



Bees are dying

The impact of climate change on the extinction of bees

Type of pedagogical project, activity, action, accompanying	Activity
Key words of relevant disciplines/ Pedagogical content	Bee community, living conditions, pollination, blooming calendar, decreased population of bees
Problematic	The impact of climate change on the extinction of bees
Thematic	Climate change consequences and adaptation, Biodiversity
Disciplines (sciences, geography)	<i>Science</i>
Pedagogical Objectives/New targeted skills	<p>The students will be able to:</p> <ul style="list-style-type: none"> - Explain the role and importance of bees in the ecosystem - Predict the consequences (<i>What would happen if bees were exterminated?</i>) - Establish the link between the use of pesticides, pollination and the harmfulness of their use for bees - Explain the influence of temperature differences on the change of blooming calendar - Establish the link between changes in the blooming calendar and the extermination of bees - Take part in an argumentative discussion
Public target(s) (age, requested skills...)	12-14 years old <i>Prerequisite: basic knowledge about the bees and their role in the ecosystem</i>
Description (step by step)	<p>Step 1) The teacher reminds the students of the results of the survey conducted (<i>Activity sheet: Exploring the consequences of climate change in our environment</i>) and of the theses that are considered to be the most significant.</p> <p>Step 2) "Bees go extinct because the flowering calendar has changed" is a thesis that is considered as significant. The teacher directs the conversation to determine</p>





	<p>the role of bees in our ecosystem. Special attention is dedicated to the importance of bees in the process of pollination. Students predict the consequences for nature if the bees went extinct. The teacher encourages the students to produce an argumentative discussion. (Conclusion on the necessity of bees in agriculture.)</p> <p>Step 3) What can we do to avoid the scenario of bees going extinct? The discussion focuses on the causes of bee extinction. Students are thinking about what could lead to bees going extinct. Conclusions: The main causes are climate change (changes in flowering calendar) and the use of chemicals in agriculture (pesticides). Students are encouraged to establish causal relationships between natural phenomena (weather conditions, activity cycle of bees, flowering calendar ...). They discuss the influence of temperature differences on changing flowering calendar, as well as the early flowering of medullary plants. They establish a connection between the evolution of the flowering calendar and the extinction of bees.</p> <p>Step 4) Question raised: can humans contribute to the easier survival of bee communities? The teacher announces a visit to the local beekeeper (Project sheet: <i>Helping the bees to survive climate changes</i>).</p>
<p>Place (meeting room, outside space, ...)</p>	<p>Classroom</p>
<p>Individual and / or collective actions</p>	<p>Group work, discussion</p>
<p>Material needed</p>	
<p>Duration of pedagogical project or activity</p>	<p>2 hours</p>





Evaluation of the new acquired skills	Active participation in discussions and understanding the cause-consequence relationship
Eco-citizen adaptation, knowledge enhancement and links to other topics	<p> Link to: Activity sheet: <i>Exploring the consequences of climate change in our environment</i> Project sheet: <i>Helping the bees to survive climate changes</i> </p> <p> Croatian: <ul style="list-style-type: none"> • https://www.bib.irb.hr/853492 </p> <p> Greek: <ul style="list-style-type: none"> • https://melissokomianet.gr/klimatiki-allagi-epeili-gia-tis-melisses/ </p>
Observations	-

Pictures

Photo. (Organization that took the picture) Country

