AI → ©reativity

Training implementation guide

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This handbook has been developed by the AI4CREATIVITY project consortium, which consists of:

Project number: **2023-2-PL01-KA220-VET-000170497**

Graphic design and layout: Katarzyna Baranek-Stachura, Foundation ARTeria

Further information about the project and the above partners is available at: **https://ai4creativity.eu/**

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the European Union

FREE PUBLICATION
Zabrze 2026

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INTRODUCTION

This publication was created as part of the AI for Creativity project, which connects vocational education with current trends in artificial intelligence (AI) and the creative industry. The AI4Creativity project brings together organizations from different countries. The project unites international partners to foster digital skills and creativity: **ARTeria** (Poland) promotes education, culture, and intercultural dialogue; **Civiform** (Italy) supports youth and adults entering the labour market; **Logopsycom** (Belgium) and **Rinova Málaga S.L.** (Spain) deliver innovative, inclusive learning methods; the **Private Secondary School of Applied Arts in Žilina** (Slovakia) provides comprehensive art education; and **YuzuPulse** (France) makes training engaging and accessible through games and technology.

On the project's homepage, you can find an overview of the partners, objectives, and outputs that serve as the foundation for this publication: **https://ai4creativity.eu/**
Artificial intelligence is transforming the way we create, communicate, and learn. In the field of culture and creativity, AI is becoming a tool that expands creative possibilities – from generating visual content and writing texts to producing music and animations. At the same time, it brings new challenges: ethical questions, the need for critical thinking, and the ability to recognize where AI helps and where it may distort.
Education is essential to ensure that future creators can use AI responsibly, safely, and creatively.
This handbook is designed to support secondary school teachers who wish to enrich their lessons with topics on artificial intelligence in the context of art, design, and creative disciplines. It provides:

Practical and adaptable teaching approaches for vocational education,
Examples of lesson structures and engaging classroom activities,
Guidance on how to connect with additional resources – including toolsheets with AI tools and workflows already published on the project's website,
Suggestions for tailoring content to different student levels and curricula.

Students will be introduced to the fundamentals of AI – what AI is (and isn't), the difference between general and narrow AI, and key concepts such as machine learning and computer vision. Through creative, hands-on activities, they will explore AI-powered tools, whether as standalone applications or integrated features in familiar software. This publication serves as a helpful resource, offering inspiration and reliable references to make lesson planning easier and more effective.

Guide begins with the Introduction, project background, and rationale for AI in cultural and creative industries, followed by guidance on the target audience and how to use the handbook.

Core sections cover **the pedagogical framework, methodology**, principles for VET education, and alignment with EQAVET and EQF standards.

Practical content includes recommended teaching approaches, a technological framework with an overview of AI tools relevant to CCI, criteria for tool selection, and ethical considerations linked to project resources.
Teachers will find guidance on lesson plan design, example structures, timeframes for short and extended modules, evaluation options, and ideas for activities across five creative domains. A central hub connects key themes with curated AI tools, tool sheets, workflows already published on the AI4Creativity project webpages, and innovative didactic methods, supporting approximately 20–30 lessons for a full-year course.

Later chapters present **challenges, recommendations**, and **future outlooks on AI's rapid evolution** and its impact on education and the creative sector.

Appendices include **a glossary, localization tips, terminology guidelines.**

Pedagogical Framework, Methodology

The cultural and creative industries (CCI) represent a dynamic space where creativity, technology, and cultural identity intersect. Education in this field goes beyond traditional artistic practices, encouraging innovation and the integration of digital tools into creative processes. As artificial intelligence becomes increasingly relevant to art and culture domains, teaching AI within CCI requires a thoughtful approach that balances technological progress with human creativity.

One of the key characteristics of AI education in CCI is the rapid pace of technological development. Teachers must adopt flexible strategies that allow for continuous adaptation. There is a growing need for critical thinking and ethical discussions, addressing issues such as copyright, transparency, and responsible use of AI. Practical application is equally important, enabling students to explore how AI can enhance creative work in many areas.

This approach aligns closely with **the European Digital Competence Framework (DigComp)**[1] , which defines **five key areas:**

- **Information and data literacy** – searching, evaluating, and managing information, including recognising AI-driven content and misinformation.
- **Communication and collaboration** – interacting and sharing in digital environments, managing digital identity, and applying netiquette.
- **Digital content creation** – producing and editing content, respecting copyright, and understanding AI-assisted creation.
- **Safety** – protecting devices, data, health, and the environment in digital contexts.
- **Problem-solving** – addressing technical issues, adapting tools, and creatively applying technology.

Integrating these areas into CCI education ensures that students not only learn creative AI applications but also develop responsible, critical, and ethical digital practices.

[1] European Commission. (2022). The Digital Competence Framework for Citizens (DigComp 2.2): With new examples of knowledge, skills and attitudes. Publications Office of the European Union. Retrieved from https://data.europa.eu/doi/10.2760/115376

How to teach with AI? ...or when NOT to use AI in education?

Teaching AI in cultural and creative industries (CCI) requires moving beyond a simple "use or don't use" mindset. Instead, AI integration should be seen as a spectrum of possibilities – consciously deciding when, how, and why to use AI based on learning goals.

Frameworks like **Edutopia's Red–Yellow–Green system**[2] help teachers categorise AI use from activities where AI should not be used (individual assessments), through cautious use for brainstorming or feedback to creative, collaborative projects where AI adds value.

Beyond this model, many other approaches exist, often outlined in national frameworks or institutional guidelines. In addition, numerous creative labs, NGOs, and educational initiatives share best practices to make AI use safer, more reliable, and more human-centred – promoting creativity and learner agency. This adaptable approach aligns with the **DigComp framework**, which emphasises digital literacy, ethical awareness, and problem-solving. The goal is to ensure AI remains a tool for learning and creativity – never a substitute for human thinking.

Some of these sources and frameworks are listed in the references for this chapter, while others can be found in the **Appendices** section under Localisation Tips for Slovakia, Poland, Belgium, France, and Spain.

[2] Edutopia is an educational platform created by the George Lucas Educational Foundation, offering research-based strategies and practical resources for educators. Framework for AI usage is described in detail in article: Mormando, S. (2023, November 9). Creating AI usage guidelines for students. Edutopia. https://www.edutopia.org/article/creating-ai-usage-guidelines-students

Principles for Education in CCI

Education in the cultural and creative industries (CCI) requires an approach that fosters creativity, critical thinking, and the ability to connect multiple disciplines. The pedagogical framework is built on principles that reflect the dynamic nature of creative sectors while responding to the challenges of digital transformation. **Principles** describe the **philosophy and core approaches** to learning and the environment that supports them.

The teacher acts as a facilitator, mentor, and learning guide. They support students in finding solutions, providing feedback, and creating conditions for creative and critical thinking. The role goes beyond delivering information; it focuses on guiding the learning process to develop autonomy and responsibility.

Key Principles:

- **Creativity:** The goal is to develop original thinking, experimentation, and the ability to create innovative solutions. Creativity is understood as a process that involves generating ideas, testing them, and implementing them in real projects.
- **Critical thinking:** Students learn to evaluate AI outputs, recognise limitations, and discuss ethical issues related to technology. This includes verifying facts, analysing sources, and making informed decisions.
- **Interdisciplinarity:** Linking art, design, technology, and social sciences enables comprehensive problem-solving. Students work on tasks that combine aesthetic, technical, and social dimensions.

Recommended Learning Approaches:

- **Project-Based Learning:** Here students tackle real-world assignments that require planning, creation, and presentation of results.
- **Experiential Learning:** Emphasis is on practical activities, experimentation, and reflection on personal experiences, “Learning by doing”.
- **Collaborative Learning:** Teamwork encourages idea sharing, communication, and the development of social skills.

Learning Environment:

- **Studios** – Spaces for creation, experimentation, and presentation.
- **Digital Platforms** – Use of online tools, virtual galleries, and collaboration apps.
- **Hybrid Learning** – Combining in-person and online education to ensure flexibility and accessibility.

Methodology for Teaching AI in Cultural and Creative Industries

Integrating AI into vocational education for cultural and creative industries (CCI) requires a structured yet flexible approach. The methodology aligns with VET principles and EQAVET/EQF standards, supporting the development of key competences such as digital literacy, creativity, problem-solving, and ethical awareness. It emphasises active learning, collaboration, and adaptability to diverse curricula.

Teaching AI in CCI should combine **innovative didactic methods** with **active learning strategies.** Lessons should reflect the dynamic nature of the creative industries, encouraging students to explore, experiment, and evaluate AI tools in authentic contexts.

Recommended Approaches:

- **Gamification** – Use game mechanics to boost motivation.
- **Design Thinking** – Foster creativity through iterative problem-solving.
- **Storytelling** – Contextualise AI concepts with narratives.
- **Blended Learning** – Combine classroom and digital platforms for flexibility.

Active Learning Techniques – examples:

- **Brainstorming & Buzzing Groups** – Generate ideas collaboratively.
- **Peer Learning** – Share knowledge and build confidence.
- **Role-Play & Simulations** – Explore ethical and creative dilemmas.
- **Reflective Techniques** – Encourage self-assessment and critical thinking.

Innovative Didactic Methods for AI in Creative Education

The table provides method descriptions, educational goals, and AI-context examples, making it easy for teachers to select strategies that fit their lesson objectives.

Table 1: Innovative Didactic Methods for AI in Creative Education

Method	Description	Educational Goal	Example Use in AI-Creative Context
Brainstorming	Group idea generation without judgment.	Encourage creative thinking and open ideation.	Generate project ideas using AI image generators (e.g., DALL·E, Midjourney).
Buzzing Groups	Short small-group discussions (5–10 minutes).	Activate all learners; promote quick engagement.	Discuss pros/cons of using AI in digital illustration.
Peer Learning	Students teach and learn from each other.	Build collaboration, responsibility, and confidence.	Share tips on using music AI tools (e.g., Soundraw, AIVA).
Project-Based Learning (PBL)	Long-term, real-world creative projects.	Foster teamwork, problem-solving, and ownership.	Create a short animated film combining hand-drawn and AI-generated frames.
Design Thinking	Empathy-centered, iterative problem solving.	Develop creativity, empathy, and testing mindset.	Design a user-friendly AI tool interface (UX/UI challenge).
Role-Play / Simulation	Students act out roles (artist, curator, critic).	Improve communication and perspective-taking.	Simulate a debate: "Should AI art be considered original artwork?"
Gamification	Use of game mechanics (points, levels, challenges).	Increase motivation and engagement.	AI art challenge: Who creates the best image based on the same prompt?
Flipped Classroom	Learn theory at home, apply it in class.	Maximize classroom practice and discussion.	Watch a tutorial on ChatGPT at home; write a story with it in class.
Visual Thinking	Use of images and visual structures for learning.	Enhance spatial and creative thinking.	Create a moodboard using AI-generated visuals for a project.
Reflective Techniques	Encourage students to reflect and self-assess.	Build critical thinking and self-awareness.	Write a reflection: "How did AI influence your creative process?"

Didactic Specifics

Timeframes:

- **Short modules** (45 min): Intro + hands-on activity (e.g., AI image generation).
- **Extended modules** (90–120 min): Project-based learning or design challenges.

Bloom's Taxonomy is a widely recognised educational framework that classifies learning objectives into hierarchical levels of complexity. It helps teachers design lessons, assessments, and curricula that progress from basic knowledge to higher-order thinking skills. Lower levels focus on recalling and understanding information, while higher levels involve critical thinking, judgment, and creativity. This progression is essential for adapting lessons to different EQF levels and learner needs. The revised taxonomy (2001) organises cognitive processes into six levels:

Remember → Understand → Apply → Analyse → Evaluate → Create.

Bloom's Taxonomy Integration:

- **Remember & Understand:** Define AI concepts.
- **Apply:** Use AI tools for creative tasks.
- **Analyse:** Evaluate AI-generated outputs.
- **Create:** Design original projects with AI.
- **Evaluate:** Reflect on ethics and originality.

Practical Tips for Teachers:

- **Start with low-barrier tools** (e.g., AI image generators, text assistants).
- **Use real-world tasks** (portfolio creation, ethical debates).
- **Encourage collaboration through group projects and peer review.**
- **Connect lessons to project resources:** AI tool sheets, workflows, and case studies.

AI should be taught not only as a technical skill but as a catalyst for creativity, collaboration, and ethical awareness, preparing students for the evolving landscape of CCI.

EQF Levels and Learner Groups for AI in CCI Education

Learner Group	EQF Level	Description of Level
High school students, Upper-secondary (vocational) students (age 15 - 18)	Level 3	Basic factual knowledge of AI concepts; ability to apply simple tools in routine tasks under guidance.
	Level 4	Broader theoretical understanding; can apply AI tools creatively, solve problems, and work with some autonomy.
Requalification learners (age 15 - 18)	Level 4	Competence to adapt AI skills to vocational contexts; problem-solving and collaboration in familiar settings.
Adult learners, artists, practitioners	Level 4 - 5	Advanced practical and theoretical knowledge; can design workflows, evaluate AI outputs, and innovate independently.

Lesson plans in this guide are designed with flexibility in mind. Each sample lesson includes **learning objectives, activities, and assessment ideas** that can be adapted to different learner profiles and EQF levels.

How EQF and Bloom's Taxonomy Connect:

- **EQF levels** describe the complexity of knowledge, skills, and autonomy expected from learners.
- Bloom's taxonomy provides a progression of cognitive tasks:
  Remember → Understand → Apply → Analyze → Evaluate → Create.

Practical Adaptation

Teachers can take a prepared lesson and simplify goals and methods for EQF Level 3 by focusing on **Remember and Understand** (e.g., defining AI concepts, guided tool use).

EQF level 3 lessons → Introductory modules: What AI is, basic tools, guided exercises. Example: Generate an image using an AI tool and describe the process.

For more advanced learners (EQF Levels 4–5), teachers can add challenging tasks that move toward **Analyse, Evaluate, and Create** (e.g., designing workflows, debating ethics, producing original AI-assisted projects).

EQF Level 4 lessons → Intermediate modules: Use AI tools for creative projects, discuss ethics. Example: Create a moodboard with AI visuals and justify design choices.

EQF Level 5 lessons → Advanced modules: Design AI-assisted workflows, critique originality. Example: Develop a concept for an AI-powered design service and present ethical implications.

This approach ensures that the same lesson template can serve multiple learner groups, from secondary students to adult practitioners, while maintaining alignment with VET principles and quality standards.

Types of AI tools relevant to CCI - a short overview

What is the role of AI in creative industries?

Although controversial, especially in the creative industries, AI's presence in our daily lives is a fact. We're learning it and, at the same time, want to educate future generations about it. Especially in the creative industries, AI brings up (again) many important questions: What is originality? What is authenticity? Where is the border between inspiration and copyright violation? Should artists have the right to decide if they want to let AI train on their creative work?

Artists' approach towards AI varies. Some don't want to have anything in common with it. They even remove their work from the Internet, fearing that AI could be trained on it. Some incorporate it partially in their work, as a brainstorming partner or editor. There's also the third group – the ones who experiment with it in different ways, like with every new tool, from the printing press to photography.

The role of AI in the creative industries is not yet defined, but we can't ignore its existence. It is we, humans and especially artists, who, over time, will decide the future of AI in the creative environment. We dedicated more space to discuss this matter in our Entrepreneurship & Career Handbook (available on the project website).

Which AI tools can be useful for teaching?

Before sentencing AI to 'death' or doing the same with human creativity, we can incorporate some of the AI tools created for CCI into the educational process. And we can explore them together with the students in the classroom.

The classroom environment is a safe space for experimenting, and it gives teachers and educators a unique opportunity to develop good AI habits in students. But this requires teachers to choose AI tools for the classroom wisely and thoughtfully. Visual tools such as Leonardo AI, Midjourney, or Adobe Firefly will help students explore artistic styles, create quick concept illustrations, or prototype exhibition materials. Video and animation tools like Dream Machine or ElevenLabs can support media classes by enabling students to experiment with video generation, storyboarding, or simple animation. Music and sound courses can integrate tools such as Loudly or AIVA to show how AI composes melodies, moods, or soundscapes. For writing and storytelling, ChatGPT, Claude or Quillbot enable students to brainstorm ideas, develop characters, and refine texts.

We encourage you to visit the AI4Creativity website to explore the thirty tool sheets we prepared on AI tools. Divided into **five main art domains: visual, music and sound, video and animation, design, writing and storytelling, they cover both basic and more advanced techniques to support skill development[3].**

[3] Quote after AI4Creativity website.

Transparency is essential

Teaching about AI should cover two main areas: the use of the tool itself and the ethical considerations behind it.

This is why the tools they select to work in the classroom should not only represent the spectre of AI possibilities but also expose its limitations and serve as a starting point for wider discussion of its responsible and ethical use. Students and teachers should review the privacy and data usage policies of AI tools as carefully as they explore their features. The invisible part of AI also has to be brought to the table: the natural resource use, especially water, energy, and physical space – something that for us is 'in the cloud' requires hectares of servers in some other part of the world. That raises serious AI-related environmental awareness, especially important in the climate change era.

Students should understand the mechanisms and resources behind AI use so they can make conscious, autonomous decisions about whether and how to use it[4].

[4] To explore more on this subject we recommend the Guide on the Opportunities and Challenges brought by Artificial Intelligence in the Arts.

Lesson Plan Design and Adaptation

Lesson planning is the foundation of effective teaching, especially when introducing innovative topics such as Artificial Intelligence (AI) in cultural and creative industries (CCI). This chapter provides teachers with guidelines for using prepared lesson plans, adapting them to different learner levels and timeframes, and creating new lessons when needed. It also offers tips for combining existing plans into longer modules or semester courses.

How to Use Prepared Lesson Plans

Prepared plans in this guide follow a structured template that includes:

- **Lesson title, domain, EQF level**
- **Learning objectives**
- **Materials and tools**
- **Phases of the lesson with timing and purpose**

Each plan is designed for 45 minutes but can be adapted for longer sessions. Teachers should review the learning objectives and ensure they align with their curriculum and check the tools and resources listed and confirm availability. Please use the suggested activities as a starting point, adding or removing elements based on student needs.

Adapting Lesson Plans

By EQF Level:

- **Level 3 (Introductory):** Focus on Remember and Understand (Bloom's taxonomy). Simplify tasks, provide guided practice, and use basic tools. **Example: Generate an image using an AI tool and describe the process.**
- **Level 4 (Intermediate):** Emphasize **Apply** and **Analyze**. Include creative tasks and discussions on ethics. **Example: Create a moodboard with AI visuals and justify design choices.**
- **Level 5 (Advanced):** Move to **Create** and **Evaluate**. Add complex projects, workflow design, and critical debates. **Example: Develop a concept for an AI-powered design service and present ethical implications.**

By Timeframe

- **Short module** (45 min): Use the standard template.
- **Block module** (90–135 min): Combine two or three short lessons. Add phases for extended practice, peer review, and reflection. E.g. combine "What is AI?" with "Ethics in AI" for a 90-minute session. Use project-based learning for extended modules (e.g., design a portfolio using AI tools).
- **Semester plan:** Group lessons by domain (Visual Arts, Design, Music, Video, Writing). Begin with introductory sessions, progress through core modules, and conclude with review and consolidation activities. A standard course typically consists of 20–30 lessons, with the option to include additional sessions for evaluation, enrichment activities, and out-of-school experiences such as AI art exhibitions, guest talks with artists, or creative workshops.

Tips for Creating New Lessons

- Start with the template structure:
  - Warm-Up (5 min)
  - Introduction (5 min)
  - Main Activity (15 min)
  - Student Practice (10 min)
  - Review (7 min)
  - Wrap-Up (3 min)
- Define clear objectives linked to Bloom's taxonomy and EQF levels.
- Select AI tools – you could use the project's Tool Sheets and workflows.
- Include interactive activities: brainstorming, group work, tool demonstrations.
- Add ethical reflection where relevant.

Evaluation Options

Formative Assessment

Formative evaluation focuses on **monitoring student progress during the learning process.** It helps teachers identify gaps in understanding and adjust instruction accordingly. Simple techniques such as exit tickets, where students write down one key takeaway or question at the end of the lesson, can provide quick feedback. Concept maps are another effective tool, allowing learners to visually organize ideas and demonstrate connections between concepts. Additionally, peer feedback during group activities encourages collaboration and critical thinking, as students learn to evaluate each other's work constructively.

Summative Assessment

Summative evaluation **measures learning outcomes at the end of a module or course**. In the context of AI and creative disciplines, this can include portfolios showcasing students' projects created with AI tools, which reflect both technical skills and creative thinking. Project presentations are another valuable method, giving learners the opportunity to explain their process, justify design choices, and demonstrate understanding of ethical considerations. Teachers can also incorporate tool-based tasks, where students apply specific AI applications to complete a creative challenge, ensuring practical competence alongside theoretical knowledge.

Self-Assessment

Encouraging **students to reflect on their own learning** is essential for developing autonomy and critical awareness. Self-assessment activities can include written reflections on creativity, problem-solving strategies, and the responsible use of AI tools. Prompts such as "How did AI influence your design choices?" or "What ethical issues did you consider in your project?" help learners evaluate not only their technical performance but also their decision-making process. This approach fosters metacognitive skills and supports lifelong learning habits.

These evaluation methods support the competence-based approach central to VET and EQF frameworks. Formative assessments ensure continuous improvement by providing feedback during the learning process, while summative assessments validate the achievement of learning outcomes aligned with EQF descriptors for knowledge, skills, and autonomy. Self-assessment promotes transparency and learner responsibility, encouraging reflection on ethical and creative dimensions of AI use. Together, these strategies uphold EQAVET principles of quality assurance by fostering clear objectives, measurable results, and ongoing feedback loops.

Digital Tools for Implementation

Teachers can enhance these evaluation methods using accessible digital platforms:

- **Exit tickets and quick feedback:** Google Forms, Microsoft Forms, or Mentimeter.
- **Concept mapping:** Padlet, MindMeister, or Canva for collaborative visual mapping.
- **Peer feedback and portfolio sharing:** Padlet, Wakelet, or Google Classroom.
- **Self-reflection journals:** OneNote or Moodle integrated activities.

These tools make assessments interactive, easy to manage, and adaptable for both classroom and remote learning environments.

Tools (as of November 2025):

- Free tool for creating surveys, quizzes, exit tickets. Integrated with Google Workspace for Education. Free plan available for schools. **Google Forms** – https://forms.google.com
- Simple platform for polls, quizzes, feedback collection. Works with Microsoft 365 Education. Free for schools using Microsoft Education accounts. **Microsoft Forms** – https://forms.microsoft.com
- Interactive presentation tool for live polls, quizzes, Q&A sessions. Free basic plan (limited questions per presentation); paid plans for full features. **Mentimeter** – https://www.mentimeter.com
- Collaborative board for brainstorming, concept mapping, portfolio sharing. Free plan with limited boards; paid education plans available. **Padlet** – https://padlet.com
- Online mind-mapping tool for visualizing concepts and ideas. Free basic plan (3 maps); education discounts for premium plans. **MindMeister** – https://www.mindmeister.com
- Design platform for creating visuals, concept maps, lesson materials. Free for schools via Canva for Education. **Canva** – https://www.canva.com
- Content curation tool for sharing resources, portfolios, collaborative projects. Free for educators and students. **Wakelet** – https://wakelet.com
- Learning management system for assignments, feedback, collaboration. Free for schools using Google Workspace for Education. **Google Classroom** – https://classroom.google.com
- Digital notebook for organizing lessons, reflections, and student journals. Free for schools via Microsoft Education accounts. **OneNote** – https://www.onenote.com
- Open-source learning management system for courses, assignments, and self-assessment. Free to download and use; hosting may require additional cost. **Moodle** – https://moodle.org

Our Project Resources

AI4Creativity Project Hub – https://ai4creativity.eu

The central resource for this guide, offering curated Tool Sheets, workflows, and lesson ideas across five creative domains: Visual Arts, Design, Music, Video, and Writing. Includes practical examples, ethical guidelines, and adaptable templates for VET educators.

Other Reliable Teaching Platforms

- Provides structured courses such as Introduction to AI and Exploring Generative AI, with interactive activities, videos, and teacher guides. Free for schools. **Code.org** – https://code.org
- Offers guidelines and classroom-ready resources aligned with five big ideas in AI. Free resources. **AI4K12 Initiative** – https://ai4k12.org
- Includes lesson plans, frameworks, and professional development for teaching AI and digital citizenship. Some free resources; premium membership for full access. **ISTE (International Society for Technology in Education)** – https://www.iste.org
- Interactive platform for building AI projects using Scratch and Python, with tutorials and lesson ideas. Free for educators. **Machine Learning for Kids** – https://machinelearningforkids.co.uk
- Showcases creative AI experiments that can be adapted into classroom activities, ideal for visual arts and design. Free access to activities with Google account, but some experiments restrict content generation for users under 18. This is due to safety and compliance concerns, as generative AI can occasionally produce unpredictable or inappropriate outputs. For classroom use, teachers need try experiments beforehand, limit use to safe unrestricted experiments or use teacher accounts or demo mode for restricted tools. It is also an oportunity to discuss responsible AI use and why age limits exist as part of digital literacy. **Google AI Experiments** – https://experiments.withgoogle.com/collection/ai
- Simple tool for creating machine learning models without coding, with tutorials suitable for classroom projects. Free tool. Teachable Machine (Google) – https://teachablemachine.withgoogle.com
- Includes AI fundamentals and applied AI modules with teacher guides. Free courses and resources. Microsoft Learn for Educators – https://learn.microsoft.com/en-us/training/educator-center/
- Guidelines for safe and responsible use of AI in education, aimed at supporting teachers in understanding ethical risks, responsibilities and good practices. Free EU resource. Ethical Guidelines for Educators on Using AI (European Commission) – https://education.ec.europa.eu/focus-topics/digital-education/action-plan/ethical-guidelines-for-educators-on-using-ai

TEMPLATE Lesson Structure (45 min) 1-2 pages

Lesson Title:

Domain:

EQF level: How to divide your prepared plan into levels (L3-L4 high school students, L5 adult learners, artists etc.).
There is a paragraph in previous chapters about how the level can be changed, adapted, so it can be something like recommendation – and if teacher needs another level, he/she will tweek it´s difficulty or objective.

- Level 3 lessons → Introductory modules: Focus on Remember & Understand (Bloom): What AI is, basic tools, guided exercises.
  "Generate an image using an AI tool and describe the process."
- Level 4 lessons → Intermediate modules: Focus on Apply & Analyze: Use AI tools for creative projects, discuss ethics.
  "Create a moodboard with AI visuals and justify design choices."
- Level 5 lessons → Advanced modules: Focus on Create & Evaluate: Design AI-assisted workflows, critique originality.
  "Develop a concept for an AI-powered design service and present ethical implications."

Learning Objectives: 2 sentences

Materials / Tools Needed:

Warm-Up / Starter (5 min): Engage students and activate prior knowledge. **What could be included:**

- Suggest a short activity that connects to the lesson topic (e.g. quiz, question, image prompt).
- Describe what the teacher should say or ask to spark curiosity.
- Include links or references to materials (e.g. quiz tools, visuals).
- Mention expected student reactions or answers.

Introduction (5 min): Present the lesson topic and goals. **What could be included here:**

- Write a short script or outline for the teacher's introduction.
- Suggest a video, reading, or visual to introduce the topic (include links).
- Define the learning objectives clearly.
- Mention what students should understand by the end of this phase.

Main Activity / Input (15 min): Explore the topic in detail. **What could be included here:**

- Describe the core content to be taught (e.g. concept explanation, tool demo).
- Suggest AI tools or resources to use (include links).
- Outline what the teacher should present or demonstrate.
- Include examples or visuals to support understanding.
- Mention what students should observe, note, or discuss.

Student Practice (10 min): Apply new knowledge. **What could be included here:**

- Propose tasks for students (e.g. worksheet, group work, creative task).
- Describe how students will use the AI tool or concept.
- Include expected outcomes or student products (e.g. image, text, idea).
- Suggest how the teacher supports or monitors the activity.

Review / Consolidation (7 min): Reinforce learning and clarify doubts. **What could be included:**

- Suggest a method for summarizing the lesson (e.g. concept map, Q&A).
- Describe how students share or reflect on their work.
- Include prompts or questions the teacher can use.
- Mention how to check understanding or address confusion.

Exit / Wrap-Up (3 min): Close the lesson and give next steps. **What could be included here:**

- Suggest a short exit activity (e.g. exit ticket, reflection question).
- Mention homework or follow-up task if relevant.
- Include a preview of the next topic or connection to future lessons.
- Describe how the teacher wraps up and transitions.

Glossary of Key Terms

Abstraction. The process of focusing on essential details of a problem while ignoring irrelevant complexity.
Example: Simplifying an AI workflow by showing only input and output steps.

AI Bias. Systematic favoritism or prejudice in AI outputs caused by biased training data or algorithms.
Example: An image generator producing stereotypical results for certain professions.

Artificial General Intelligence (AGI). A hypothetical AI system capable of understanding, learning, and performing any intellectual task that a human can do. Unlike current AI, it would autonomously generalise knowledge across different domains.
Example: An AGI that can design a building, diagnose a medical condition, write a research paper, and cook a meal - all without task specific training. (No such system currently exists.)

Artificial Narrow Intelligence (ANI). AI systems designed to perform a single task or a narrow range of tasks, such as language generation, image recognition, or music creation. Almost all current AI technologies fall into this category.
Example: An AI that generates interior design images but cannot solve a math problem or understand spoken language.

Autoregressive Model. An AI model that predicts the next element in a sequence based on previous elements.
Example: Used in audio generation and language models.

Computer Vision. AI technology that enables machines to interpret and process visual information from images or videos.
Example: An app that identifies objects in a photo.

Contradiction. When an AI generates conflicting or opposing responses based on similar input.
Example: A chatbot giving two different answers to the same question.

Data Set. A collection of data used to train or test AI models.
Example: Thousands of labeled images used to teach an AI to recognize animals.

Deepfake. Synthetic media where AI alters or creates realistic images or videos of people doing things they never did.
Example: Fake videos of public figures.

Deep Learning. A type of machine learning using multi-layered neural networks for complex tasks like image recognition.
Example: AI that can identify faces in photos.

Diffusion Model. An AI model that learns to generate images by progressively removing noise from a random image.
Example: Stable Diffusion uses this approach.

Explainability. The ability to understand and interpret how an AI system makes decisions.
Example: A tool that shows which features influenced an AI's output.

GAN (Generative Adversarial Network). A model where two networks (generator and discriminator) compete to create realistic synthetic data.
Example: AI creating photorealistic images of imaginary objects.

Generative AI. AI that creates new content (images, text, music) by learning patterns from existing data.
Example: Tools like DALL·E or Midjourney generating original artwork from text prompts.

Hallucination. When an AI system produces false or misleading information that appears plausible.
Example: A chatbot inventing a fake citation.

Image-to-Image (img2img). AI process that modifies an existing image based on input instructions.
Example: Adding furniture to a photo of an empty room.

Inference. The process of applying a trained AI model to new data to make predictions or generate outputs.
Example: Using an AI model to predict color trends in design.

Inpainting / Outpainting. Inpainting replaces parts of an image; outpainting extends the image beyond its original borders.
Example: Adding a missing object in a photo or expanding a scene.

Internet of Things (IoT). Network of connected devices that communicate and share data.
Example: Smart home systems integrated with AI for lighting and temperature control.

Large Language Model (LLM). An AI model trained on vast text datasets to generate and understand human-like language.
Example: ChatGPT answering questions or writing text.

Machine Learning (ML). A subset of AI where systems learn patterns from data and improve performance without explicit programming.
Example: AI learning to classify images of furniture.

Model Parameters. Values that define how an AI model processes data and makes predictions.
Example: Adjusting parameters to improve image quality in an AI generator.

Natural Language Processing (NLP). AI techniques for understanding and generating human language.
Example: AI translating text from English to Spanish.

Neural Network. An interconnected system of nodes (neurons) that processes data through layers using weights and activation functions.
Example: AI recognizing handwritten digits.

Neural Style Transfer (NST). A technique that applies the artistic style of one image to another.
Example: Making a photo look like a Van Gogh painting.

Overfitting. When a model learns training data too well, reducing its ability to generalize to new data.
Example: AI performing well on test images but poorly on real-world photos.

Prompt. An instruction, question, or description given to an AI model to guide its output. Clear and specific prompts help the AI produce more relevant and accurate results.
Example: "Generate a minimalist living room design with natural materials and warm lighting."

Text-to-Image (txt2img). AI process that generates images from text prompts.
Example: “Generate a modern living room with Scandinavian design.”

Token. A small unit of text (a whole word, its part, or a punctuation mark) that an AI model uses when processing language. AI models read, interpret, and generate text token by token. Tokenisation is primarily optimised for English, which means that inflected languages generate more tokens for the same amount of text (for example, Slovak produces 20–40% more tokens). This creates a greater load on AI models, results in slower processing, and leads to overall higher costs due to token based billing.
Example: The sentence “AI helps designers work faster.” may be split into tokens like: “AI” – “helps” – “design” – “ers” – “work” – “faster” – “.”

Transformer Architecture. A neural network design used in large language models for processing sequences of data efficiently.
Example: GPT models are based on transformer architecture.

Variational Autoencoder (VAE). A neural network architecture used for generating new data similar to the training set.
Example: Common in image generation tasks.

Virtual Reality (VR). Immersive technology creating simulated environments.
Example: Virtual tours of architectural designs.

Country-Specific Adaptation Tips for Partner Countries

Why Adaptation to Local Contexts Matters

Every EU country is working toward integrating artificial intelligence into education, but not all have established a dedicated framework for generative AI in schools. AI technologies are evolving at an exceptionally fast pace, which means that the information provided here reflects the situation as of **November 2025**. It is not feasible to cover all EU member states in detail; therefore, examples from partner countries are presented to illustrate how diverse and context-specific approaches to AI in education can be. These examples highlight variations in policy, implementation strategies, and ethical considerations, offering inspiration for offering inspiration for contextual adaptation. Adaptation ensures that AI-related guidance aligns with national strategies, legal requirements, and pedagogical priorities. Adapting content to local frameworks also supports teacher confidence, student safety, and compliance with regional standards such as the EU AI Act.

Slovakia

Slovakia has introduced the National Plan for the Responsible Use of AI in Education (2025–2027), which prioritizes accessibility, equality, and safety. It includes teacher training programs, AI competence centers, and guidelines for ethical use, with plans to embed AI into the national curriculum from 2026/2027. These resources provide a strong foundation for adapting the project framework to Slovak conditions.

- Ministry of Education, Research, Development and Youth of the Slovak Republic. (2025). Plán zodpovedného využívania umelej inteligencie vo vzdelávaní 2025–2027 [National Plan for the Responsible Use of AI in Education 2025–2027]. Bratislava: Ministerstvo školstva SR.
Retrieved from **https://ai.iedu.sk/wp-content/uploads/2025/09/Plan_zodpovedneho_vyuzivania_AI_vo_vzdelavani_PUBLIC.pdf**

Italy

Italy does not yet have a dedicated generative AI framework for schools, but its **National AI Strategy (2024–2026)** and **pilot project**s in selected schools offer a starting point. These initiatives emphasize teacher training, ethics, and digital skills, and align with the EU AI Act. Italy's participation in the AI4T project also provides practical resources for classroom integration.

- Agenzia per l'Italia Digitale. (2024). Italian strategy for artificial intelligence 2024–2026. Rome: AgID.
Retrieved from **https://www.agid.gov.it/sites/agid/files/2024-07/Italian_strategy_for_artificial_intelligence_2024-2026.pdf**

- Euronews. (2024, September 26). Italy pilots AI in schools looking to boost tech-based learning.
Retrieved from **https://www.euronews.com/next/2024/09/26/italy-pilots-ai-in-schools-looking-to-boost-tech-based-learning**

Spain

Spain has published **the Guidelines on the Use of AI in Education** through INTEF (National Institute of Educational Technologies and Teacher Training). This document provides a comprehensive framework for integrating AI into pre-university education in an ethical and effective way. It includes contextual information about AI, practical applications for students, teachers, and schools, and addresses challenges such as algorithmic bias, deepfakes, and privacy. The guide also offers a decalogue for responsible AI use, a glossary of key terms, and annexes with good practices and recommendations for classroom implementation.

- Instituto Nacional de Tecnologías Educativas y de Formación del Profesorado (INTEF). (2024). Guidelines on the use of AI in education. Ministerio de Educación, Formación Profesional y Deportes.
Retrieved from **https://intef.es/Noticias/guidelines-on-the-use-of-ai-in-education/**

France

France does not have a single framework, but has national initiatives under France 2030 and participates in the AI4T project. These efforts include AI pathways for students, teacher training programs, and ethical guidelines aligned with the EU AI Act. These resources can guide localisation to ensure compliance and pedagogical relevance.

- France Education International. (2024). AI4T – Artificial Intelligence for and by teachers.
Retrieved from **https://www.france-education-international.fr/en/expertises/cooperation-education/projets/ai4t-artificial-intelligence-and-teachers**

- Ministère de l'Éducation nationale. (2025). Intelligence artificielle au service de l'éducation: des mesures ambitieuses pour accompagner les usages des élèves et des professeurs.
Retrieved from **https://www.education.gouv.fr/intelligence-artificielle-au-service-de-l-education-des-mesures-ambitieuses-pour-accompagner-les-416551**

Poland

Poland's approach to AI in education is anchored in its **National AI Strategy (2020)** and the broader **National Digital Education Strategy.** These policies aim to foster AI literacy, teacher training, and infrastructure development, ensuring alignment with EU AI Act principles. Key initiatives include **AI Labs** and the flagship program **Laboratoria Przyszłości** (Laboratories of the Future), which equips schools with modern technologies such as 3D printers, robotics kits, and digital tools to build STEAM competencies. While Poland does not yet have a dedicated generative AI framework for schools, these programs emphasize ethics, safety, and equal access, providing a strong foundation for localisation and adaptation of international guidelines.

- Ministerstwo Cyfryzacji. Ministry of Digital Affairs. (2020). Polityka dla rozwoju sztucznej inteligencji w Polsce od roku 2020 [Policy for the development of artificial intelligence in Poland from 2020]. Warsaw: Government of Poland.
Retrieved from **https://www.gov.pl/web/ai/polityka-dla-rozwoju-sztucznej-inteligencji-w-polsce-od-roku-2020**

- Ministerstwo Edukacji i Nauki. (2021). Laboratoria Przyszłości [Laboratories of the Future]. Warsaw: Government of Poland.
Retrieved from **https://www.gov.pl/web/laboratoria**

Belgium

Belgium does not yet have a single national framework dedicated to generative AI in schools, but it has strong foundations through its **National Convergence Plan for the Development of Artificial Intelligence** and regional strategies such as DigitalWallonia4.ai and the Flemish AI Action Plan. These policies emphasize trustworthy AI, cybersecurity, and lifelong learning, aligning with EU AI Act principles. In education, Belgium promotes AI literacy and teacher training through initiatives like **AI4Belgium**, regional living labs, and collaborative projects such as **AI4T (Artificial Intelligence for and by Teachers**). Additionally, the European Schools have adopted a **Framework for the Educational Use of Generative AI (2025)**, which applies to Belgian schools within that system. These resources provide a strong basis for localisation, focusing on ethics, transparency, and pedagogical relevance.

- Federal Public Service Policy and Support (BOSA). (2022). National convergence plan for the development of artificial intelligence. Government of Belgium.
Retrieved from **https://bosa.belgium.be/en/themes/digital-administration/digital-strategy-and-policy/national-convergence-plan-development**

- AI4Belgium. (2019). AI4Belgium national strategy report.
Retrieved from **https://www.ai4belgium.be/wp-content/uploads/2019/04/report_en.pdf**

- Schola Europaea. (2025). Framework for the educational use of generative artificial intelligence in the European Schools.
Retrieved from **https://www.eursc.eu/BasicTexts/2025-01-D-65-en-2.pdf**

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- National AI in Schools Taskforce. (2023). **Australian Framework for Generative Artificial Intelligence in Schools.** Commonwealth of Australia. Retrieved from **https://www.education.gov.au/download/17416/australian-framework-generative-artificial-intelligence-ai-schools/35400/australian-framework-generative-ai-schools/pdf**

- OSPI is Washington State's primary education agency, oversees K–12 schools, sets standards, issues policies and guidance, including frameworks for safe and ethical use of technologies like AI. **Office of Superintendent of Public Instruction.** (2024, July). Comprehensive AI guidance: Human-centered AI guidance for K–12 public schools (Version 3.0). Olympia, WA: OSPI. Retrieved from **https://ospi.k12.wa.us/sites/default/files/2024-06/comprehensive-ai-guidance.pdf**

- Provides strategic recommendations for using AI in education with a focus on equity, effectiveness, and ethical frameworks. Suitable for policy development and school-level planning. **OECD. (2023). OECD digital education outlook 2023**: Opportunities, guidelines and guardrails for effective and equitable use of AI in education. OECD Publishing. **https://doi.org/10.1787/c74f03de-en**

- A practical toolkit and framework for teachers to integrate AI into lessons. Includes scenarios, recommendations, and didactic tips, ideal for secondary education. TeachAI. (2023). **TeachAI toolkit and framework. https://www.teachai.org/toolkit-framework**

- **Global UNESCO guidelines for safe and responsible use of generative AI in education and research.** Official, internationally recognized source focused on ethics and practice. UNESCO. (2023). **Guidance for generative AI in education and research.** UNESCO. **https://www.unesco.org/en/articles/guidance-generative-ai-education-and-research**

- Defines AI-related competencies for students, helping educators plan learning outcomes and integrate AI into curricula. UNESCO. (2023). **AI competency framework for students.** UNESCO. **https://www.unesco.org/en/articles/ai-competency-framework-students**

- An open framework for developing AI literacy. Includes skill categories and recommendations for different education levels, useful for curriculum design. AILit. (2023). **AI literacy framework. https://ailiteracyframework.org**

- Simply Psychology. (2023). Bloom's taxonomy.
Retrieved from **https://www.simplypsychology.org/blooms-taxonomy.html**

- Arizona State University – Learning and Teaching Hub. (2023). Bloom's taxonomy reference guide.
Retrieved from **https://lth.engineering.asu.edu/reference-guide/blooms-taxonomy/**

- Cornell University – Center for Teaching Innovation. (2023). Bloom's taxonomy.
Retrieved from **https://teaching.cornell.edu/resource/blooms-taxonomy**

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