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Open: Wide Minds to Find Eco Virtual STEAM Solutions Against Climate Change!

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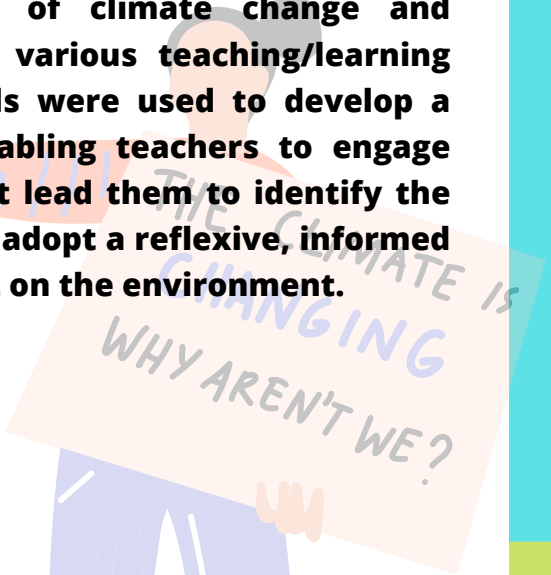
WI-MI

Formation of STEAM pedagogy in climate change

The project "Wi-Mi, Open: Wide Minds Will Find Eco Virtual STEAM Solutions against Climate Change!" is a dynamic, inclusive and comprehensive project that aims to present and validate different models of teaching and learning using the STEAM methodology in climate change. It aims to implement and develop educational methodologies focused on community scientific projects in the fight against climate change, in an inclusive and cooperative way, with the different partners involved in this project, in order to expand and globalize new educational approaches that support the issue of climate change and subsequent environmental concerns. To this end, various teaching/learning materials were produced and different digital tools were used to develop a STEAM learning environment, with the aim of enabling teachers to engage students in pedagogical and scientific practices that lead them to identify the effects of climate change on them. communities and adopt a reflexive, informed and critical stance on these changes and their impact on the environment.



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In work package 1, each partner participating in this project wrote a chapter on how to choose and develop different teaching strategies, using a STEAM approach, to be applied in a pedagogical context when exploring themes focused on the issue of change climate change and its impact on the environment, which all countries are already facing. These strategies make it possible to innovate and support the development of teachers' professional practices in teaching climate change in an effective, inclusive, diverse, innovative and international way, enabling them to get closer to students and, consequently, to their concerns and engagement with environmental problems.

The chapters that make up the educational strategy of each partner are the following:
Chapter 1 - Integrating Science Lessons into Climate Change.
Chapter 2 - Integrating Technology Lessons into Climate Change.
Chapter 3 - Integrating Engineering Lessons into Climate Change.
Chapter 4 - Integrating Art Lessons into Climate Change Chapter 5 - Integrating Math Lessons into Climate Change.
Chapter 6 - Strategies for the development of community scientific projects to combat climate change.

To implement the content of the various chapters, each partner designed lesson plans in accordance with the defined objectives, centered on the STEAM approach and based on feasible community science projects, including real-world examples, case studies and current events. These plans allowed teachers to carry out activities that allowed students to have direct contact with the reality and problems of climate change in the community where they live.

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The activities and direct contact with the different realities made the students aware of their responsibility towards the environment and towards others. They were also able to sense the problem, adopt it, and inevitably develop critical thinking and problem-solving skills. In this way, the student becomes a central agent in the teaching and learning process and assumes an active role as a self-regulating agent in learning development and problem solving. In this setting, the student was able to develop meaningful learning.

To promote all this activity, WP1, partners Austria, Turkey, Bulgaria, Romania, Croatia and Portugal held 6 conferences with the aim of raising awareness among teachers, students and other stakeholders, sharing strategies and action plans for educating young people in finding solutions. to climate change and promoting their critical thinking.

Essential to the success of this first work package (WP1) were online meetings between partners to share views, outline strategies, plan and discuss ideas. In addition, each school asked 3 experts to read and analyze the 6 chapters mentioned above, understand the different approaches, assess their feasibility and answer a questionnaire from which a report was drawn up. Their feedback shows that the work presented in WP1 is very good, innovative, diverse and easy to implement in schools, towns and cities.

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