



Short Learning Program of Art, Design & sustainability
with special focus on environment and climate change

2021-1-ES01-KA220-HED-000032193

MODULE 1

Sustainability & Climate Change: historical perspective and their relationship with Arts

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Overview of Module 1

Module 1 Sustainability & Climate Change: historical perspective and their relationship with Arts						
Lesson	Topics	Time (h)	Week	Activity	Time (h)	Compulsory/Optional
Lesson 1 Sustainability and SDGs: Historical background and concepts	Warming up activity			A0 - Initial thought on Sustainability	2	compulsory
	Topic 1 Sustainability concepts and Circular Economy	26	Week 1&2	A1. Connecting your daily life with Sustainability and SDGs (Part I)	4	compulsory
	Topic 2 Sustainable Development Goals (SDGs)			A2. Connecting your daily life with Sustainability and SDGs (Part II)	4	compulsory
Lesson 2 Sustainability and art	Topic 1 Historical context of the relationship between art and sustainability	13	Week 3	A1. Early activism movements (Essay)	4	compulsory
	Topic 2 Artivism's digital formats			A2. Create a digital activist project	3	compulsory
Lesson 3 Sustainability Assessment Tools	Topic 1 Sustainability Assessment and Ecological Footprint	13	Week 4	A1. Calculating your Personal Ecological Footprint	4	compulsory
	Topic 2 Life Cycle Assessment			A2. Life Cycle Analysis/Assessment and artistic works/ design (Research activity)	4	optional

Lesson 1 Content

Outlines

Topic 1: Sustainability Concepts and Circular Economy



Summary

Topic 1 aims to introduce the historical background and the concepts of Sustainability, by focusing on the most urgent global issues in this field. Also, the concept of Circular Economy and its main principles are presented. By the end of this topic, the participant will recognize the importance and urgency of sustainability, identify the various dimensions of sustainability, and recognize the relationship between Circular Economy and sustainability.



Essential Questions

- What is sustainability and what are its main dimensions?
- What is the concept of Circular Economy?
- What is the relationship between Circular Economy and Sustainability?



Educational materials

- Moreno Pires, S., Theodosiou, N., Bacelar-Nicolau, P., Caeiro, S., Galli, A., Malandrakis, G., Niccolucci, V., Nicolau, M., Papadopoulou, A., Mapar, M., Patrizi, N., Pulselli, F.M., Zachos, D. (2022). EUSTEPS MOOC: Sustainability and Ecological Footprint: from theory to practice. Topic 1/Part 2- Sustainability Concepts (Slides). <https://repositorioaberto.uab.pt/handle/10400.2/12981>.
- Waas, T., Hugé, J., Verbruggen, A., Wright, T. (2011). Sustainable Development: A Bird's Eye View. *Sustainability*, 3(10), 1637–1661. <https://doi.org/10.3390/su3101637>
- Walker, A. M., Opferkuch, K., Roos Lindgreen, E., Raggi, A., Simboli, A., Vermeulen, W. J. V., Caeiro, S., Salomone, R. (2021). What is the relation between Circular Economy and Sustainability? Answers from Frontrunner Companies engaged with Circular Economy practices. *Circular Economy and Sustainability*, 731–758. <https://doi.org/10.1007/s43615-021-00064-7>



Videos

Sustainability

- ACCIONA. (2016). What is sustainability. Video available on: <https://youtu.be/FbAjxkGvDNs>
- ACCIONA. (2015). Sustainability in everyday life. Video available on: <https://youtu.be/kZlrIQDf1nQ>

Circular Economy

- European Environment Agency. (2017). Circular Economy. Video available on: <https://www.youtube.com/watch?v=9mHi93n2AI>
- Sustainability Illustrated. (2020). Circular Economy: definition & examples- Sustainability Environment. (2020). Video available on: <https://www.youtube.com/watch?v=X6HDcubgxRk>



Further reading

- Folke, C., Polasky, S., Rockström, J., Galaz, V., Westley, F., Lamont, M., ... & Walker, B. H. (2021). Our future in the Anthropocene biosphere. *Ambio*, 50(4), 834-869. <https://link.springer.com/article/10.1007/s13280-021-01544-8>
- Kuhlman, T., Farrington, J. (2010). What is Sustainability? *Sustainability*, 2(11), 3436–3448. <https://doi.org/10.3390/su2113436>
- Pulselli, F. M., Coscieme, L., Neri, L., Regoli, A., Sutton, P. C., Lemmi, A., & Bastianoni, S. (2015). The world economy in a cube: A more rational structural representation of sustainability. *Global Environmental Change*, 35, 41–51. <https://doi.org/10.1016/j.gloenvcha.2015.08.002>
- Klein, N., Ramos, T. B., Deutz, P. (2020). Circular economy practices and strategies in public sector organizations: An integrative review. *Sustainability (Switzerland)*, 12(10), 1–24. <https://doi.org/10.3390/su12104181>
- Figueira, I., Domingues, A.R., Caeiro, S., Painho, M., Antunes, P., Santos, R., Videira, N.; Walker, R.M., Huisingh, D., Ramos, T.B. Sustainability policies and practices in public sector organisations: The case of the Portuguese Central Public Administration. *J. Clean. Prod.* 2018, 202, 616–630. <https://doi.org/10.1016/j.jclepro.2018.07.244>
- Nesom, S., MacKillop, E. (2021). What matters in the implementation of sustainable development policies? Findings from the Well-Being of Future Generations (Wales) Act, 2015. *Journal of Environmental Policy and Planning*, 23(4), 432–445. <https://doi.org/10.1080/1523908X.2020.1858768>



Learning Activities

Name of Activity	Setting	Aim	Time (hours)
A0. Initial thought on Sustainability	Individual Online and Classroom	Warming-up activity to raise awareness, train being present, and enhance the ability to think sustainably.	2

Instruction

Step 1- Find a piece of a poem (or write it down) with a link to the concept of sustainability.

Step 2- Select three keywords that show the links between Sustainability and the selected poem.

Step 3- Share your selected poem, the keywords, and a brief note (up to 100 words) on how the concept of sustainability emerges in this poem.

Step 4 - Have a look at your colleague's contributions to react/comment on them (minimum 1 and maximum 3).

Name of Activity	Setting	Aim	Time (hours)
A1. Connecting your daily life with SDGs (Part I)	Individual Online and Classroom	This activity aims to connect the sustainability dimensions and the SDGs with your daily activities/behaviors.	4

Instruction

Note: This activity consists of 2 parts and each part should be done in 1 week.

Part I

Step 1- Choose **one example** of an activity or behavior from your daily life (e.g., cooking, eating, cleaning, exercising, working from home, household activities, taking care of your pet, and other household activities, or even an artwork created by you or by others).

Step 2- Provide an **original photo** (taken by you) of your example which demonstrates the selected activity/behavior.

Step 3- Write a **description** of your example - between 150 and 200 words – and explain which sustainability dimension(s) (environmental/social/ economic) is/are most connected to your selected example. Justify the reasons (You may select more than one dimension)

Step 4: Share your selected example (the original photo and the description) in the Forum/Class (If you share it in the Forum, note that the maximum size for uploading your image is 250MB).

Topic 2: Sustainable Development Goals

Summary



Topic 2 aims to introduce the concepts of the United Nations (UN) Sustainable Development Goals (SDGs). By the end of this topic, the participant will understand how the SDGs are integrated goals and how they link with different dimensions of sustainability. This topic also intends to help the students to link their daily life with the SDGs to give them a comprehensive and practical understanding of sustainability challenges in their daily routines and work and the associated solutions.



Essential Questions

- What are UN Sustainable Development Goals, their application, and their links with sustainability dimensions?
- How can the concept of sustainability and SDGs be linked to daily routines and work activities?
- How can we participate actively in sustainability actions in our communities?



Educational materials

- Moreno Pires, S., Theodosiou, N., Bacelar-Nicolau, P., Caeiro, S., Galli, A., Malandrakis, G., Niccolucci, V., Nicolau, M., Papadopoulou, A., Mapar, M., Patrizi, N., Pulselli, F.M., Zachos, D. (2022). EUSTEPS MOOC: Sustainability and Ecological Footprint: from theory to practice. Topic 1/Part 3- Sustainable Development Goals (SDGs)- Action towards 2030 (Slides). <https://repositorioaberto.uab.pt/handle/10400.2/12982>
- United Nations Development Programme. UNDP SDGs booklet. pp 24. <https://www.undp.org/publications/sustainable-development-goals-booklet>



Videos

- CAFOD (Catholic Agency for Overseas Development). (2016). The Sustainable Development Goals (SDGs)- Action towards 2030? Video available on: <https://youtu.be/9-xdy1Jr2eg>.



Further reading

- Wackernagel, M., Hanscom, L., & Lin, D. (2017). Making the Sustainable Development Goals Consistent with Sustainability. *Frontiers in Energy Research*, 5. <https://doi.org/10.3389/fenrg.2017.00018>

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Learning Activities

Name of Activity	Setting	Aim	Time (hours)
A2. Connecting your daily life with Sustainability and SDGs	Both individual and group work Online and Classroom	This activity aims to connect the sustainability dimensions and the SDGs with your daily activities/behaviors	4

Instruction

This activity is part II of the previous activity.

Part II

Step 1- Go back to Activity 1 and to the original photo of your daily activity or behavior that you already shared.

Step 2- Find a link between your photo and at least two Sustainable Development Goals (SDGs) by answering the following questions (**between 150-200 words**):

- Which two SDGs are most connected to your selected example, and how?
- Is there any link/connection between the selected SDGs? If yes, explain how they are interconnected.
- What are two solutions or changes that can be made to your selected example that could increase their alignment with multiple SDGs and the sustainability dimensions?

Step 3- Share your response on the Forum/Class.

Step 4- After sharing your example on the Forum/Class, comment (between 150-200 words) on an example and its description shared by one other participant. Your comment should answer one of the following questions:

- How another participant's example (or solutions) is/are (or not) linked with multiple SDGs?
- Propose one more solution on another participant example that suits the SDGs or sustainability dimensions.

Note: You should also cite at least one of the reading's references available in lesson 1, while developing your work or commenting on the works of other students.

Lesson 2 Content

Outlines

Topic 1: Historical context of the relationship between art and sustainability



Summary

Overview of historical movements that shaped the political role that art can assume nowadays. Focus on 20th century movements, such as May 68 and Situationist International, as well as early eco-art movements, tied to grassroots movements and land-art.



Essential Questions

- What are the relevant aspects, in terms of the activism/art relationship, brought about by May 68?
- What characteristics of artistic practice that may be relevant to sustainability issues can be identified in the Situationist International?
- Is there a relationship between eco-art and land-art?



Educational materials

- Vico, Aladro; Jivkova-Semova, Dimitrina & Bailey, Olga. 2018. **Artivism: A new educative language for transformative social action.** In Comunicar: Revista Científica Iberoamericana de Comunicación y Educación = Scientific Journal of Media Education, 57(4). <http://digital.casalini.it/10.3916/C57-2018-01>
- Goris, Y. (2017). **Activism, Artivism and Beyond: Inspiring initiatives of civic power.** The Spindle, Partos. <https://www.thebrokeronline.eu/wp-content/uploads/attachments/Activism%2C+Artivism+and+Beyond+-+PDF+2017.pdf>
- Salzbrunn, Monika (2021). **Researching Artivism through the Event Approach: Epistemological and Methodological Reflections about Art and Activism.** L'artivismo: forme, esperienze, pratiche e teorie, 2. <https://doi.org/10.13130/connessioni/15264>



Further reading

- Sacha Kagan. (2011). Art and Sustainability, Connecting Patterns for a Culture of Complexity. 514 p., ISBN 978-3-8376-1803-7
- Weintraub L. (2012). To Life!: Eco Art in Pursuit of a Sustainable Planet. <https://www.jstor.org/stable/10.1525/j.ctv1xxwhw>
- Westley, F. R., Folke, C. (2018). Iconic images, symbols, and archetypes. Ecology and Society, 23(4). <https://www.ecologyandsociety.org/vol23/iss4/art31/ES-2016-8850.pdf>
- Folke, C., Polasky, S., Rockström, J., Galaz, V., Westley, F., Lamont, M., ... & Walker, B. H. (2021). Our future in the Anthropocene biosphere. Ambio, 50(4), 834-869. <https://link.springer.com/article/10.1007/s13280-021-01544-8>



Videos

- syrus marcus Ware. (2020). Ancestors: Do you read us? Dispatches from the future. Video available on: <https://youtu.be/BZTCARfPzOU>
- Exposing climate change disinformation and corporate greenwashing on social media during COP26. Video available on: <https://eco-bot.net/>
- The Art Assignment. (2019). Art we launched into space: Video available on: <https://www.youtube.com/watch?v=4mmlKLMF99A>



Learning Activities

Name of Activity	Setting	Aim	Time (h)
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A1. Essay	Individual Online and Classroom	Aim: Produce an essay relating early activism movements to present-day actions	4
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Instruction

Step 1: Identify a present-day activist project. Justify your choice and present its background, with sources and references.

Step 2: Establish a historical relationship with preceding movements and currents, supported by bibliographic references.

Step 3: Present your work and foster the discussion.

Topic 2: Artivism's digital formats



Summary

Analysis of several different digital artefacts from the 20th century used in activist projects related to sustainability, from *memes* to *culture-jamming*, *subvertising*, remixing and appropriation. These image formats, both static and animated (including animated gifs and videos) are not just increasingly popular, but extremely easy to produce and disseminate, and may be ingeniously used for art and design communication campaigns on sustainability and climate change issues.



Essential Questions

- What is *tactical media*?
- Look for specific examples of 20th century *memes*, *remix*, *subvertising* and *culture jamming* art projects related to sustainability and frame them as an activist practice.



Educational materials

- Elgaaied-Gambier, L., & Mandler, T. (2021). **Me trying to talk about sustainability: Exploring the psychological and social implications of environmental threats through user-generated content.** *Ecological Economics*, Elsevier, 187(107089).
<https://doi.org/10.1016/j.ecolecon.2021.107089>
- Vico, Aladro; Jivkova-Semova, Dimitrina & Bailey, Olga. 2018. **Artivism: A new educative language for transformative social action.** In *Comunicar: Revista Científica Iberoamericana de Comunicación y Educación = Scientific Journal of Media Education*, 57(4).
<http://digital.casalini.it/10.3916/C57-2018-01>
- Goris, Y. (2017). **Activism, Artivism and Beyond: Inspiring initiatives of civic power.** The Spindle, Partos. <https://www.thebrokeronline.eu/wp-content/uploads/attachments/Activism%2C+Artivism+and+Beyond+-+PDF+2017.pdf>
- Salzbrunn, Monika (2021). **Researching Artivism through the Event Approach: Epistemological and Methodological Reflections about Art and Activism.** *L'artivismo: forme, esperienze, pratiche e teorie*, 2. <https://doi.org/10.13130/connessioni/15264>
- Can technology bring back long-lost nature?
<https://we-make-money-not-art.com/can-technology-bring-back-long-lost-nature/>

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Further reading

- Debatty, R. (2021). Can technology bring back long-lost nature?
<https://we-make-money-not-art.com/can-technology-bring-back-long-lost-nature/>
- Escobar, Arturo (2018). Designs for the Pluriverse. Radical Interdependence, Autonomy, and the Making of Worlds. Duke University Press: Durham and London.
https://www.academia.edu/38094580/Designs_for_the_Pluriverse_Radical_Interdependence_Autonomy_and_the_Making_of_Worlds_Arturo_Escobar



Videos

- The McDonalds Video Game. Available on: <http://www.molleindustria.org/mcdonalds/>
- Plastic Air - Digital Design, Data Driven Design - An interactive experience for Google Arts & Culture explores the environmental impact of airborne microplastics. Available on: <https://www.pentagram.com/work/plastic-air/story>
- UN Environment Programme. (2018). #CleanSeas Break-Up PSA: "It's not me, it's you". Video available on: <https://youtu.be/-DEc16dEMns>
- Sustainable Memes. <https://www.pinterest.pt/shopsalvos/sustainable-memes/>



Learning Activities

Name of Activity	Setting	Aim	Time (h)
A2. Create a digital artist project	Group Online and Classroom	Aim: Create a small sustainability and climate change artist project	3

Instruction

- Step 1: Identify a present-day cause and use one of the studied formats (meme, remix, etc.).
Step 2: Present it in class and gather feedback from other groups.

Lesson 3 Content

Outlines

Topic 1: Sustainability Assessment and Ecological Footprint



Summary

This topic aims to get inside the various Sustainability Assessment Tools and their application in different places. The topic also introduces the Ecological Footprint concept, its methodology, and the basic premises behind it, thus providing the knowledge and tools to understand and measure whether a given lifestyle is compatible with our One-planet reality.



Essential Questions

- What are the sustainability assessment tools and their importance?
- What is the concept of Ecological Footprint?
- How can you assess the Ecological Footprint of your activities/behaviors?



Educational materials

- Nessa, B., Urbel-Piirsalua, E., Anderbergd, S., Olssona, L., (2007). Categorising tools for sustainability assessment. *Ecological Indicators*, 60, 498 – 508. <https://doi.org/10.1016/j.ecolind.2008.09.014>
- Galli, A., Patrizi, N., Bacelar-Nicolau, P., Caeiro, S., Malandrakis, G., Moreno Pires, S., Niccolucci, V., Nicolau, M., Papadopoulou, A., Mapar, M., Pulselli, F.M., Theodosiou, N., Zachos, D. (2020). EUSTEPS Students' teaching module. Unit 4: "Ecological Footprint Introduction" (Slide presentation). <https://www.eusteps.eu/wp-content/uploads/2020/10/Unit-4-Ecological-Footprint-Introduction.1.pdf>
- Ecological Footprint Calculator: <https://www.footprintcalculator.org/home/en>



Videos

Sustainability assessment tools

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- Kirkels, A. (2019). Assessment tools for Sustainability. Eindhoven University of Technology. Video available on: <https://www.youtube.com/watch?v=tUqFVzWajs>

Ecological Footprint

- Moovly (2015). Ecological Footprint Explained. Video available on: <https://youtu.be/fACkb2u1ULY>
- Sustainability Illustrated (2013). Ecological Footprint: Do we fit on our planet?“. Video available on: https://youtu.be/g_aguo7V0Q4



Further reading

- Waas, T., Hugé, J., Block, T., Wright, T., Benitez-Capistros, F., Verbruggen, A. (2014). Sustainability assessment and indicators: Tools in a decision-making strategy for sustainable development. *Sustainability (Switzerland)*, 6, 5512–5534. <https://doi.org/10.3390/su6095512>
- Borucke, M., Moore, D., Cranston, G., Gracey, K., Iha, K., Larson, J., Lazarus, E., Morales, J. C., Wackernagel, M., & Galli, A. (2013). Accounting for demand and supply of the biosphere’s regenerative capacity: The National Footprint Accounts’ underlying methodology and framework. *Ecological Indicators*, 24, 518–533. <https://doi.org/10.1016/j.ecolind.2012.08.005>.
- Galli, A., Kitzes, J., Wermer, P., Wackernagel, M., Niccolucci, V., & Tiezzi, E. (2007). An exploration of the mathematics behind the ecological footprint. *International Journal of Ecodynamics*, 2(4), 250–257. <https://doi.org/10.2495/ECO-V2-N4-250-257>.
- Global Footprint Network: <https://data.footprintnetwork.org/#/>
- Kitzes, J., & Wackernagel, M. (2009). Answers to common questions in Ecological Footprint accounting. *Ecological Indicators*, 9(4), 812–817. <https://doi.org/10.1016/j.ecolind.2008.09.014>.



Learning Activities

Name of Activity	Setting	Aim	Time
A1. Calculating your Personal Ecological Footprint	Individual and Group work Online and Classroom	Aim: This activity aims to calculate the Ecological Footprint (EF) of a person’s daily life and identify possible solutions to reduce it.	4

Instruction

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Answer questions about your daily life activities and behaviors by exploring the 'Ecological Footprint Calculator.' This activity consists of 2 parts:

PART 1 - Individual Work

Step 1- To run the personal calculator, access the "Ecological Footprint Calculator" (<https://www.footprintcalculator.org/home/en>), and click on "Take the first step" (select your preferred language from those available in the calculator). Then, answer the questions based on your daily life activities/ behaviors.

Notes:

- To improve the accuracy of each question, click "Add details" when this option is available (this step is optional). Remember to click the "SAVE" button after entering the details.
- The results of your calculation will appear on the "Summary" page. For more detailed results, visit the "See Details" or "Facts and Figures" pages. To see the details of the results, it is suggested to open the tool in your laptop/computer for a better visualization.

Step 2- After obtaining the results, open the **Table of Activity**, transfer the results of your personal EF to the Table, and directly answer the questions in the table. Each question should be directly answered in the Table of Activity:

1. Which of the activities (consumption categories) had the greatest impact?
2. Is it the activity that you expected to have the largest impact?
3. How do the results make you feel?
4. What changes are you unwilling to make? Why?
5. Suggest two solutions to reduce your personal Footprint based on the obtained results.

Note (optional): For insight into the existing sustainability solutions, we suggest exploring the solutions proposed on the **100 Days of Possibility List**: <https://www.overshootday.org/100-days-of-possibility/>.

PART 2 - Group Work

Step 3- After completing the Table of Activity, share your individual Footprint result in the Forum/ Class. Then, address the following bullet points with a comment on the results obtained by at least one other participant:

- Suggest one more solution that could help another participant reduce her/his EF.
- Share what would be needed to achieve a one-planet lifestyle.

Note:

- The comments and replies should be constructive and based on critical analysis. Comments should be between 150 to 200 words.

Topic 2: Life Cycle Analysis/Assessment



Summary

This topic aims to introduce the concept of Life Cycle Assessment as a sustainability assessment tool and its application to assess an environmental load of a product, process, or activity throughout its life cycle.



Essential Questions

- What is the concept of Life Cycle Analysis/Assessment?
- How can an environmental load of a product, process, or activity be assessed throughout its life cycle?



Educational materials

- McManus, M. C., & Taylor, C. M. (2015). The changing nature of life cycle assessment. *Biomass and Bioenergy*, 82, 13–26. <https://doi.org/10.1016/j.biombioe.2015.04.024>



Further reading

- UNEP/ SETAC Life Cycle Initiative. (2011). Towards a Life Cycle Sustainability assessment. Making informed choices on products. <https://www.unep.org/resources/report/towards-life-cycle-sustainability-assessment-making-informed-choices-products>
- Michael Z. Hauschild, Ralph K. Rosenbaum, Stig Irving Olsen (2018). *Life Cycle Assessment Theory and Practice*. Editors: Hauschild, M.Z., Rosenbaum, R.K., Olsen, S.I. Springer. ISBN 978-3-319-56474-6. <https://doi.org/10.1007/978-3-319-56475-3>



Videos

- SPARK-sx. (2017). The principles of Life Cycle Assessment (LCA). Video available on: <https://www.youtube.com/watch?v=r0ucT1KRiO4>
- CascadesFinePapers (2011). Life Cycle Assessment. Video available on: <https://www.youtube.com/watch?v=KrJUpSiCOoU>
- Ecochain (2021). Life Cycle Assessment (LCA) For Beginners. Video available on: https://www.youtube.com/watch?v=2s8wqa_lvoQ



Learning Activities

Name of Activity	Setting	Aim	Time
A2. LCA and artistic works/ design (Research activity) (optional)	Group work (3 or 4 students) Online and Classroom	The aim is a brief research activity on the link between LCA and artistic works or designs.	4

Instruction

The students should participate in a brief research activity by searching how the LCA tool already has been used for the environmental impact of an artwork or design.

Step 1- Choose your group which should consist of 3 or 4 students.

Step 2- Search on the internet (papers, books, artworks, designs, etc.) and try to find some examples of how the LCA tool already has been used for the environmental impact of an artwork or design.

Step 3- Identify the main features/ highlighted points of using the LCA in your selected artwork/design and present your findings in the class/forum by developing a brief PPT (maximum 10 slides).