



# Disaster Risk Reduction & Resilience

## Learning and Teaching

### Package 4

**UNIT 2: STOP DISASTERS! USING THE UNDRR GAME AS A LEARNING TOOL FOR DISASTER RISK REDUCTION & RESILIENCE**

CONOR GALVIN, UNIVERSITY COLLEGE DUBLIN

KATELYN STAINFORTH, UNIVERSITY COLLEGE DUBLIN



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## Overview

This LTP explores an innovative approach to teaching climate crisis resilience through educational games. It emphasises the transformative potential of gamification in enhancing both teaching and learning experiences related to climate crises. It introduces the concept of gamification as a tool to understand the climate crisis and what students can do to become resilient and contribute to the prevention of disasters. By using gamification and game-based learning, students are provided with an opportunity to be actively engaged while learning about disaster risks and resilience. At the same time, they are encouraged to enhance their collaborative, problem-solving and creative thinking skills.

Unit 2 is based around a digital game. The United Nations Office for Disaster Risk Reduction (UNDRR) has the mission of providing leadership and support to governments and organisations around the world who work in disaster risk reduction, with the goal of creating a world where natural disasters do not threaten the well being of people or the future of the planet. As part of their outreach programme, UNDRR worked with game developer *PlayerThree* to create the **Stop Disasters!** game, which helps players learn about the effects of various natural disasters and how these might be prepared for and to some degree mitigated. This Unit focuses on the **Stop Disasters!** flood scenario, which takes place in a fictitious small village of a few hundred people in Eastern/Central Europe. The village is built on a large river which will flood after 20 minutes of game-play (in the Easy scenario) or when manually triggered by the player. The basic idea is that the player – or players working in teams – ‘invest’ a given sum of money in preparing the village for the expected flood. By repeating the scenario a number of times the player or team can learn to improve the outcomes for the village. Further details are provided in the Unit handbook accompanying this Unit.

## Pedagogical Approach

This LTP is designed to encourage and support teachers and teacher-students to use serious games in their teaching relating to climate resilience and other aspects of sustainability. This Unit is structured so that aspects can be used either in-person as part of a seminar/workshop or at-distance in the form of a wholly online teacher learning event – depending on the needs of the professional learning context.

Unit activities are designed to develop aspects of Embodying sustainability values, Embracing complexity in sustainability, Envisioning sustainable futures, and Acting for sustainability. The embedded Pedagogical Approach: is designed to be dynamic, adaptable, and values-focused and to emphasise problem solving, communication, critical thinking, autonomy, and ethical consideration.

It finishes with [an activity to reflect on your practice](#) (individually and/or with colleagues), on how the previous activities contribute to developing sustainability competences and acting in a more sustainable way. We also propose [a Template](#) to develop your own learning activities, and [TAP-TS Roadmap](#) to lead you through the process.

## The need to build resilience and understanding for climate action

Encouraging young people to study issues like resilience and climate action is crucial gives them insights into sustainable living and promotes critical thinking and problem-solving skills. Understanding the interconnected nature of these challenges provides a holistic perspective for making informed decisions. Education on these issues empowers youth people, preparing them for the future with adaptability and



sustainability in mind. It also fosters environmental and social responsibility, so shaping a more informed and proactive global citizenry. In summary, engaging with these topics early on equips young individuals to contribute to a sustainable and more resilient world.

## Piloting of the materials within TAP-TS

Draft materials and activities were tested with UCD student teachers on secondary teacher education programmes in 2022 and 2023. In addition, in association with SCoTENS (the Standing Conference on Teacher Education North and South, Ireland) refined versions were used in North/ South online webinars in Jan 2022 and Feb 2023. Versions of the unit were used off-line as part of ALEs 1 and 2 and it is intended to validate the final packages in the TAP-TS ALEs and Summer Schools in 2024.



## UNIT Overview

Main Topic	Target Group	Duration	Knowledge Area/ Subjects in School	Activities	Possible assessment
Using <i>Stop Disasters!</i> to teach DRR and Resilience.	Teachers / student teachers with an interest in educational gaming as a pedagogical strategy.	240 mins	1: Sustainable development. 2: Politics & Society	<a href="#">Activity 1.</a> Group Discussion <a href="#">Activity 2.</a> Playing the Game <a href="#">Activity 3.</a> Reflection <a href="#">Activity 4.</a> Teaching and Learning Challenge <a href="#">Activity 5.</a> <i>Reflection on teacher practice</i>	Teacher determined
<b>Intended Learning Outcomes</b>	<p><b>Having worked through the activities and materials, students will be able to:</b></p> <ul style="list-style-type: none"> <li>• D2.4/2/LO1: Plan, teach, and reflect on learning activities /opportunities provided for students by using <i>Stop Disasters!</i> in a teaching &amp; learning setting.</li> <li>• D2.4/2/LO2: Use <i>Stop Disasters!</i> meaningfully within teaching &amp; learning settings; to include understanding the range of possibilities and the limitations of using the game with young adult learners.</li> <li>• D2.4/2/LO3: Develop context-specific extensions and supplementary materials to accommodate diverse learner-needs when teaching with <i>Stop Disasters!</i></li> </ul>				
<b>Prior Competencies</b>	<p>Obligatory:</p> <ul style="list-style-type: none"> <li>• No prior competencies required.</li> </ul> <p>Optional/ideal:</p> <ul style="list-style-type: none"> <li>• Digitally literate to a level that allows meaningful engagement with <i>Stop Disasters!</i> online support materials.</li> <li>• Collaboration and cooperation skills to support group activities and agreed solutions.</li> </ul>				
<b>Required materials</b>	<p>Group-level access to the <i>Stop Disasters!</i> Game on the UNDRR platform: <a href="https://www.stopdisastersgame.org/">https://www.stopdisastersgame.org/</a></p> <ul style="list-style-type: none"> <li>• Digital projector / interactive board with good broadband connection.</li> <li>• Access to the <b>TAP-TS <i>Stop Disasters!</i> Handbook</b> and other resources.</li> </ul>				
<b>Cooperation/ Networking</b>	<p>The unit could facilitate contacts with agencies and organisations with a brief in DRR and societal resilience such as UNDRR or DG-ECHO as well as more local bodies involved in flood preparation and education like Civil Defence / Civil Protection Organisations and NGOs.</p>				
<b>Practical Notes for Teachers</b>	<p>The materials as presented below are in four blocks of approx. 60 minutes each, but this can easily be adjusted depending on time available at the discretion of the teacher. Examples of teachers' individual adjustments can be found relatively easily through online searches. These would include, for instance, the way that Amanda Rosen suggests to build home preparation and follow through into the use of the game [https://activelearningps.com/2012/08/02/online-educational-games-natural-disaster-preparation-with-stop-disasters/], or using the various worksheets and resources located through a search. Useful materials including worksheets by Mike Farley can be found here:</p>				



	<a href="http://mrsmoorekhs.weebly.com/uploads/2/2/4/6/22468214/2008-monograph-stop-disasters-simulation.pdf">http://mrsmoorekhs.weebly.com/uploads/2/2/4/6/22468214/2008-monograph-stop-disasters-simulation.pdf</a> Note: many of these may have old timestamps and/ or older http-type URLs as <b>Stop Disasters!</b> has been around for a considerable amount of time.	
<b>Addressing GreenComp</b>	<b>Embodying sustainability values</b>	
	X	1.1 Valuing sustainability To reflect on personal values; identify and explain how values vary among people and over time, while critically evaluating how they align with sustainability values.
	X	1.2 Supporting fairness To support equity and justice for current and future generations and learn from previous generations for sustainability.
	X	1.3 Promoting nature To acknowledge that humans are part of nature; and to respect the needs and rights of other species and of nature itself in order to restore and regenerate healthy and resilient ecosystems.
	<b>Embracing complexity in sustainability</b>	
	X	2.1 Systems thinking To approach a sustainability problem from all sides; to consider time, space and context in order to understand how elements interact within and between systems.
	X	2.2 Critical thinking To assess information and arguments*, identify assumptions, challenge the status quo, and reflect on how personal, social and cultural backgrounds influence thinking and conclusions.
	X	2.3 Problem framing To formulate current or potential challenges as a sustainability problem in terms of difficulty, people involved, time and geographical scope, in order to identify suitable approaches to anticipating and preventing problems, and to mitigating and adapting to already existing problems.
	<b>Envisioning sustainable futures</b>	
	X	3.1 Futures literacy To envision alternative sustainable futures by imagining and developing alternative scenarios and identifying the steps needed to achieve a preferred sustainable future
	X	3.2 Adaptability To manage transitions and challenges in complex sustainability situations and make decisions related to the future in the face of uncertainty, ambiguity and risk.
	X	3.3 Exploratory thinking To adopt a relational way of thinking by exploring and linking different disciplines, using creativity and experimentation with novel ideas or methods.
	<b>Acting for sustainability</b>	
	X	4.1 Political agency To navigate the political system, identify political responsibility and accountability for unsustainable behaviour, and demand effective policies for sustainability.
	X	4.2 Collective action To act for change in collaboration with others.
X	4.3 Individual initiative To identify own potential for sustainability and to actively contribute to improving prospects for the community and the planet.	



## UNIT DESCRIPTION

### Start-Up

*The aim of this activity is to harvest and gather individual responses and then have the class synthesize said ideas and responses.*

**Estimated  
Duration**






#### Activity 1. GROUP DISCUSSION

This activity is dedicated to giving a space for learners to give their thoughts on what disaster risk reduction and resilience means to them.

GreenComp reference:  
2.2 critical thinking,  
2.3 problem framing,  
2.1 systems thinking,  
4.2 collective action,  
3.3 exploratory thinking  
and 4.3 individual initiative

**Preparation for Activities:** Learners will use a Padlet/Jamboard platform that should be created by the educator.







#### Description

1.  Educators should create or give learners access to a group discussion platform.
2.  A full- group discussion on what “Disaster risk reduction and resilience” might mean to them should occur.
3.  Use a Padlet / Jamboard or any available idea harvesting method to gather individual responses and then have the class synthesise these.
4.  Learners should be pointed to the online resource such as **European Civil Protection and Humanitarian Aid Operations Disaster Preparedness factsheet** ([https://civil-protection-humanitarian-aid.ec.europa.eu/what/humanitarian-aid/disaster-preparedness\\_en](https://civil-protection-humanitarian-aid.ec.europa.eu/what/humanitarian-aid/disaster-preparedness_en)) or to the Introduction Section of the **TAP-TS Stop Disasters! Handbook**  to counter check the understandings that are emerging.

60 min







## Development

<i>Stop disasters! using the UNDRR game as a learning tool for disaster risk reduction &amp; resilience.</i>		Estimated Duration
<p><b>Activity 2. STOP DISASTERS GAME</b> This activity is based around understanding the game provided within this LTP.</p> <p><b>Green Comp:</b> 3.1 Futures literacy, 3.3 Exploratory thinking, 3.2 Adaptability, 1.1 Valuing sustainability and 2.2 critical thinking</p>	<p><b>Preparation for Activities:</b> Educator should have access to the materials and resources for this section: LTP4Unit2 Handout1.2 Fact Sheet </p> <p><b>Description</b></p> <ol style="list-style-type: none"> <li> Introduce the Stop Disasters! game to the group. Walk through the basics and indicate how the game is played and its core objective. Have the students work in pairs to open and play the entry level scenario on Flooding once or twice.</li> <li> Show / direct them to the key module resources which should now make more sense than they would earlier and ask them to read them through; the <b>TAP-TS Stop Disasters! Game Guide and the TAP-TS Flooding Fact Sheet.</b>  Allow sufficient time for this. Ask them to share insights from their reading. Develop a <b>Try-Out Strategies List</b> on a whiteboard or have them write it down.</li> <li> Replay the Game making use of any / all ideas that the group has assembled from the previous activity. Most will very probably still fall short on some or all of the game objectives. Revisit &amp; restate possibilities using the collective wisdom of the group to do so.</li> <li> Direct the group away from the game. Ask them to sit in teams of four or five and consider / discuss how the game could be used in a teaching &amp; learning setting, and how they would go about doing this. Have each group share its ideas and suggestions in a plenary.</li> </ol>	60 min



## Consolidation

		Estimated Duration
<i>Reflection based on the two activities previous and mainly about the game.</i>		
<p><b>Activity 3.</b> <b>REFLECTION</b></p> <p>This activity links to pure reflection around the game and the learning and teaching package.</p> <p><i>This links to <b>Green Comp</b> through 1.2 Supporting fairness, 2.2critical thinking, 2.1systems thinking</i></p>	<p><b>Preparation for Activities:</b> Handbook  handed out for the learners.</p>	60 min
	<p><b>Description</b></p> <ol style="list-style-type: none"> <li> Direct the group to the short piece on playing Stop Disasters! by Rex Brynen which can be found in the TAP-TS Stop Disasters! Handbook or here: <a href="https://paxsims.wordpress.com/2009/08/14/stop-disaster/">https://paxsims.wordpress.com/2009/08/14/stop-disaster/</a> .</li> <li> Ask them to consider the main points made in the piece and to decide if these are relevant to using the game in their teaching situations.</li> <li> And if so, how, and why?</li> </ol>	

## Follow-Up

*By utilizing a Learning and teaching challenge relating to using Stop Disasters!*

**Estimated  
Duration**

### Activity 4.




#### T&L CHALLENGE

This activity allows educators to challenge and test the knowledge of the learners.

This activity links to **Green Comp** through 4.1political agency, 2.3promoting nature, 3.1futures literacy , 4.3individual initiative and 2.2critical thinking

**Preparation for Activities:** Educators should set a Teaching and Learning challenge that is related to using Stop disasters. Educators have full choice over what gets put into this challenge.

#### Description


1.  Set a T&L Challenge relating to using **Stop Disasters!** that the students can work on over the following few days.  
This could focus on individually or collectively developing supplementary / extension materials that the group may have identified would be needed to use the game meaningfully in a teaching & learning setting.
2.  A resource that can assist in this is the [DG ECHO \(2021\) Guidance Note on Disaster Preparedness](#) (Chapter 6), also in Handouts.
3.  And encourage them also to play for personal best scores on the Stop Disasters! game over the next few days!

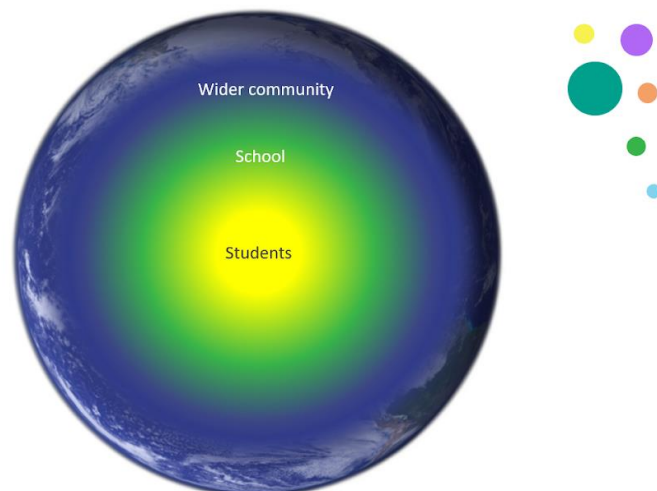
60 min

### Activity 5. Reflection on teacher practice

This is an activity aimed at helping reflection (individually and/or with colleagues) on how the previous activities contribute to developing sustainability competences and acting in a more sustainable way.


#### How can I mobilize the activities in my teacher practice?

 Please reflect on two or three of the following dimensions at three levels of engagement (students - teacher; school; and wider community and beyond):




#### Dimension 1. Learning objectives:


- In what ways do these activities contribute to the global educational goals for your students? You might consider in particular LTP methods, materials, tools and activities you would or have implemented/transferred from the TAP-TS LTP into your regular teaching curricula.
- Within the school or learning context, how have the activities helped the learners in terms of embodying sustainability values, acting for a sustainable future and/or envisioning a more sustainable future?


 How have the activities added to the knowledge and understanding of the learners in terms of working with others in the broader community to create inclusive visions for a more sustainable future?



**Dimension 2. Integration with different subjects:**


 In what ways the activities could engage your students with different knowledge areas and subjects of the curriculum? In what ways these activities could be connected with different subjects of the curriculum?


 How have the activities contributed to collaboration with others at school or institutional level to approach a sustainability issue from different perspectives, knowledge areas and contexts?  
In your opinion, do the LTP materials, tools and methods you have implemented also offer potential for use in other subjects? If so, in which subjects?

 How have the activities encouraged students to draw on different perspectives, and subject knowledge to identify interconnections, and reflect on one's own environmental, cultural and economic impact?



**Dimension 3. Inclusion:**

 Can the previous activities contribute to all students' participation and learning? What actions can you take to ensure the learning of all students?

 How have the activities contributed to engage with different perspectives to consider sustainability challenges and opportunities?

How do the activities help reflect on, identify, envision or even shape the trajectory towards a collective preferred future that includes various perspectives, cultures, traditions, and are grounded in values for sustainability?



**Dimension 4. Environmental / Sustainability awareness:**

To what extent do the activities promote awareness and responsibility among your students?

Did the implemented LTP materials, methods or tools increased or rather limited the opportunity to increase students' environmental awareness?

How have the activities encouraged the students to be aware of their individual and collective impact on nature, and provided opportunities to restore it at school level?

How have the activities contributed to grasp connections and interactions between natural events and human actions?



**Dimension 5. Digital resources and equipment:**

Do the current resources and equipment available in your institution adequately support the activities you have selected and implemented from LTP materials, or are there enhancements needed?

How did you try to enable students to use resources for learning at school in a sustainable way?

Did the activities encourage students to assess and question their needs to carefully manage resources in the pursuit of longer-term goals and common interests? How did the activities help them to think critically about information sources and communication channels on sustainability to assess the quality of the information they provide?



**Dimension 6. Community involvement:**

- To what extent can you involve the local community or connect with community issues related to the sustainability theme approached?
- Have the selected and implemented LTP methods, tools and materials encouraged you to initiate cooperation with external partners (associations, companies, NGOs, etc.) to enrich learning experiences? If so, in which areas are you aiming for cooperation?
- To what extent do the activities engage in democratic decision making and civic activities for sustainable development?
- How does your teacher practice encourage students' intentions and willingness to give back to the community and nature?



**Dimension 7. Assessment and feedback:**

- Have you adapted the original assessment methods or the requirements for students after integrating the LTP materials, methods, or tools into your existing teaching concept? If yes, in which way/how?
- To what extent does your teaching practice encourage students to use evidence, combine knowledge and resources to analyse and evaluate futures and their opportunities, limitations and risks, and contribute to decision-making at school level.
- To what extent does your teaching practice encourage students to use evidence, combine knowledge and resources to analyse and evaluate futures and their opportunities, limitations and risks, and contribute to decision-making, and become agents of change.

## Glossary of Icons



- Video



- Quiz



- Worksheets



- Editable Worksheets



- Various Media, e.g. Learning Apps



- Text to Read



- A question to Respond or a Question for Reflection



- A Discussion



- A task for an inquiry or search



- Focusing Activity



- A Reflection Activity



- An Activity for Action



## Worksheets and Links



### Start-Up

#### Activity 1. Group Discussion

- **Worksheet**  - **1.1 Handbook - Using STOP DISASTERS in TAP-TS settings.pdf**
- **Fact sheet**  - **1.2 Flood - Fact sheet [Useful background for STOP DISASTERS session].pdf**
- [https://civil-protection-humanitarian-aid.ec.europa.eu/what/humanitarian-aid/disaster-preparedness\\_en](https://civil-protection-humanitarian-aid.ec.europa.eu/what/humanitarian-aid/disaster-preparedness_en) 



### Development

#### Activity 2. Stop Disasters Game

- **Fact sheet**  - **1.2 Flood - Fact sheet [Useful background for STOP DISASTERS session].pdf**
- <https://www.stopdisastersgame.org/> 

### Consolidation

#### Activity 3. Reflection

- **Worksheet**  - **1.1 Handbook - Using STOP DISASTERS in TAP-TS settings.pdf**
- <https://paxsims.wordpress.com/2009/08/14/stop-disaster/> 

### Follow-Up

#### Activity 4. T&L Challenge

- **Worksheet**  - **https://civil-protection-humanitarian-aid.ec.europa.eu/system/files/2022-02/dg\_echo\_guidance\_note\_-\_disaster\_preparedness\_en.pdf**



## TAP-TS Roadmap

TAP-TS Roadmap has three main goals: (1) for the TAP-TS partners as a roadmap to design LTPs; (2) for teachers and student teachers to design materials for teaching sustainability; (3) evaluation of LTPs. Explore the visualisation on the next page.

### TAP-TS Roadmap: the Steps / stages in the TAP-TS LTPs Design Journey

<b>1: Clarify the Goal</b>	<p>Our overarching goal is to enable learners and teachers to think and act sustainably. To actively participate in the discourse on sustainability, the topics must also be addressed - sustainably - in schools and universities. The goal of TAP-TS is to create learning and teaching packages for this purpose in the following areas:</p> <ul style="list-style-type: none"> <li>2.1 A Sustainable Europe.</li> <li>2.2 Sustainability and Digitality.</li> <li>2.3. Sustainability and Environmental Education.</li> <li>2.4 Climate Crisis Resilience.</li> <li>2.5 Dealing with Climate Disinformation.</li> <li>2.6 Green Citizenship in/for Europe.</li> <li>2.7 Sustainable Entrepreneurship Education.</li> </ul>
<b>2: Competency Areas</b>	<p>The LTPS should be aligned with the interconnected four competences defined in the Green Comp Framework: • Embodying sustainability values • Embracing complexity in sustainability • Envisioning sustainable futures • Acting for sustainability</p>
<b>3: Networking &amp; Bundle Expertise</b>	<p>There are many exciting topics. 1. Find a focus: what driving question is at the centre of your LTP. 2. See what resources are available (competencies, teaching-learning materials, etc.). 3. Network with colleagues and partner institutions regionally and nationally.</p>
<b>4: Working through the design process</b>	<p>Teaching Sustainability should be: action-oriented learning; hands-on; focussing on real life challenges; stimulate creative collaboration between teachers and learners; visions-oriented; participatory and action oriented . Approaches to teaching sustainability may be inquiry-based learning; explorative learning; networked learning; participation learning aimed at problem framing. Teaching Sustainability may incorporate the following activities: collaborative projects, future framing workshops, research and analysis, discussion.</p>
<b>5: ASSESSMENT DESIGN</b>	<p>In Education for Sustainability assessment can be multifaceted and primarily encourage reflection and be evidence based. There is not always ONE right answer. The goal should be to RAISE QUESTIONS. TS is not about teaching the „right“ behaviour, but about practising a critical perspective. Give TS an important place in curricula and implement credits, badges, or awards for it.</p>
<b>6: PUBLISH TO TAP-TS PLATFORM</b>	<p>Can you and where can you publish your materials under a Creative Commons license as free as possible. Because that is sustainable!</p>



**1 CLARIFY THE GOAL**

A goal of TAP-TS is to create learning and teaching packages that would enable teachers and learners think and act sustainably. Find a focus based on SDGs, GreenComp Framework or a sustainability problem; and define learning objectives within the seven TAP-TS themes.

1. A Sustainable Europe.
2. Sustainability and Digitality.
3. Sustainability and Environmental Education
4. Climate Crisis Resilience. 5. Dealing with Climate Disinformation. 6. Green Citizenship in/for Europe. 7. Sustainable Entrepreneurship Education.

**2 PLAN**

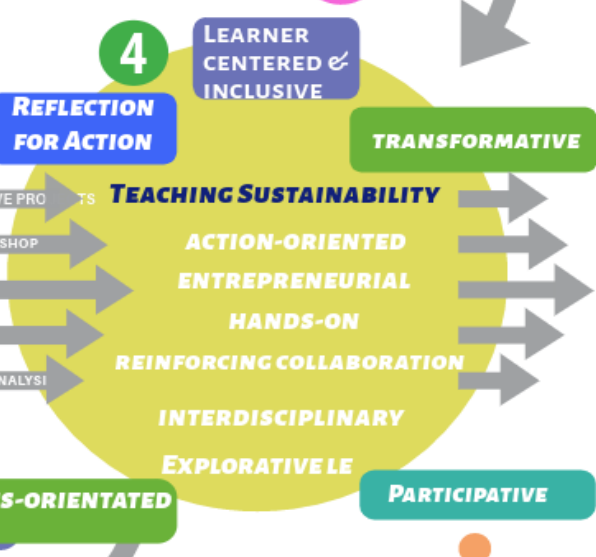
Consult the TAP-TS LTPs Architecture. The LTPs Units should address the interconnected competences as defined e.g. in the Green Comp Framework:

1. Embodying sustainability values
  - 1.1 Valuing sustainability | 1.2 Supporting fairness | 1.3 Promoting nature
2. Embracing complexity in sustainability
  - 2.1 Systems thinking | 2.2 Critical thinking | 2.3 Problem framing
3. Envisioning sustainable futures
  - 3.1 Futures literacy | 3.2 Adaptability | 3.3 Exploratory thinking
4. Acting for sustainability
  - 4.1 Political agency | 4.2 Collective action | 4.3 Individual initiative

See GreenComp for details

**3 BUILD NETWORK AND GROW EXPERTISE**

See what resources are available and could support your LTP (teaching-learning materials, etc.). Network with colleagues and partner institutions regionally and nationally. Describe possible collaborations with the 'world of work'.



# ROADMAP Developing TAP-TS Materials

**7 SHARE**

Publish and share your materials under a Creative Commons license as open access. Because that is sustainable!

**6 REFLECT**

In Education for sustainability assessment is multifaceted, and primarily encourages reflection for action and future-oriented aimed to raise questions and practise a critical perspective.

There is no ONE right answer! Give TS an important place in curricula and implement credits, badges or awards for it.

**5 DO IT! HAVE FUN! DISCUSS! BE CREATIVE!**



# Teaching Sustainability: Learning activity Template

## 1. Introduce yourself!

<b>My name:</b>
<b>My country:</b>
<b>My role:</b>
<b>My school:</b>
<b>My class:</b>

## 2. OVERVIEW

*Provide a brief description of the learning activity, including information about the targeted age group and duration. Clearly state the motivation behind your learning activity and explain which elements of the curriculum your learning activity is related to.*

**Age Group:**

**Duration:**

**Related Themes of Sustainability:**

**Description:**

## 3. LEARNING OUTCOMES

*What are the learning outcomes of this learning activity, and which key GreenComp competences does it promote?*

## 4. LEARNING APPROACH

*Having in mind the learning outcomes, what active learning approaches will be applied?*

*Specify the engagement strategies and sequence of learning tasks that students will develop in the context of the activity. Explain how GreenComp competences will be promoted.*

*What will be the role of the teacher, and what will be the students' role? How will the students work—individually or in groups?*

## 5. DIGITAL RESOURCES

*Which digital technologies, including tools, services, and resources, will be utilized in the activity? Additionally, how will these digital technologies be effectively integrated to enhance lesson outcomes and student understanding?*

## 6. ASSESSMENT

*What assessment strategies and instruments will be employed to evaluate student learning?*

## GreenComp Framework: the European Sustainability Competence Framework

Within the TAP-TS Project, *GreenComp* (Bianchi et al., 2022) serves the following purposes: design of learning and teaching packages; development of TAP-TS professional development activities, (self)-reflection, and evaluation. The aim of GreenComp is to foster a sustainability mindset by helping teachers and students develop the knowledge, skills and attitudes to think, plan and act with empathy, responsibility, and care for our planet.

### Visual representation of *GreenComp*:



GreenComp consists of 12 competences (in bold) organised into the four areas (in italics) below:

- *Embodying sustainability values, including the competences*
  - **valuing sustainability**
  - **supporting fairness**
  - **promoting nature**
- *Embracing complexity in sustainability, including the competences*
  - **systems thinking**
  - **critical thinking**
  - **problem framing**
- *Envisioning sustainable futures, including the competences*
  - **futures literacy**
  - **adaptability**
  - **exploratory thinking**
- *Acting for sustainability, including the competences*
  - **political agency**
  - **collective action**
  - **individual initiative**

**Reference:** Bianchi, G., Pisiotis, U., Cabrera Giraldez, M. GreenComp – The European sustainability competence framework. Bacigalupo, M., Punie, Y. (editors), EUR 30955 EN, Publications Office of the European Union, Luxembourg, 2022; ISBN 978-92-76-46485-3, doi:10.2760/13286, JRC128040.

# Project partners



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