



**Media & AI literacy toolkit for teachers,  
educators and other professionals**

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## Introduction

This 'Media & AI Literacy Toolkit for Teachers, Educators and Other Professionals' serves as both a comprehensive guide and a practical toolkit designed primarily for teachers, educators, librarians, journalists and youth workers, and other professionals working with young people (particularly ages 13-17) and potentially adults in diverse formal and informal learning environments.

You can navigate this toolkit sequentially to build a comprehensive understanding, or alternatively, dip into specific sections based on your immediate needs. We strongly encourage you to adapt the resources provided to your specific context and learners' needs, fostering critical thinking, resilience against disinformation, and informed digital citizenship.

The toolkit is organised into three main parts:

**Part 1 - Developing Algo/AI Literacy Competences** establishes the theoretical and pedagogical foundation of the Algowatch approach. It includes links to the Algowatch Competence Framework, a glossary, provides examples of cross-curricular applications, and proposes an adaptable PowerPoint presentation suitable for training sessions.

**Part 2 – Eye-opener and ice breaker activities** provides access links for a series of four versatile 'eye-opener' and 'icebreaker' activities suitable for each of the four main topics of the project quizzes.

**Part 3 – Quizzes and accompanying document** introduces the four themed interactive quizzes (Climate Change, Health and well-being, Democracy and Citizenship, Online Relationships) and the accompanying document

**Part 4 – Videogame 'Eunopia: Mission AI' and accompanying document** is focused on the videogame 'Eunopia: Mission AI' including its gameplay and minigame elements.

**Part 5 - Algowatch exhibitions** offers resources (editable posters and accompanying document) and detailed plans for organising interactive Algowatch exhibitions in both school and public library settings, providing practical guidance for educators wishing to undertake such initiatives.

**Part 6 – Going forward with Algowatch** focuses on broader application strategies and the project's continuity. It outlines various ways you can continue collaborating with the Algowatch project beyond its initial phase, contributing to the ongoing mission of promoting Algo/AI literacy.

## Part 1 - Developing Algo/AI literacy competences

Algowatch defines Algo/AI literacy as a key part of Media Information Literacy (MIL), going beyond simple awareness to include users' knowledge, understanding, and active strategies for engaging with algorithms and AI systems in the field of media, culture and education.

Their approach is competence-based, focusing on equipping users with the ability to understand and intentionally manage their online interactions, viewing Algo/AI literacy not as a standalone technical skill, but as an integrated element within broader MIL practices.

Part 1 establishes the theoretical and pedagogical foundation for the Algowatch approach, including competence framework, a glossary, curricular examples, and training materials

### 1.1. Competence framework

The [Algowatch Competence Framework](#) structures competences around the three educational pillars: Knowledge, Know-how, and Know-how-to-be, aligning with MIL principles and adapting the European Digital Competences Framework (DigComp 2.2). It aims to equip individuals not only to protect themselves against risks like disinformation but also to leverage the possibilities offered by algorithms and generative AI in media, culture, and education.

### 1.2. Glossary

Developing Algo/AI literacy requires familiarity with specific terminology. The [Algowatch Data-Algo-AI Glossary](#), included as part of this toolkit, defines key concepts from an MIL perspective. This critical glossary defines the terms and offers their interpretation in the MIL context.

### 1.3. Where in the curriculum

The concepts and activities developed by Algowatch can be effectively integrated in the curriculum, either transversally, across all subjects, or through a dedicated Media Information Literacy subject. It should be clear that Algo/AI literacy is not confined to technology classes, since its principles and implications permeate numerous subject areas. Table I presents proposals for some junior cycle subjects.



**Table I – Ideas to integrate Algowatch resources into Junior, Transition and Senior cycle in Ireland.**

Discipline	Algowatch Integration
English	Analyse algorithmic media influence, AI text/bias, disinformation mechanisms, and linguistic bias in AI. Consider the implications of Gen AI for creativity and writers?
Gaeilge (Irish)	Learn new vocabulary and critically evaluate AI translations. Analyse online communication norms shaped by platforms, and investigate algorithmic effects and mis/disinformation in Irish language media. Consider the implications of AI and algorithms for minority languages.
Modern Foreign Languages (French, Croatian, Portuguese)	Learn new vocabulary and critically evaluate AI translations. Analyse online communication norms shaped by platforms, and investigate algorithmic effects and mis/disinformation in French, Croatian or Portuguese digital media. The vocabulary in the foreign language resources may be more appropriate to senior cycle level students.
Science	Investigate the use of AI in scientific discovery/analysis, interpret data visualisations, and understand algorithmic modelling. Discuss how algorithms and AI can be used to amplify ideas not based on scientific research or to spread fake information. Could focus on the climate or health and wellbeing themes in the quiz and game.
History	Explore algorithmic influence and use in accessing digital historical sources, contextualise information control historically, and compare AI's impact to past tech shifts.
Geography	Explore algorithmic influence on access to and understanding of climate and environmental information, contextualise information control historically, and compare AI's impact to past tech shifts.
Mathematics	Explore algorithm logic/structure, apply probability/statistics to ML concepts, and critically examine data representation and dataset bias. Explore how game programming uses mathematical concepts.
Visual Art	Consider how AI and algorithms create and critically debate the impact of gen AI on creativity and creative ownership.
Civic, Social and Political Education (CSPE)	Short Course. The themes in the quiz and game link directly to the focus in this course on rights and responsibilities, global citizenship and exploring democracy. Consider the impact of mis and disinformation on democracy.

Digital Media Literacy	Short course. The competency based approach in Algowatch and the themes of online relationships and health and wellbeing complement the focus in this course on evaluating online content, online identity and online safety. Expands course content into considering algorithms and AI.
Transition year micro module	The toolkit provides an outline of three sessions that could be adapted to form part of a transition year micro module.

### 1.4. Teachers Power Point in front of the class

The PowerPoint titled ['Becoming smart about Democratic challenges and disinformation'](#) is structured into three distinct sessions, designed potentially for a total duration equivalent to three 45-minute periods, although adaptable.

- Session 1 introduces core Algo/AI literacy concepts, including AI governance, recommendation systems, machine learning, bias, prompts, and the EU AI Act.
- Session 2 focuses on online information quality, defining disinformation, exploring fake news and deep fakes, and presenting the Algowatch quizzes.
- Session 3 centres on fact-checking strategies and introduces the 'Eunopia: Mission AI' videogame, concluding with advice to "Be smart about algorithms!" and "Be smart about AI!".

## Part 2 – Eye-opener and ice-breaker activities

Part 2 of the toolkit proposes four icebreaker activities, one for each of the four themes of the Algowatch project resources. The activities should be adapted by country and respective language. Please test any external applications or links before your session, as they may change over time.

### Activity 1: My digital wellbeing (in line with ‘Health and well-being’)

Serves as an eye-opener by grounding the discussion in national digital contexts and prompting personal reflection on digital life quality. Can spark initial discussion about factors influencing online experiences. **Link:** Digital Quality of Life Index (DQL) - <https://surfshark.com/dql2023>

### Activity 2: Introduce yourself through your new avatar (in line with ‘Online relations’)

A creative icebreaker allowing participants to express themselves non-verbally and share personal insights through their avatar creation. **Link:** Voki App - <https://www.voki.com>

### Activity 3: Climate change - tracking global floods (in line with ‘Climate change’)

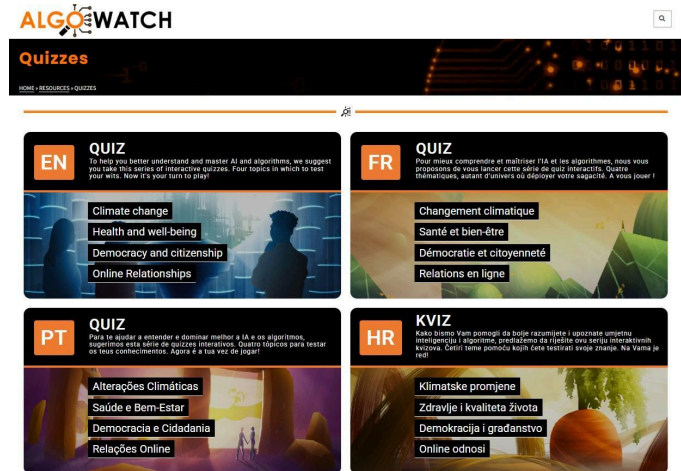
Eye-opener demonstrating large-scale data collection and algorithmic processing for societal benefit (environmental monitoring), linking data/AI to real-world issues. **Link:** Global Flood Database - <https://global-flood-database.cloudtostreet.ai/#interactive-map>

### Activity 4: Political party invented by AI (in line with ‘Democracy and Citizenship’)

A thought-provoking eye-opener raising questions about AI's potential role in governance and politics, sparking debate about future possibilities and democratic implications. **Link:** requires participants to use search engines; example article link provided for context: <https://www.trtworld.com/magazine/can-an-ai-led-danish-party-usher-in-an-age-of-algorithmic-politics-60008>)

## Part 3 – Quizzes & accompanying document

The primary objective of the [four themed interactive quizzes](#) (Climate Change, Health and well-being, Democracy and Citizenship, Online Relationships) is to help users understand information in the age of algorithms and AI, recognise potential risks like misinformation, and develop key Algo/AI literacy skills based on the Algowatch Competency Framework.



To stimulate learners, the quizzes employ a variety of interactive formats, including multiple-choice questions, fill-in-the-blank texts, "hot spot" image analysis, flash cards, true/false statements, and drag & drop activities. Adopting a Media and Information Literacy (MIL) approach, the quizzes do not penalise wrong answers; instead, players are encouraged to repeat activities until they find the correct answer, fostering learning through experimentation. No final score is given, emphasising participation and learning, and detailed feedback is provided for each activity.

Associated with quizzes, the toolkit includes an accompanying document which explains the principles behind the quizzes' production, list the quizzes' questions and 'correct' answers, as well as the feedback provided by the quiz after each answer is submitted, which varies depending on whether the answer is correct or not.

### Quiz 1: Climate change

Addresses the role of algorithms and AI in accessing information about climate change, climate scepticism, data visualisation, and environmental monitoring. Contains 14 activities examining search engine results for climate queries, filter bubbles related to climate scepticism, identifying AI errors in generated images of nature, using AI tools for information seeking, understanding predictive algorithms, and the attention economy's impact on accessing reliable climate information.

### Quiz 2: Health and well-being

Investigates how algorithms and AI impact health information, beauty standards, wellness trends, medical advice, and the spread of health-related misinformation. Features 14 activities looking at recommendation algorithms for health/beauty content, reliability of search results for health queries, understanding generative AI responses (e.g., ChatGPT is not sentient), identifying AI errors in medical-related images, strategies for dealing with harmful online health trends, the economics behind free health advice from influencers, and the risks/benefits of AI in healthcare (e.g., diagnostic support).

### Quiz 3: Democracy and citizenship

Explores the intersection of algorithms, AI, and democratic processes, including political discourse, freedom of expression, and information warfare. Includes 15 activities covering topics like recommendation algorithms on social media, search engine rankings for political terms, identifying AI-generated images related to demonstrations, understanding predictive algorithms in contexts like justice, strategies for combating political disinformation, and the ethics of AI in politics (e.g., the Danish "Synthetic Party" case).

### Quiz 4: Online relationships

Focuses on how algorithms and AI influence social interactions, online dating, self-presentation (avatars), hate speech, and the representation of groups online. Includes around 14 activities exploring how recommendation algorithms shape social connections, bias in search results for sensitive terms, AI celebrity clones, tackling online hate speech and shadow banning, conversing with generative AI for creative tasks, and the ethics of AI avatars claiming expertise (e.g., AI "psychologists").

These quizzes are versatile tools for educators. They can be used for positioning, to assess a group's existing knowledge and skills to tailor interventions, or as intervention tools to facilitate collective workshops where the quizzes spark discussion and develop Algo/AI literacy skills collaboratively. They can be integrated into various school curricula, including MIL, History, Geography, Science, and more. It is also possible to use different quizzes as pre- and post-assessments for a learning sequence.

## Part 4 – Videogame ‘Eunopia: Mission AI’ & accompanying document

The ‘[Eunopia: Mission AI](#)’ videogame is available in four languages (Croatian, English, French, and Portuguese) and can be played directly online via your browser (PC, Mac, or iOS) or by downloading and installing the file onto a computer (Mac or PC).



Information on how to install it, an explanation of the game's design and development process, and its relationship with the Algowatch competence model are available in the accompanying document, which forms part of the toolkit.

It takes the form of an open-world adventure and puzzle video game. The overall learning goals include promoting Algo/AI literacy, encouraging critical exploration of AI influences, teaching skills to combat these influences, and sparking discussions on the benefits and drawbacks of AI and algorithms.

### Game story

The narrative is set on the alien planet of Eunope. Players take on the role of the protagonist, Alai, whose mission is to assist the native Eunopeans in understanding the pervasive influence of algorithms and AI. It becomes apparent that Eunope is under the control of rogue AI, leading to widespread issues like misinformation, disinformation, echo chambers, and societal dysfunction.

Players navigate a cityscape and its outskirts, interacting via chat with non-playable Eunopean characters (NPCs) to gather insights about their society and personal stories. The game's objective is to investigate various rumours received through these interactions, uncover the truth behind them by checking sources, and thus help resolve the problems caused. This process encourages players to develop critical thinking skills and draw parallels between the game's challenges and real-world interactions with AI.

### Themes in the game

The game weaves its narrative and challenges around four core themes: Climate change, Health and

Wellbeing, Democracy and Citizenship, and Online Relationships. Players must gather clues and assess if rumours are false or true. The themes allow the game to connect with various school subjects such as Media Literacy, History, Geography, Science, Languages, and Social, Personal and Health Education as outlined in table 1 above.

### Minigame

Embedded within the main game's story world, a minigame is unlocked when players are asked by Eunoceans to help with online content or social media issues caused by the rogue AI. Successfully solving the minigame puzzles resolves the NPC's issue and allows the player to progress. The minigame can also be accessed separately from the main menu for a shorter, focused play experience. Its core purpose is to encourage players to reflect on how their online actions affect the algorithms influencing their social media feeds and to analyse strategies for navigating these systems.

## Part 5 – Algowatch exhibitions & accompanying document

The Algowatch project resources – including eye-opener activities, conceptual posters (derived from the framework/glossary), the interactive quizzes, the Eunoopia videogame, the project website, and the informational PowerPoint presentation – can be effectively showcased through interactive exhibitions. Indeed, the project team planned four such exhibitions across the partner countries, which took place at different times and in various prominent locations.

Implementation and evaluation commenced in three exhibitions: in France, the exhibition was held at the Cité des Sciences in Paris on March 28-29 as part of ‘The Spring of Cultural Thinking’ initiative; in Croatia, it took place at the National Library in Zagreb from April 9-16, coinciding with Media Literacy Week; and in Portugal, running at the News Museum in Sintra from June to September 30th.



Since the closure of the Science Museum in Dublin it was decided to focus on festivals, galleries and libraries in Ireland. There will be three exhibitions in Ireland. The first is part of [Dublin maker](#) (30th of August, 2025), a large annual free festival for all ages celebrating creativity, invention, and the maker movement. The second is a stand alone exhibition in Portlaoise public library (22-24th Sept.) which will include an exhibition and workshops. [Portlaoise public library](#) was Ireland's first library of sanctuary in 2020 with a special focus on cultural diversity, community and belonging for all. It is also one of eight Europe Direct centres in Ireland, which aims to build knowledge and connection to the European Union. Europe Direct is a Europe-wide network of centres. Finally, Algowatch will exhibit and run a workshop as part of [European Researcher's Night](#) (Trinity College Dublin, 26th of Sept). It will exhibit in the [Douglas Hyde art gallery](#) and the event is open to the general public.

Inspired by what we have learned so far, we decided to develop the [Exhibit accompanying document](#), which includes two potential plans, one for a school setting and another for a public library collaboration. Both plans incorporate student involvement and aim to raise awareness about Algo/AI literacy. An evaluation questionnaire (available in paper or online format, detailed separately in the toolkit) should be used to gather feedback in both scenarios.

## 5.1. Posters

Five core posters have been created in each of four languages (Croatian, French, English and Portuguese), for use in the different countries' exhibitions, since they are available as editable files. Additional posters, explaining various mechanisms or impacts and providing concrete tips are also available in each language. Core projects are communication posters meant to attract attention, additional posters are content posters. This allows toolkit users to translate and adapt the content, enabling them to carry out activities for different audiences, including potential exhibitions in schools or other public access locations.

The first poster is a general introduction to the Algowatch project and its aims. The second focuses on the scientific aspects of the project, outlining the research being undertaken and the methods used. The third highlights the importance of citizen science and public participation in the project. The fourth poster showcases the various tools and resources available through the project. The fifth and final poster provides information on how to get involved and stay updated on the latest developments.



## Part 6 – Going further with Algowatch

The Algowatch project values ongoing collaboration and engagement beyond its initial funding period (ending September 30, 2025). If you, as teachers, students, educators, mediators, or multipliers, are interested in continuing to work with the project's themes and resources, there are several ways to stay involved and contribute to the promotion of Algo/AI literacy.

Firstly, you can connect with the project through the national partners in France, Croatia, Ireland, and Portugal. They remain key points of contact for country-specific initiatives and information. Furthermore, the project team highly encourages you to provide feedback on your experiences using the Algowatch resources (eye-openers, quizzes, Eunopia game, educational documents, exhibition plans, etc.) in your specific contexts. Sharing insights on what worked well, any adaptations made, and the impact on learners is invaluable as the team seeks to refine and potentially expand these tools.

The project is committed to maintaining access to its outputs; the Algowatch website will remain available and regularly updated until at least September 2027, two years after the official project completion date. This ensures continued access to the resources developed. Looking further ahead, the team intends to submit a new funding application to continue and build upon the work initiated by Algowatch.

In the meantime, the project's sustainability plan, currently under development, already outlines several avenues for continued activity and collaboration, leveraging the fact that resources are available under Creative Commons licenses. These include:

- Holding exhibitions using the Algowatch toolkit resources in various venues.
- Participating in future European Researchers' Night events, in 2025 and 2026.
- Continuing the organisation and implementation of Algowatch workshops and teacher training programmes.
- Disseminating project materials and findings at national and international conferences.

Your continued engagement, whether through using the resources, providing feedback, participating in events, or connecting with national partners, is vital for the ongoing success and impact of the Algowatch initiative in fostering critical Algo/AI literacy.



## ALGOWATCH – Decoding Algorithms: Media and AI Literacy for All

ALGOWATCH - Developing algorithm literacy for all, to fight disinformation and foster e-inclusion with quality information for knowledge-based democratic societies is a research project funded by the European Commission, developed by a consortium made up of Savoir Devenir (France), Maynooth University (Ireland), Association for Communication and Media Culture -DKMK (Croatia), Iscte-University Institute of Lisbon (Portugal) and University College Dublin.

Its main mission is to create a dedicated multi-stakeholder team focused on algo-literacy, an emergent sub-field of Media and Information Literacy (MIL), with a special focus on how to detect and deflect algorithmic disinformation. To do this, it focuses its research on four main activities:

1. Produce interactive quizzes and games for awareness
2. Engage participants in co-creative activities in an exhibit space
3. Deploy exhibit in workshops with multiplier professionals in formal settings (schools) and in informal settings (libraries, museums)
4. Disseminate the resources for transfer of practices. The final deliverables will consist of an activity bank and a dissemination toolkit (with pathways for e-inclusion, communication plan and evaluation plan).

For more information look for the project website [algowatch.eu](http://algowatch.eu).

5/17/2025

### Contacts

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