

City Challenge Report Card			
The City Challenge Theme		PRATUM, Place for all 3. Regenerating Urban Space to Connect People in a Healthy Environment	
School/Summer School		ZŠ a MŠ Hradec Králové, Štefcova 1092	Teacher(s) / Disciplines Mgr. Lenka Bičanová Bio / Geo Mgr. Sylva Balcarová Bio / CH Radka Paříková teaching assistant Mgr. Barbora Špitálníková Eng Mgr. Tereza Kozderková Eng / French Mgr. Michaela Konradyova Bio / Russian Mgr. Jiri Duchacek History / PE Mgr. Pavlína Lohnická Bio / Maths Mgr. Markéta Uhlířová Eng Mgr. Lenka Jeriová Inf / PR
The planning phase	Problem (The What-question)	Solutions close to nature - protection of biodiversity and microclimate of the city	
	Relevance (The Why question)	The aim of our project was to explore the importance of urban greenery for influencing the microclimate of the city. Urban greenery has a crucial role in preventing the formation of so-called heat islands. We investigated the effect of greenery on creating a suitable microclimate. An important ability of greenery is to stabilize a more pleasant climate inside the city when exposed to high temperatures, but also to maintain a certain humidity of the air or soil.	
	Expectation / Hypothesis	Greenery in cities has a positive effect on the city's microclimate - it prevents the formation of heat islands, maintains higher soil moisture.	
	Methods (The How-question ¹)	We performed pedological measurements in situ according to the GLOBE Program methodology. We measured the soil temperature on our newly created butterfly meadow, the soil temperature at the tartan field and the temperature of the tartan field with a soil thermometer. We also determined the water content of the butterfly meadow soil and the soil at the playground. At the same time, we used data on temperature and NDMI remote sensing index for comparison.	
	Participants² (The Who-question)	Teachers and pupils of elementary school Hradec Králové, Štefcova 109 Mgr. Josef Laštovička, Charles University Hradec Králové, municipal technical service	
The implementation	Activity 1 (e.g. literature, book review)	Study of literature resources and internet resources, measurements (temperature, soil water content)	
	Activity 2 (e.g. gather data / information)	Remote sensing course led by Mgr. Josef Laštovička	
	Activity 3	Measurement of soil temperature and water content in soil in situ.	

¹ Please provide the keywords regarding both, the teaching approach and the research approach

² E.g. the science team members

³ Please provide support if possible through pictures, sketches, charts, student reflection or such

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	Activity 4	Collection of remote sensing data regarding temperature and NDMI index.
	Activity 5	Statistical evaluation of soil temperature and soil water content data - tables, graphs.
	City Challenge solution	Implemented changes leading to a positive effect on the city's microclimate in the school garden and in the immediate vicinity of the school - the establishment of a butterfly meadow, mosaic cutting. Evaluation of the influence of greenery on the microclimate of the city.
The documentation and reporting phase	Group or class (e.g. reports, posters etc)	Posters Banner Boards
	School (e.g. school web page, school newspaper)	School website School magazine
	Public (e.g. meeting, news media)	Open event in the form of Garden party - meeting with the public Presentation of the project at GLOBE Games 2022 in Zbiroh.

Room for additional explanations (some feedbacks on main problems found and related solutions, or other observations are very appreciated)
