

Aiideas



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1. PROJECT JUSTIFICATION

The Aldeas project aims to encourage students to reflect on the role of Artificial Intelligence (AI) in today's society, analyzing its positive uses, potential risks, and ethical challenges. It also seeks to help students learn to use AI critically, consciously, and responsibly, while exploring its applications in scientific research and everyday life.

Additionally, Aldeas promotes the development of key competences defined in current Spanish educational legislation, inspired by the Council of the European Union Recommendation on Key Competences for Lifelong Learning (May 22, 2018). It also pays special attention to cross-curricular elements, offering a comprehensive educational experience closely linked to 21st-century reality.

2. TOPICS

1. Introduction. History and basic concepts

Brief overview of the evolution of AI and clarification of key concepts.

- Definition of artificial intelligence: What is AI really?
- Short history and evolution of AI.
- Types of AI: weak vs. strong (ANI vs. AGI).

Possible group work: creation of a timeline?

2. Practical Applications of AI

Exploration of real and useful applications in education, professional environments, and everyday life.

- AI in education: study assistants, translators, organization and creativity tools.
- Writing and correction tools: How can ChatGPT, Grammarly, or LanguageTool improve your writing? Ethical analysis of their use.
- Information search and organization: Advanced search engines (Bing Chat, Perplexity AI) and text summarization tools (Resoomer, Hugging Face).

- Visual and artistic content creation: Tools like Midjourney or DALL·E for creative projects.
- AI in everyday life: from Spotify to autonomous cars.

Possible activity: AI tools workshop. Each group explores an educational AI tool (ChatGPT, Perplexity, Canva AI, DALL·E, Elicit, etc.) and presents its advantages and limitations.

Creation of an interactive map with applications by area of interest.

3. Connection with current scientific research

- AI in scientific research:
 - Applications of AI in science:
 - Biology and Medicine: Discovery of new drugs, analysis of medical images (diagnosis of diseases like cancer), and DNA sequencing.
 - Astronomy: Processing massive telescope data to discover new planets or galaxies.
 - Environmental Sciences: Climate change prediction, deforestation monitoring, and weather pattern analysis.
- Case studies:
 - AlphaFold (Google DeepMind): How AI predicts protein structures, revolutionizing biology.
 - Data analysis at the Large Hadron Collider (CERN): AI helping scientists find subatomic particles.
 - Examples of recent research that would not be possible without AI.

4. Risks and ethical dilemmas

Reflection on issues such as bias, privacy, misinformation, and technological dependence.

Objective: Reflect on the abuses and risks of AI.

- Bias in algorithms and discrimination.
- Data protection and privacy.
- Fake news and misinformation.
- Impact on employment and creativity.
- Technological dependence.

- Plagiarism and authenticity: Where is the line between help and copying? Reflection on originality and learning.
- Ethical challenges in research:
 - Who is responsible if an AI system makes a mistake in a medical diagnosis?
 - How biases in training data can affect research outcomes.

Possible activities:

Online debate (via videoconference or forum): “Should strict limits be placed on AI development?” “EU policy on AI.”

“Developing a 'Ten Commandments' guide for responsible AI use” summarizing joint conclusions.

3. FINAL PRODUCT AND DISSEMINATION

Final project (to choose):

- Podcast: Recording an episode discussing the pros and cons of AI.
- Short documentary: Creating a video exploring one of the project topics (e.g., “The future of deepfakes”).
- Interactive ethical AI guide for students: Developing a practical guide with recommendations on responsible AI use.

Students must use AI tools for its creation.

The results will be published on eTwinning and shared through social media platforms such as Instagram, X, and others.

4. EVALUATION AND FINAL REFLECTION

Self-assessment, peer assessment, and reflection on what was learned and the international experience.

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