v=Ps6lqEzqvQk>

Ask learners to take notes while watching the video-clip and after pose the following questions:

- What was happening in this video?
- How did you feel watching the video?
- What challenges have the people living inside the camp of Moria?
- How did these problems originated and who is responsible?
- How have these challenges and problems affected you?

Step 3

Introduce learners to the idea of “push” and “pull” factors that might explain life inside the Moria refugee camp. Push and pull factors mean what will pull people towards a better place for living (the more positive factors); or what will push people away from the Moria refugee camps (the negative factors). Ask learners to identify reasons beyond living conditions for pushing them away from the refugee camp.

Step 4

Combine the above strategy with the Think, Pair, Share strategy, by asking learners to write and discuss their push and pull factors with a partner before sharing them with the whole class. More specifically, have learners reflect on a given question or write a response in their journals (Think). Have learners pair up and share their responses (Pair). Then, ask pairs to share their standpoints to the whole class (Share).

Step 5

Relate all the pushing factors with the dreams of refugees. Encourage learners to focus on what refugees are hoping for in their new life and discuss the drivers and barriers to fulfill their hopes and dreams.

Ask learners to think also their own dreams- what they would like to do in life, where they would like to be, what they would like to achieve, etc. and discuss if they think that refugee children also deserve to have similar dreams.

Show the [film “Dreams”](#) (03:43 mins),

https://www.youtube.com/watch?v=oct1fpLJI10&list=PL_ea5GGKK3gA3NYmKuMHTLSj1soEhbE0a which shares some of the dreams of young refugees or asylum seekers arriving in the UK. Use the following prompts (and notes) to lead a brief dialogue with learners:

- How were the dreams you saw in the film similar to those you shared?
- Were the dreams different in any way?
- How did watching the film make you feel?
- How might it feel if these factors hindered you following your dreams?
- What could you do to help support refugees/asylum seekers to achieve their hopes and dreams – to help remove the barriers?

Reflection questions

After the discussion, give learners the opportunity to reflect on the following questions in their journals and/or through a class discussion:

- What did you learn from this activity?
- How did your ideas about the topic change during this activity, if at all?
- Explain what caused your ideas to change or why you think your ideas did not change.
- How does life in the refugee camp of Moria shaped the way you see the world?

Draw on particular examples from this activity when answering these questions.

At the end, ask learners to complete the “L” column of their K-W-H-L chart (“What did you **L**earn at this point?”). Finally, in pairs or groups, have students compare what they wanted to learn and what they have learned, identifying if there are remaining things to learn.

Consider incorporating the columns referring to Actions and Questions. A (List of actions that could be taken). Q (Questions that still remain unanswered or could be raised for further use).

Activity Part 3: Connecting Past, Present and Future

Looking back at history it cannot only inform our decisions today and future but also show that humanity shares similar problems across different historical times and contexts. This activity uses some short films to help learners understand that the refugee crisis is not a new phenomenon and that people both, in the island of Lesbos and elsewhere have been accepting massively refugees in the past.

The challenging and essential questions to be asked in this activity are:

1. How has history affected the way some individuals are responding to the refugee crisis today?
2. Why might it be helpful to focus on similarities and shared human experiences rather than differences? What can we learn from doing this?
3. What would you like to ask the different generations experiencing displacement and become refugees?
4. How does the voyage to Lesbos in 1922 relate to the present voyage of Syrians and other displaced people elsewhere? What are the similarities and differences?

The overriding learning objectives for this activity are:

1. Recognise that that displacement is nothing new
2. Understand the shared humanity and commonality

Procedural steps:

Step 1

Ask learners in your class to fill out the following K.W.H.L.chart (Know; Want; How; Learned). Start with the “K”, “W” and “H” columns (save the “L” column for the end of each of each activity).

Step 2

Introduce learners to the idea that although the context for why people have been forced to move may be different today from in the past, the experience of displacement – the hopes and fears – are very similar. Show learners the short film developed by UNICEF (<https://www.youtube.com/watch?v=utM6uFb8VNw>) that shares the stories of Harry (a former child refugee from WWII) and Ahmed (who fled the Syrian civil war) and follow-up with two video-clips going back to the catastrophe of Izmir in 1922 and Minor Asia, that caused the displacement of hundreds of thousands Greeks to flee in the neighboring Greek islands, including Lesbos.

<https://www.youtube.com/watch?v=O5jG5-JJKN4>

https://www.youtube.com/watch?v=lm6_7EKTkWM Ask learners to take notes in their diaries/journals while watching these videos.

Discuss the content of all the videos and the important messages that they convey using the following prompts: What did the older and younger people have in common?

Step 3

Give learners in small groups the following pair of pictures and ask them to:

Describe what they can see and what is happening in the photos; What clothes are they wearing; Do they look happy, sad, angry, bored, tired?; How does the photo make you feel? Would you like to be there? Why/Why not?

Compare and contrast the photos by giving a brief description of the two pairs of photos (action, location), writing what the pictures have in common and different and justify their comments.

Speculate about the situation and the feelings, thoughts, fears, hopes of the main actors in the pictures.

React for what they are seeing, expressing their own feelings, thoughts, fears and hopes.



Lesvos, 2019



Lesvos 1922



Minor Asia, 1914



Lesvos, 2019

Step 4

Give this text to learners and ask them to take a position and express their feelings about the message it conveys. “Today's parents, who exclude refugee children from schools, are grandchildren and grandchildren of people who have come to these places, uprooted from their homelands and homes”. Initiate a class discussion with prompting questions such as: Did you expect such a behavior? Justify your answer. What would you like to tell them? What might their ancestors would say to them? How might they feel? Would they also be acting the same?

Step 5

At the end, ask learners to complete the “L” column of their K-W-H-L chart (“What did you **L**earn at this point?”). Finally, in pairs or groups, have students compare what they wanted to learn and what they have learned, identifying if there are remaining things to learn.

Consider incorporating the columns referring to Actions and Questions. A (List of actions that could be taken for engaging learners). Q (Questions that still remain unanswered or could be raised in other circumstances).

Activity Part 4: Simple acts make a difference

This final activity, wraps- up all the previous ones in an attempt to merge constructed knowledge, critical consciousness developed and active engagement towards making a difference, that is change.

The overriding learning objectives for this activity are:

1. Reflect on what they have learned about refugees
2. Debate on rights and responsibilities
3. Exhibit changes in feelings, attitudes, perceptions and behaviours

Procedural steps

Step 1

Ask learners in your class to fill out the following K.W.H.L.chart (Know; Want; How; Learned). Start with the “K”, “W” and “H” columns (save the “L” column for the end of each of each activity).

Step 2

Invite learners to watch this short video-clip, focusing on a family restaurant initiative nearby the Moria refugee camp in Lesvos. Ask learners to write down their feeling about this initiative and decode the messages conveyed through the video.

<https://www.facebook.com/ajplusenglish/videos/greek-couple-welcomes-refugees-home/1120396604768512/>

Step 3

Show these two short films focusing on refugee personal testimonies from the Tilos Experiment. Ask learners to discuss the Tilos Experiment and the lessons learned.

<https://www.youtube.com/watch?v=jGd9sPVRpOQ>

<https://www.youtube.com/watch?v=pwa9KPxbZWQ>

Step 4

Invite learners to watch a short film about another initiative from a family in the island of Samos, nearby Lesbos. <https://www.youtube.com/watch?v=n3SycAtnUxQ>

Ask learners to share how they felt about these films, using the following prompts: What was the moment that stood out for you and why? How did watching these films make you feel?

Step 5

Invite learners to merge cognition (Head) that is what they have learned with what they have felt (Heart) and translate both into action (Hand). This is the 3Hs strategy, which can be facilitated by the following graphic organizer. Ask learners to work in small groups to prepare a short plan aiming to help refugees and migrants in their schools and communities. The three columns of the Table could help them think about and record their ideas. Among the things needed could be compassion, solidarity, emotional support, food, nutrition, shelter, clothing, health care, educational support. Once the learners have completed this task, ask the small groups to exchange their plan with a neighboring group for comments. At the end, a refined table that represents the whole class will be developed that needs to be realised.

List things needed	Justify why they are needed	Actions to be taken

Final reflections

After the discussion, give learners the opportunity to reflect on the following questions taking into consideration their journals and all previous activities:

- What did you finally learn from all these activities?

- Did anything change on your own personality and the way you see the world? List the key changes you have experienced.
- Explain what caused your ideas to change or why you think your ideas did not change.

At the end, ask learners to complete the “L” column of their K-W-H-L chart (“What did you **L**earn at this point?”). Finally, in pairs or groups, have students compare what they wanted to learn and what they have learned, identifying if there are remaining things to learn.

Consider incorporating the columns referring to Actions and Questions. A (List of actions they could be taken). Q (Questions that still remain unanswered or could be raised).



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**WORLD WATER DAY
22nd MARCH
(SDG6)**

**Developed by:
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World Water Day is an annual UN observance day that highlights the importance of freshwater. The objective of this day is to advocate for the sustainable management of freshwater resources and raise public awareness on the conservation and protection of this natural resource. World Water Day is celebrated around the world on the 22nd of March with a variety of events.

The proposed activity gives food for thought on the discussion of water privatisation, pricing and treating water as any other commercial product. The activity begins with Bolivia's case of water privatisation which led to the Cochabamba Water War. The following stage includes a debate on the price of water within Cyprus local settings, giving learners with further opportunities on reflecting about water as a common natural resource imperative for human (and other living beings') survival and well-being.

The learning design scenario constitutes of the following three parts:

- Part 1: The story of "abuela grillo" - The case study of Bolivia's water privatisation
- Part 2: Debate on "Water Pricing in Cyprus" a hypothetical scenario based on the fact that due to persisting draughts, Cyprus is nowadays turning into desalination of sea water to cover for their needs of water. This raises the cost of water production and the dilemma posed here concerns the equivalent raise in water pricing.
- Part 3: Conclusions emerging from the previous activities, would concern reflecting on water as a common good, as a natural resource, issues of water administration (private vs public good), human rights, etc.

Learning objectives

It is worth pointing out that learning objectives will be emerging and refined along with the development of the learning activities. The overriding learning objectives for this theme are the following:

1. Explore the issue of access to clear water as a human right and common good vs as a financially exploitable good.
2. Develop appreciation of water as a good that shouldn't be taken for granted and raise awareness on how access to clean water is connected to other sustainability issues, e.g. poverty or climate change.
3. Become aware of the political and economic aspects of water management.
4. Develop transversal skills, issues of sustainability justice and the six pillars of 21st c. learning

Suggested age range: 12–15 years old

Subjects: Geography, Civics, Languages, Economics, Politics, Ethics

Curriculum Standards: (from the EE/ESD MoEC Guide – defining the expected learning outcomes on the EE/ESD Curriculum)

(http://www.schools.ac.cy/klimakio/Themata/perivallontiki_ekpaidefsi/odigos_ekpaideftiku.u.html)

By the end of the activities students are expected to:

- Become aware that ensuring sufficient quantity and quality of water is a human right.
- Understand that lack of water can have consequences on the ecological, social, economic and political level.
- Understand that lack of water as a global issue, affects life quality of millions of people.
- Explore the consequences of water shortage on a global and regional level, how this is connected to other SD issues (e.g. poverty, desertification, climate change etc) and understand the complexity of the problem.
- Understand how water shortage problems are connected to the geographical location of a country and its climate.
- Explore the factors that lead to water shortage in our region (climate change, limited rainfall...)
- Become aware of their personal and collective responsibility on water management and water saving, and how this is also connected to their individual consumption patterns and needs.
- Develop discussion and communication skills for gathering information and addressing water issues on a global level.
- Participate in action for information and public awareness raising for water saving.

10Cs to be developed: (Communication, Collaboration, Critical Thinking, Critical Consciousness, Construction of knowledge, Critical Reflection, Co-responsibility)

Sustainability Justice (Social justice and environmental justice)

Learning pillars to be developed: (Learning to be; Learning to know; Learning to do; Learning to live together; Learning to transform oneself and society and Learning to give/share)

Resources:

The content of this lesson celebrating the World Day of Water is primarily based on Open Education Resources, mostly in digital form. A key resource also comes from the socio-cultural capital of learners. **Cite the references to the resources**

<http://edu-kit.sameworld.eu/>

https://www.youtube.com/watch?v=AXz4XPuB_BM

<https://www.economist.com/the-americas/2000/02/10/water-war-in-bolivia>

<https://democracyctr.org/article/bolivia-15-years-on-from-the-water-war/>

<https://journals.openedition.org/mediterranee/6583>

Activity Part 1: Water War: The Case of Abuela Grillo

The overriding learning objectives for this activity are:

- Acknowledge water and sanitation as a human right and understand that clean drinking water and sanitation are essential for the realisation of all human rights
- Understand what discrimination means and how this can limit the human rights of certain communities / groups of people.
- Identify the values that concern the solutions to ensuring clean water for all (as these are identified in the case of Bolivia)
- Appreciate the benefits of a holistic viewing of the issue and be able to identify different interests or agendas in each option provided.
- Advocate for equality and human rights in the case of water.

Warming-up Before You Begin

Start with a short introductory discussion about access to clean water as a human right for all. Discuss how we get water in our homes, how much we pay for it and why, and if they think that access, quality and cost of water is the same everywhere on the globe?

Ask learners in your class to fill out the following K.W.H.L. chart (Know; Want; How; Learned). Start with the “K”, “W” and “H” columns (save the “L” column for the end of each of each activity).

View the short cartoon film: Abuela Grillo

https://www.youtube.com/watch?v=AXz4XPuB_BM

Reflections: Based on the short film, initiate a discussion with the following prompting questions:

- What is the story about?
- Why did granny Grillo leave the village?
- What happened to granny Grillo when she reached the big city?
- Who do you think the men in suits were? Why did they need granny Grillo? (Why did they kept her captive?)
- What happened to the village after granny Grillo left?
- Why did people protest?
- Who do you think granny Grillo is? What does she represent?

Note to the teacher:

Civilian rule was restored in Bolivia in 1982, ending decades of military dictatorships which left behind them severe economic problems for the country. In order to address a 20,000% hyperinflation the Bolivian government turned to the World Bank's help for restoring the country's economy. Under the World Bank's guidance, Bolivia privatised its railways, telephone system, national airlines, and hydrocarbon industry. While the privatisation process can attract foreign investments, boost a country's economy and relief a government of development and administration cost of these services, the privatisation of certain goods can be debatable. Water privatisation in Santa Cruz Bolivia, according to World Bank, resulted in increased access and quality service, yet the same attempts in Cochabamba had the exact opposite effect.

The **Cochabamba Water War** was a series of protests that took place in Cochabamba, Bolivia, between December 1999 and April 2000 in response to the privatisation of the city's municipal water supply company SEMAPA. The tensions erupted when a new firm, Aguas del Tunari – a joint venture involving Betchel – was required to invest in the construction of a long-envisioned dam (a priority of Mayor Manfred Reyes Villa – in spite of the World Bank's advice not to) - so they had drastically raised water rates. The extremity of the privatisation measures went as far as to forbid even the collection of rain water by the people. The wave of demonstrations and police violence was described as a public uprising against water prices. Protests, largely organized through the Coordinadora in Defense of Water and Life, a community coalition, erupted in January, February, and April 2000, culminating in tens of thousands marching downtown and battling police. One civilian was killed. On the 10th of April 2000, the national government reached an agreement with the Coordinadora to reverse the privatization. A complaint filed by foreign investors was resolved by agreement in February 2001.

The story of the Cochabamba water war is presented through a cartoon: “La abuela grillo” – (Grandma Grillo).The cartoon is used as a trigger for discussion and role play in order to better understand and reflect on water as a common good.

The short film and discussion is an introductory to the activities that will follow. Discussion will give learners the opportunity to reflect on their own ideas and values. For this part of the activity, students work with in groups with their peers.

Procedural steps:

In the following parts of the activity, learners will start thinking about the values around water management and commercialisation vs treating water as a common good / resource. In order to do so they have to explore and obtain sufficient information on the water war in Cochabamba Bolivia and how its privatisation lead to unfair, high cost of water making it inaccessible to the community.

For a more objective insight on the issue, learners can read about similar privatisation tactics followed by Bolivian government in other areas of the country, where privatisation apparently benefited the community. Discussion will also address politics, corruption issues, economic issues etc.

Step 1.

Ask learners to use Google Maps and visit Cochabamba area in Bolivia and draw information on the area. They should obtain information on:

- Its geographical location
- The climate
- The political and economic situation of the country / and the area
- The natural sources available in the area
- Water sources in the area

Through this process they will understand the political, economic and environmental problems of the country, in a way will help them understand how the water problem emerged.

Step 2.

Ask learners to use Google to explore about Cochabamba water war and obtain information on the issue.

They should specifically explore:

- The government's position on the issue

- The local government's position on the issue
- The World-Bank's suggestions on the issue
- People's position and demands
- Companies' position and demands.

More information can be obtained through:

<https://www.economist.com/the-americas/2000/02/10/water-war-in-bolivia>

<https://democracyctr.org/article/bolivia-15-years-on-from-the-water-war/>

movie: Even the rain (<https://www.netflix.com/title/70154110>) -

<https://www.nytimes.com/2011/02/18/movies/18even.html>

FLOW documentary (For the LOve of Water)

<https://www.youtube.com/watch?v=RkdIfArWqo>

Through this exploration, students will learn about the context of the water war, the roles of the country's government, the local government, the world-bank, private and public water companies and the people. It is important to obtain a holistic and objective view of the problem so as to identify effective solutions in a systemic way (e.g. resolving the water problem might be connected to resolving corruption issues in the country)

Step 3. Reflection

(Reflection questions)

Questions that can further enhance the reflective and values analysis of the discussion could be:

- Who owns water?
- Who has the right to use water?
- Why do we pay for water?
- What do you think about bottled water? (water is treated as a commodity instead of first need good & carbon footprint)
- Do you think it is fair for some people to pay for water and for others not?
- What should happen if poor people cannot afford to pay for water?
- Whose responsibility is it to provide healthy clean water to people?

These can be addressed and discussed in plenary in the class.

At the end, ask learners to complete the "L" column of their K-W-H-L chart ("What did you **Learn** at this point?"). Finally, in pairs or groups, have students compare what they wanted to learn and what they have learned, identifying if there are remaining things to learn.

Note to the teacher:

In Part1 of the activities, the emphasis is on challenging learners' ideas on water and developing an understanding of the story of Water War. They are challenged to 'revisit' the story in an objective spirit, and be open to different views and positions. During this process they might be assigned to undertake a role that does not match their beliefs, nevertheless, this will lead to learners' values review and development and an informed and well documented position towards the conflict issue. Role-groups are formed and they should differ to the Classe's normal group organisation – sitting arrangement (different members). This will prepare learners for stage 2.

Activity Part 2: Water scarcity, cost and price in Cyprus (Debate activity).

The Activity Part 2, transits learners from a distant water issue, to the local context. Learners will explore and reflect on water shortage issues in Cyprus, means and cost of water production, political decisions on water cost and administration and how these decisions affect consumers.

The overriding learning objectives for this activity are:

- Understand that water issues are also economic and political, water being a common good, necessary for the people's good health and well-being.
- Acknowledge water and sanitation as a human right and understand that clean drinking water and sanitation are essential for the realisation of all human rights
- Understand what discrimination means and how this can limit the human rights of certain communities / groups of people.

Procedural steps:

Step 1.

Ask learners in your class to fill out the following K.W.H.L. chart (Know; Want; How; Learned). Start with the "K", "W" and "H" columns (save the "L" column for the end of each of each activity).

Step 2.

Provide learners with the debate scenario:

Cyprus faces severe water shortage problems, due to climate change and other geographical and environmental factors, many of which with political and economic connotations too. This activity focuses on the water shortage problem in Cyprus. Cyprus government, since the country's independence in 1960, invested in dam constructions as a means to resolve the water shortage problem. In the recent years this was proved to be an ineffective solution as dams depend on rainfall, which is not a reliable water source due to prolonged draught periods. So, water in Cyprus, is nowadays also produced by desalination units. As water demand raises, and draught persists, (less water obtained from dams and springs) the need for more desalination – produced water raises. This of course raises the cost of clean water 'production'. For consumers, up to now, clean, good quality water has been accessible at a very low price (approximately 1 euro per m³). Water Development Department (WDD) currently applies a scaled scheme for charging water consumption in order to encourage water saving.

1.Current water charge scheme

Scaled Water charges for households

Residential tariff per 4-monthly period (VAT rate 5%)

	€
Fixed Charge	16,00
Maintenance charge	6,00

Consumption:

	From (m³)	To (m³)	€
	1	40	0,90
	41	80	1,43
	81	120	2,45
	121	and over	5,00

(<https://www.wbl.com.cy/en/page/water-rates>)

Still these prices, considering that water will mainly originate from desalination units, cannot cover the actual cost of water. Therefore WDD proposes a new scheme of prices, and the Cyprus Parliament has to discuss and approve new prices.

1. Proposed water charge scheme

Scaled Water charges for households

Residential tariff per 4-monthly period (VAT rate 5%)

	€
Fixed Charge	20,00
Maintenance charge	8,00

Consumption:

	From (m³)	To (m³)	€
	1	40	1,10
	41	80	2,20
	81	120	3,50
	121	and over	7,00

As part of the scenario, learners constitute the members of the Cyprus Parliament. They are presented with the following question: **Do you agree with raising the water price to meet the production cost or not?**

Step 2

Learners are divided into two groups, depending on their position on the question.

They study the given resources but they also search for more information through the internet.

e.g.

<https://inspiredeconomist.com/2008/10/03/what-is-the-value-of-water-an-online-debate-by-the-economist/>

https://www.iemed.org/observatori/arees-danalisi/arxiu-adjunts/10-papers-for-barcelona-2010/8-environmental-and-sustainable-development-in-the-mediterranean/ferragina_8.pdf

https://www.iemed.org/observatori/arees-danalisi/arxiu-adjunts/anuari/med.2017/IEMed_MedYearbook2017_water_challenges_mediterranean_Kibaroglu.pdf/

<https://journals.openedition.org/mediterranee/6583>

<https://www.wbl.com.cy/en/page/water-rates>

<http://www.cy2012.eu/index.php/en/file/v5rbArStMbT2nxXo9+AUZw==>

<https://www.env-econ.net/2008/09/a-water-pricing.html>

<https://urlzs.com/HCKbr>

http://www.moa.gov.cy/moa/wdd/wdd.nsf/index_gr/index_gr?opendocument

Step 3: Brainstorm and organise ideas on their view on raising water charges.

- After studying the resources available, learners can use sticky notes and write one point – argument in favour of their position on each piece of paper individually. They can use key words rather than full sentences.
- Then, they can work as a group, review their ideas and organise them on a large piece of paper. Duplicated ideas get stuck on together.
- The following tables and questions can help them set their arguments to support their position.

BENEFITS FROM RAISING WATER CHARGES	PROBLEMS FROM RAISING WATER CHARGES

BENEFITS FROM KEEPING CURRENT LOW WATER CHARGES	PROBLEMS FROM KEEPING CURRENT LOW WATER CHARGES

Raising the water charges: how can you address the problem of low income families? How can you provide affordable good quality water to the citizens?

Keeping the current water charges: How can you ensure that the operation of the desalination units is economically viable? How can you ensure that enough, good quality water is produced for the needs of the citizens?

Step 4: Structure the Speeches for the debate

The group then uses another sheet of paper to identify between 7-10 arguments to support their view. They may have more than these so to get them down they can:

- Scrap small or insignificant arguments
- Join together similar arguments to make larger ones
- On their sheet they need to write the names of the arguments. EACH NAME SHOULD BE NO LONGER THAN THREE WORDS.
- They also have to be ready to present counter-arguments to the arguments of the opposite group.

Choose the summary speaker from each group a timekeeper from each group and a chair for the whole debate session (teacher can be the chair of the debate). Divide the arguments between the first three speakers that would follow the summary speaker (the summary speaker will speak first and will present the group's position on the issue and their proposal. After the summary presenter, the arguments identified (7-10) would be divided to three speakers. The first speaker can have three - four arguments. The second and third speaker should have two or three arguments. The rest of the group members should be able to join the debate after the initial presentation of the summary of their group's position and provide counter arguments (rebuttal) to deal with the opposite group.

Step 5: Structure the Speeches for the presentation of the arguments.

Introduce the learners to the Idea of developing arguments by "Making Them REAL"

- Reason
- Evidence
- Analysis
- Link

Allow some time to the summary presenter and the first speakers from each group (with help from their peers) to think about how to make each of their points REAL.

- The summary speakers need to think what they think the biggest issues in the debate will be. Their speech will focus on three big issues and show why their side has won those issues. They can work to make these arguments REAL.
- The three initial speakers, and the rest of the students in the group (timekeepers and any other students) should work on making their arguments REAL.

Step 6: Debate begins

Debate follows simple rules that are previously agreed in the classroom: e.g. no interruption, agreed time for presenting arguments, no personalised comments, democratic processes etc.

The debate begins with the presentation of a summary of each group's positions and rationale. Then taking turns, the three speakers (one at a time from each group) present analytically the group's arguments. After that, members of each group try to rebut the other group's arguments and support their own. With the end of the discussion, learners return to their original groups and vote for a decision.

At the end of the activity, ask learners to complete the "L" column of their K-W-H-L chart ("What did you Learn at this point?"). Finally, in pairs or groups, have students compare what they wanted to learn and what they have learned, identifying if there are remaining things to learn.

Reflection questions

After the debate activity, give learners the opportunity to reflect on the following questions in group and/or through a class discussion:

- What did you learn from this activity?
- How did your ideas about the topic change during this activity, if at all?
- Explain what caused your ideas to change or why you think your ideas did not change.

Activity Part 3: Water - air - natural resources

This part is the closure of the activity. It intends to take the whole activity one step forward and challenge learners into reflecting upon how they see the same issue applied to other natural resources, e.g. air, minerals, or forests, etc.

The overriding learning objective for this activity are:

1. Recognise that that administration of common natural resources is often connected to environmental justice and other sustainability issues (e.g. poverty, good health and well-being, reduced inequalities, decent work and economic growth etc)
2. Understand the need for developing empathy and solidarity towards less fortunate, even between nations and develop a feeling of responsibility and need to act.

Procedural steps:

Step 1

Ask learners in your class to fill out the following K.W.H.L.chart (Know; Want; How; Learned). Start with the "K", "W" and "H" columns (save the "L" column for the end of Part 3 of the activity).

Step 2

The challenging and essential questions to be asked in this activity are:

1. How do you think other common natural resources should be administered, e.g. air, minerals, or forests, etc
2. In which cases would privatisation be acceptable? Why?
3. What should individuals as well as governments have in mind when using / exploiting a natural resource to which they have access?

4. Why is solidarity between people and between nations important for achieving the sustainable development goals?

These questions are discussed in the classroom plenary.

Step 3

Individually, learners prepare a letter addressed to the Cyprus Parliament (or water authorities), explaining your position and ideas on water pricing in Cyprus, according to the debate's final decision.

All letters are then reviewed in order to compose a representative one for all the class. This letter can be mailed to the authority it addresses or published in local media.

Final reflections

Questions previously presented are addressed and discussed in plenary with the class.

- (1. How do you think other common natural resources should be administered, e.g. air, minerals, or forests, etc
2. In which cases would privatisation be acceptable? Why?
3. What should individuals as well as governments have in mind when using / exploiting a natural resource to which they have access?
4. Why is solidarity between people and between nations important for achieving the sustainable development goals?)

At the end, ask learners to complete the "L" column of their K-W-H-L chart ("What did you **L**earn at this point?"). Finally, in pairs or groups, have students compare what they wanted to learn and what they have learned, identifying if there are remaining things to learn.

Note to the teacher:

After the completion of the activities, as a follow up / extension of the lesson you can use the following link to access a variety of games on water.

<https://games4sustainability.org/water-games/>



WORLD DAY:

3 June World Bicycle Day (A/RES/72/272)

(SDG11: Make cities and human settlements inclusive, safe, resilient and sustainable)

Developed by:

Victoria Pavlou (Frederick University)

To make cities and human settlements inclusive, safe, resilient and sustainable, the unit of lessons/activities entitled “A healthy life” / “Healthy living in sustainable cities” is developed adopting the CARE learning design methodology. This unit aims to strengthen understanding of what a good life is in terms of healthy living and how to make cities more inclusive, safe, resilient and sustainable. To do so, it focuses around the World day of Bicycle.

The learning activities developed primarily function as teacher training materials for designing student-driven learning activities applying the CARE methodology. The scenario for this unit takes place in Nicosia, Cyprus. Nicosia is the capital city of Cyprus, located in the centre of the island. Despite being a small island with population under a million, Nicosia faces traffic problems, which are due to the low usage of public transportation, the high usage of private cars and the limited infrastructure that would support other means of transportation, such as bicycles. Further, there is limited use of sustainable energy in public or private transportations. All these contribute to high rates of air pollution, which leads to public health issues (air quality, noise) and environmental issues (green house emission issues). At the same time, it has to be noted that local authorities in Nicosia have been considering for some years alternative means of transportation and are now implementing a series of projects to address the traffic problem facing the capital, but also to revitalize the urban center's commercialization and improve the environment. These projects affect central highways in the Nicosia area and it is expected that in the forthcoming years, more infrastructure will be available for pedestrians and bicyclists. Educating people to embrace changes and contribute to making their city inclusive, safe, resilient and sustainable is important for the success of any project.

The learning design scenario constitutes of the following parts:

- Warm-up activity: A good life
- Part 1: Dreaming of a bicycle - New attitudes
- Part 2: Cycling and security
- Part 3: Cars and bicycles
- Part 4: Promoting cycling - What needs to be known?

This is a very good lesson. However, there is a missing point, that is, the connection of cycling with sustainability. My suggestion is to integrate part 3 in 2 and develop part 3: Cycling and climate change and Part 4. To connect promotion with climate change

Learning objectives

The overall goal of this unit of lessons is for learners to understand how bicycling not only benefits themselves as individuals but also benefits their society and their environment. Thus adopting cycling on a regular base will lead to a better life (emotional and physical health) and also to a better society (make cities safe, resilient and sustainable).

The overriding learning objectives for this unit of lessons/activities are the following:

1. Offer knowledge about the personal and community benefits of cycling.
2. Capitalize on the positive feelings that cycling evokes.
3. Change attitudes towards cycling and promote frequent cycling.
4. Take action towards supporting a redesign / redistribution of space in the cities.
5. Develop transversal skills, issues of sustainable societies (environmental and economic societies) and the seven pillars of 21st c. learning

Suggested age range: 10–14 years old (Looking to the whole text, there is a need to differentiate parts of the activities to be distinct for learners' capability within the set range. The 4 years range make a difference at this age group)

Subjects: Language, Visual Arts, Health Education and Environmental Education/ Education for Sustainable development

Curriculum Standards:

In Cyprus, the Curriculum Standards of the subject (or area?) Environmental Education/ Education for Sustainable development is designed to meet curriculum standards of all subjects of Primary Education at different levels; they are linked to the respective learning outcomes of each subject at each learning level. Thus, next these 'all inclusive' standards are cited:

Curriculum standards Learning outcomes General:	Learning outcomes Success Indicators Specific	Curriculum Adequacy Indicators
3. Students should develop communication, dialogue, collaboration, collegiality and participatory skills.	3.1 Students should collaborate, discuss, exchange views, arguments and thoughts, democratically in groups, to investigate the problem under study, while identifying the essential and unimportant points of the	3.1.1 Collaborative learning and effective communication skills: -Active listening. -Expression of opinions. - Summary of messages. - Identify and distinguish the essentials and non-essentials of the conversation.

	<p>conversation while critically examining their ideas while avoiding criticizing people.</p> <p>3.2 Students should organize and classify the information needed, evaluate the relevance and coherence of an argument, cultivate critical thinking and respect for different views, draw conclusions and encourage dialogue by supporting their views with arguments.</p>	<ul style="list-style-type: none"> - Observation and description. - Reflect and review of initial views on the issue under investigation. <p>3.2.1 Effective coordination and discussion skills:</p> <ul style="list-style-type: none"> - Active listening, adherence to regulations by those involved during the discussion. - Summarizing and examining objections, reservations, ideas and contradictions. - Accepting different views. - Identification and presentation of arguments to substantiate their point of view. - Synthesis of opinions and formulation of conclusions.
<p>5. Students should be able to recognize, evaluate, systematize and accept values.</p>	<p>5.1 Students should recognize the values embedded in their views and choices and analyze their beliefs on the issue of sustainable development.</p> <p>5.2 Students should analyze and clarify commonly accepted social values and stereotypes as well as personal values.</p>	<p>5.1.1 Recognition of values</p> <ul style="list-style-type: none"> - Recognition of rights due to intrinsic value - Recognition of the values of solidarity, equality, equality, democracy. <p>5.2.1 Analysis and clarification of values</p> <ul style="list-style-type: none"> - Discerning the interests and ideology behind the values. - Clarification and definition of stereotypes. Identifying social stereotypes. Studying the causes of stereotypes and stereotypical attitudes. - Proposals for action in the context of values promoting the common good.
<p>6. Students should acquire civility, personal and collective responsibility and competence for action. Be able to plan and take action at a personal cross-sectoral, Community, national and international level</p>	<p>6.2 Students should understand the need to organize and implement sustainable development actions at local, national and global level, as well as understanding the social, economic, political factors that raise a sustainable development issue, and the social, emotional reasons that create the need for action to deal with it.</p>	<p>6.2.1 Importance of organizing and implementing sustainable development actions</p> <ul style="list-style-type: none"> - Identifying the social, economic, political factors to highlight a sustainable development issue. - Selection and explanation of actions to address and resolve the issue under investigation in the school environment.

Time: Two school day in a primary school [Question: the activities proposed are quite lengthy. Should I reduce them so they fit in one day?]

This is a good question! My suggestion is to plan the activities in different days across the subjects you have included rather than on two consecutive days

7Cs to be developed: Communication, Collaboration, Creativity, Critical Thinking, Cross-cultural Understanding, Critical Reflection, Connectivity

Sustainability Justice: environmental justice & economic justice

Learning pillars to be developed: Learning to be; Learning to know; Learning to do; Learning to live together sustainably; and Learning to transform oneself and society

Resources

The content of this unit celebrating the International Bicycle Day is primarily based on Open Education Resources, mostly in digital form. A key resource also comes from the socio-cultural capital of learners. Open educational resources can be found in the following links:

https://ec.europa.eu/environment/archives/cycling/cycling_en.pdf

https://ec.europa.eu/environment/archives/cycling/cycling_gr.pdf

Warm-up activity & part 1

This section (warm-up activity and part 1) aims to offer a personal context in the students' learning by focusing on what a good living means to them and investigating aspects of healthy living. It also aims to enable them to understand how cycling can contribute to their healthy living and develop an awareness of the role of cycling in making cities more inclusive, safe, resilient and sustainable.

The overriding learning objectives of the warm up activity and part 1 are for learners to:

- explore the issue of healthy living through cycling
- raise awareness about the feasibility of daily cycling
- understand the relationship of cycling and sustainable living
- develop transversal skills (collaboration, communication, critical thinking, creativity)

Warming-up activity:

- Divide the class into groups and give them the topic "A good life" to discuss with the following prompts: "What a good life means?/ What a good life means to you? What a good life means to others?"
 - Ask groups to use the Kidsinspiration software¹ or any other concept map software to organizer and communicate their ideas. The software supports the communication of relationships between concepts and ideas and multimodal ways of representing information.

¹ Kidspiration is a child-friendly version of the popular Inspiration software. Kidspiration allows users to visually display and organize thoughts and ideas across various disciplines. This software appeals especially to visual and auditory learners, as users can hear and see words, numbers, and concepts. The software is provided in the public schools in Cyprus and its use is supported through the website: <http://www.schools.ac.cy/klimakio/Themata/diathematika/kidspiration/index.html>

- Ask learners to create a concept map and encourage them to group their answers around suitable concepts. (Since you ask later to make another concept map with focusing on ‘Bicycling and healthy living’, it is suggested to be more specific here). The first concept map could aim to familiarize learners with concept mapping and the tool, using words relevant to the theme. In this case, some reflection questions should also be posed. This may be done with the whole class using the whiteboard or with each group using colours and shapes and other features of the software. They should include overarching concepts such as:
 - health,
 - security,
 - basic needs, etc.
- Inform learners that you will focus only on health and healthy living. Ask learners to fill in the K.W.H.L. chart (Know; Want; How; Learned). Start with the “K”, “W” and “H” columns (save the “L” column for the end of each of each activity).
- Utilize learners’ views regarding the concept ‘health’ (as already documented in the concept maps) and initiated a discussion around the questions:
 - What healthy living means to you?
 - What are the conditions around living healthy? / What one can do to promote healthy living?
 - How bicycling can contribute to healthy living?
- Ask learners to make another concept map with the title ‘Bicycling and healthy living’. Learners should work in groups using the concept map software. They should bring in their knowledge and experiences about/with cycling. E.g., how often they use their bicycles, when and why, with friends or alone, feelings, racing, etc.). These pieces of knowledge and their experiences should be represented in a multimodal way, using pictures, sounds and text.

Reflections

Based on the discussions and the concept maps created by the learners, initiate a discussion with the following prompting questions:

- Why do you think that cycling can contribute to the emotional health of an individual?
- Why do you think that cycling can contribute to the physical health of an individual?
- Do you think that there are serious factors that prohibit cycling?
 - E.g., Is there a safety issue that prohibit you from taking up cycling?
- In your opinion, does cycling benefit only the person who cycles or are there other benefits?

At the end, ask learners to complete the “L” column of their K-W-H-L chart (“What did you Learn at this point?”). Finally, in pairs or groups, have students compare what they wanted to learn and what they have learned, identifying if there are remaining things to learn.

Note to the teacher:

Developing student-driven learning activities implies that learners’ voice matter. Giving voice to learners can be activated through the K.W.H.L. chart and graphic organizer. The responsibility for framing learning objectives should be, thus, in the hands of both teachers and learners. First by K (learners brainstorm what they already know about the topic). W (Learners brainstorm a list of what they want to learn for the theme or

topic they will work on). H (Learners identify strategies or tools they could use to find out what they want to know). L (At the start and end of each key activity, learners identify what they have learned).

The basic KWHL chart can be extended to incorporate two more columns referring to Actions and Questions. A (Learners merge knowledge acquired with action by brainstorm a list of actions they could take, that eventually contributes in developing active citizenship). Q (Learners consider what questions they still have, which could be taken at a later stage in the curriculum extension, turning learning a holistic and lifelong process).

Some questions that maybe brought up or that you feel it is important to 'guide' learners to bring up are the followings (European Communities, 1999, pp.6-7):

WHY THE BICYCLE?

It is very likely that the potential for stepping up cycling in your town is much greater than the predictions which you could make based on the current situation. While daily cycling may not yet have become one of the habits of your fellow citizens, it is nevertheless a mode of transport which promises to play a significant role in mobility management. Why is it that towns in a situation quite comparable with yours have nevertheless taken up this challenge? Does the bicycle have a role to play among your objectives for improving the quality of life in your town and the appeal of public transport?

WHAT NEEDS TO BE KNOWN

The number of potential cyclists is high because almost everyone enjoys cycling when a minimum of favourable conditions are met. Since it is no longer a habit to think of cycling, people must be reminded that cycling can be an efficient and pleasant way of getting around on a daily basis. Pointers must be given for people to think about cycling. What is the relationship between cycling for pleasure and daily cycling? Apart from these two major components, what other elements constitute a pro-cycling policy? What would a policy favouring cycling cost? What needs to be known to take the first (right) steps.

TO HELP YOU

If a pro-cycling policy interests you, you are not alone. Networks of towns for cyclists exist in several countries. Almost every year, a congress or conference brings together people with experience or knowledge which could be of assistance to you. Closer to home, cyclists are ready to help you for their town to move with them. Where are the resources to be channelled and what is the best way of making use of synergies?

PART 1: DREAMING OF A BICYCLE/ NEW ATTITUDES

In this activity, the learners will further explore how frequently and why they might be cycling. This will enable them to realize the feasibility of frequent or even daily cycling

and that new attitudes towards cycling are needed in order to embrace healthy living and promote sustainable living. Thus, they will also investigate the impact of cycling on their environment / city.

The overriding learning objectives of this activity are the following:

1. Document when, why and how often they might be cycling
2. Realize the feasibility of daily cycling
3. Argue about the advantages of cycling for themselves, their community and their environment (city)
4. SKILLS
5. ATTITUDES

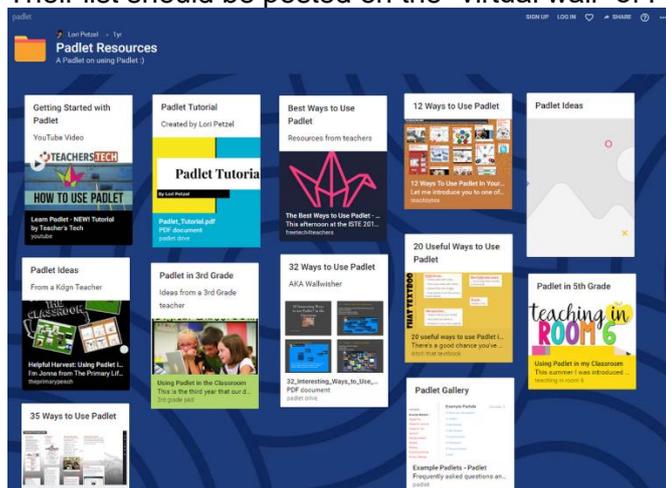
Procedural steps:

Step 1:

- After announcing to the class that they are going to discuss about daily cycling, ask them to fill out the K.W.H.L. chart (Know; Want; How; Learned). Start with the “K”, “W” and “H” columns (save the “L” column for the end of the activity).

Step 2: Where can I cycle and why?

- Ask learners to list all of their daily activities including extra curriculum activities². Their list should be posted on the “virtual wall” of Padlet³.



- After posting their list, ask learners to explore the proximity of these activities to their house. To do this, they should open the google maps application (maps.google.com) and explore the distance between their house and their school or other places that they go on a daily or weekly base (e.g., the pool, the dance

² School in Cyprus finishes by 13:05 for primary school children and 13:35 for secondary school children. The majority of children participate in a variety of extra curriculum activities after school such as sports (football, basketball, tennis, etc.), English language lessons, music lessons (piano, guitar, and violin) or other activities.

³ Padlet is a “virtual wall” which promotes collaboration, communication, creativity and more because of its versatility. Students can write a response to a discussion question, add resources for a collaborative class project, work in small groups, use it for brainstorming or connect with other students and classrooms throughout the world. It is a free tool (padlet.com).

lessons, the grocery shop, etc.). Ask them to note time needed to go to these places by bicycle instead of a car.

- a. These pieces of information should be added on the 'virtual wall' (text or photo/ print screen from maps.google.com).
- b. Based on these, initiate a discussion about trips that could be made by bicycle.
- c. Ask children who already use their bicycle to talk about their experiences.

I think this activity could be also related with Math since measuring distances is a concept that is included in Math in 10y..

Step 3: Networking

Networking: The number of potential cyclists is high because almost everyone enjoys cycling when a minimum of favourable conditions are met.



- Show some picture of people cycling in Nicosia. Ask them to comment on the pictures and pose questions such as:
 - Where can I cycle and why?
 - Search for cycling routes on google maps
 - Leisure/ fun/ to go somewhere etc.
 - Where can I find out of other potential cyclists?
 - Encourage children to search for networks through a search engine or specific social network sites such as Facebook and Instagram.
 - Encourage children to collect information (text and visual), such as cycling activities and cycling routes.

Step 3: Representing myself cycling

- Show a couple of the following artworks or simply focus on one to initiate a discussion.
- Start with factual questions, e.g. what do you see, where is this person, how he is depicted/what is he wearing, which lines, colours (or any other visual element) do you see, what materials were used, etc.), and then move to interpretative questions, e.g., how do you think this person feels, why is he cycling, how do you feel when you see this artwork, what do you think, would you like to be in this person's position (use of the Factual and Interpretive Inquiry model for responding to art works, Pavlou, 2013)

Suggestions of artworks⁴:



⁴ There are many artists that have depicted bicycles or cyclists. It is suggested to focus on local artists. Two artworks of a Cypriot artist and one artwork of a Greek artist are suggested.

Stelios Votsis, Cyclist (1988)
Mounted bike



Stelios Votsis, Cyclist (2005)
(1935)

Leslie DeRose (2010-2014)

map
prints



Alecso Fasianos, The blue Cyclist

- Ask learners to depict themselves riding a bicycle. They should focus both on the cyclist and the environment.
 - How would they depict themselves? What would their feelings be?
 - Challenge them to think carefully of the environment. Focus on their neighborhood/ city and ask them to imagine how their environment would be/would change if everybody was cycling. A brief discussion among groups should take place for sharing ideas.
 - Challenge them to think of different materials/ techniques.
 - Learners may work alone or in groups.
 - Learners may produce 2D artworks with a variety of materials and techniques, such as paints, pastels, collage with scrap papers and old maps, prints, etc.
 - Learners may produce 3D artworks with a variety of materials and techniques, e.g. recycled materials, soft metal, cardboards, etc.

Reflections

Based on the notes learners have produced (on padlet's virtual wall), the discussions that took place and the artworks they produced, initiate a discussion with the following prompting questions:

- Why are you not cycling as often as you could?
- How would your life change if you (and others) cycle on a daily base?
- How would your neighborhood/ city change if more people were to cycle on a daily base?

At the end, ask learners to complete the "L" column of their K-W-H-L chart ("What did you Learn at this point?"). Finally, in pairs or groups, have students compare what they wanted to learn and what they have learned, identifying if there are remaining things to learn.

Consider incorporating the columns referring to Actions and Questions. A (List of actions that could be taken), e.g. take up cycling on a daily base, encourage their family to cycle more, promote cycling through open art exhibitions to the public. Q (Questions that still remain unanswered or could be raised for further use), e.g., how can we encourage authorities (school, municipality, others) to improve facilities for cyclers?

PART 2: CYCLING AND SECURITY

In this activity learners will focus on cycling and security. One of the barriers to taking up cycling is a perception of the physical danger posed by motor traffic. However, the real risks are minimal and, the research suggests, are outweighed by the health benefits by a factor of around twenty to one. It may be more risky to your health to be sedentary.

Learning objectives. By the end of these activities, learners should be able to:

1. Cite the most common safety hazards when one is cycling
2. Drive a bicycle responsibly for their own safety and the safety of others.
3. Be aware of the real advantages and disadvantages of daily cycling.
4. Be critical of information and not to really on stereotypic views regarding safety and cycling
5. Develop transversal competence (Communication, Collaboration, Creativity, Critical Thinking, Cross-cultural Understanding, Critical Reflection, Connectivity)

Procedural steps:

Step 1

After announcing to the class that you are going to discuss safety issues regarding cycling in the city, ask learners in your class to fill out the K.W.H.L. chart (Know; Want; How; Learned). Start with the “K”, “W” and “H” columns (save the “L” column for the end of the activity).

Step 2

For younger learners

Grade E (primary education) in the Greek language subject Cyprus has a series of lessons around life in a city (see Students’ book, Unit 2, Life in the city, pp. 23-40 http://archeia.moec.gov.cy/sd/281/e_dim_glossa_tefchos_1_vivlio_mathiti.pdf, and Students’ exercise book, especially ‘A whole city is using the bicycle. The Karditsa’s experiment’, in p. 14, http://archeia.moec.gov.cy/sd/281/e_dim_glossa_tefchos_1_tetradio_ergasion.pdf).

There are also other resources in Greek related to safety and cycling, such as ‘Κυκλοφοριακή αγωγή για ποδηλάτες’, ‘Ο γύρος του κόσμου με το ποδήλατο’, etc.

Choose one of the proposed materials. Read the text and discuss the storyline with the learners. Pose questions such as:

- What safety hazards are there when cycling in a city?
- What are your responsibilities?
- What are the responsibilities of others?
- What kind of facilities would you like to have in your neighborhood?

For older learners:

- Watch the following videos (these are in English):
<https://www.youtube.com/watch?v=mUoLhEVLASo>
https://www.youtube.com/watch?v=2MiEyK5d_BM

Initiate a discussion using the following questions as prompts:

- What safety hazards are there when cycling in a city?
- What are your responsibilities?
 - What do you need to do before getting on your bicycle?
 - What do you need to do while cycling?
- What are the responsibilities of others?
- What kind of facilities would you like to have in your neighborhood?

Step 3

For younger learners

Organize games with bicycles. Use the following resource:

<http://paf.org.au/wp-content/uploads/2015/02/Safe-Cycle-Bike-Games-Lanyard.pdf>

The games are designed to develop cycling observation skills, a crucial traffic defensive riding skill. The Safe Cycle games in blue are best played on a basketball court or similar area using the design over leaf. This course can be used for all of the blue games without needing to reset your activity area. Use chalk or markers to set up the course. Change the size to suit number and size of riders. Green games are best played on grass areas. There are a couple of activities in grey for teachers that want to simulate real traffic conditions. The games in orange are just for fun but will help build student confidence on a bike.

For older learners:

Organize a ride in the neighborhood. Ask for parents' consent and the assistance of traffic officers if you think that it is necessary.

Before the ride, discuss what learners will need to do based on the issues discussed in the first video clip.

Step 4

- Invite the local contact person of the school and the police to the school to talk about cycling and safety.
- Divide learners in groups and let them prepare questions for the visit:
 - Have learners search for information involving bicycle accidents and car accidents in the neighborhood/ city before the visit of the local policeman/policewoman.
 - Ask them to prepare questions about issues they would like to get information about or would like to discuss with him/her.

Step 5

- Encourage learners to take part on the cycling activity organized by their local authorities on the World Bicycle Day. Alternatively collaborate with schools near to your school and organize in collaboration with them your own School Cycling activity.
 - Discuss with learners feelings and emotions during the cycling activity.
 - Encourage them to talk about their experience as a whole.

Reflections

Based on activities as well as the notes have written down, initiate a discussion with the following prompting questions:

- Do you feel safe to use your bicycle frequently?
- Have your attitudes towards safety and bicycle changed?

At the end, ask learners to complete the “L” column of their K-W-H-L chart (“What did you Learn at this point?”). Finally, in pairs or groups, have students compare what they wanted to learn and what they have learned, identifying if there are remaining things to learn.

PART 3: CARS AND BICYCLES - REDISTRIBUTING SPACE

This part focuses on the need to redistribute space and means to make our cities inclusive, safe, resilient and sustainable. The ‘battle’ between cars and bicycle still takes place. As noted almost 20 years ago by European Communities, (1999, p. 7):

When town centres have been remodelled for pedestrians, cyclists often find their place in them quite naturally. Wherever cars are no longer taking up all the space, bicycles pop up. But if decisions have to be taken between making room for car traffic and for cyclists, the choices made are sometimes draconian. How is one to choose between the demand for cycling facilities on the one hand and the ‘requirements’ of car traffic on the other? What limitations can we allow to be imposed on one mode of transport in order to give the other its chance?

Learning objectives: by the end of the activities learners should be able to:

1. Argue about the advantages and disadvantages of cars and bicycles for the individual, the family and the community
2. Develop transversal competence
3. Develop positive attitudes and an activist stand towards cycling.

Procedural steps:

Step 1

After announcing to the class that we are going to focus on whether our cities need to be redesign to accommodate the use of bicycles, ask learners in your class to fill out the K.W.H.L. chart (Know; Want; How; Learned). Start with the “K”, “W” and “H” columns (save the “L” column for the end of the activity).

Step 2

- Set the following questions to initiate a discussion for the need to redistribute space in our city:
 - Does a car fulfill all our needs?
 - Does everybody has a car?
 - Do all members of a household have access to it? / Does everybody hold a driving licence or are able to drive (children/adolescence)?
- Ask learners to post their views on the ‘virtual wall’ of padlet.

Step 3

- Divide the class into two groups and initiate a debate between two groups: one group should support keeping space distribution as it because cars are more important than bicycles and the other group should argue in favour of redistributing space to accommodate daily use of bicycles.
- Before starting the debate allow groups to gather information that would support their arguments. Ask them to think about personal benefits, family benefits and community benefits.
 - In favour of cars, e.g.:
 - Cars are comfortable and safe
 - Cars allow many people to commute at the same time.
 - Cars allow for easy transportation during long distances.
 - Cars can be driven despite weather conditions.
 - Young children and elderly people cannot cycle.
 - You can transport many things with cars without worrying about weight.
 - In favour of bicycles, e.g.:
 - Cars contribute to high rates of air pollution, which leads to public health issues (air quality) and environmental issues (green house emission issues).
 - Car traffic is the major source of noise in town.
 - Cars are expensive
 - Bicycles are economical, every trip you make, more savings are made
 - Bicycles need less space to park
 - Parents freed from the chore of transporting their children gain time and money
 - Transportation and parking is easier to the old part of the city where many shops are around.
- Make notes of the arguments at the whiteboard. At the end summarize the discussion and ask learners to note which argument was more compelling to them, despite the position that they had during the discussion

Step 4

- Puzzle learners as to whether it is utopic to have a city that really embrace cycling or encourages measures that promote cycling and public transportation that lead to lowering the car use rate.
- Have learners to watch a video on the example of Utrecht and take notes as they watching:
<https://www.youtube.com/watch?v=Boi0XEm9-4E>
- Revisit the initial question. Ask further questions:
 - What was the most impressive thing about this video?
 - How did the municipality of Utrecht redesign the city space?
 - What kind of transformation took place?

Reflections

Based on discussions as well as the notes learners have written down, initiate a discussion with the following prompting questions:

- Do you think that a redesign of our city is necessary or not?
- In your opinion, what are the most important characteristics that a redesign should have?
- How could you contribute to this redesign?

PART 4: PROMOTING CYCLING/ WHAT NEEDS TO BE KNOWN?

In this activity, the learners will be encouraged to take action and promote cycling. They will respond to cycling campaigns and organize their own campaign.

The overriding learning objectives of this activity are the following. Learners should be able

1. To acknowledge the most important changes that need to be done in order to promote safe, inclusive, resilient and sustainable cities (attitudes and facilities)
2. To communicate their ideas clearly and comprehensively to others (parents, children, community authorities)
3. To collaborate and take action towards promoting cycling as a means for healthy living

Procedural steps:

Step 1

After announcing to the class that they will organize their own cycling campaign, ask learners in your class to fill out the K.W.H.L.chart (Know; Want; How; Learned). Start with the “K”, “W” and “H” columns (save the “L” column for the end of the activity).

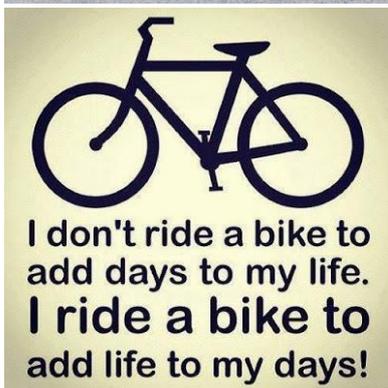
Step 2

Discuss first in groups and then with the whole class the following posters and photographs (you may choose some of these). For each one, focus first on describing what they see and then on interpreting the message of the poster/ photograph:



10% transport
90% road rage

40% transport
60% human contact



Step 3

Divide the class into groups. Ask them to think of the following:

- To whom this campaign will be addressed? (children, parents, school authorities, municipality authorities, etc.)
- What would the message be?
- How they will communicate their message?
 - Poster
 - Handout
 - Installation
- What means/materials/techniques they will need to use to prepare their 'campaign tools'
 - Encourage learners to use photographs – set up scenes, take pictures and manipulated them if needed using the Gimp software⁵. However, learners may use other means / materials/ techniques, such as paints, pastels, mixed materials, collages, the Paint software, etc.
 - Encourage learners to prepare posters and/or handouts.

Step 4

Execute the campaign:

- Learners will need to decide the roles that they will undertake for this endeavor to be successful.
- After the distribution of roles, they will all collaborate to run their campaign.

Reflections

At the end, ask learners to complete the “L” column of their K-W-H-L chart (“What did you Learn at this point?”). Finally, in pairs or groups, have students compare what they wanted to learn and what they have learned, identifying if there are remaining things to learn.

Final reflections

The proposed activities of this unite are planned for two consecutive days. However, the setting of the campaign might take on another day. After the end of all activities, give learners the opportunity to reflect on the following questions activities:

- What did you finally learn from all these activities?
- Did anything change on your own personality and the way you see the world?
- List the key changes you have experienced.
- Explain what caused your ideas to change or why you think your ideas did not change.

⁵ GIMP is a cross-platform image editor available for GNU/Linux, OS X, Windows and more operating systems. It is free software, which is available in many countries. It is suggested that it can be used in the visual arts lesson for image manipulation and a guide in Greek is available through the Ministry of Education’s webpage.

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