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Resources and Tool for Light Pollution Monitoring and Mitigation

Age: Grade 3-9

Topics: Light Pollution, Light pollution symulator, light effects, educational resources, DarkSite Finder, Light Pollution interactive map, NASAWorldView, Stellarium, Mitigation

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Educational tools and resources for various grade levels: simulators, interactive maps, satellite imagery, and celestial exploration platforms, enhancing the light pollution's impacts

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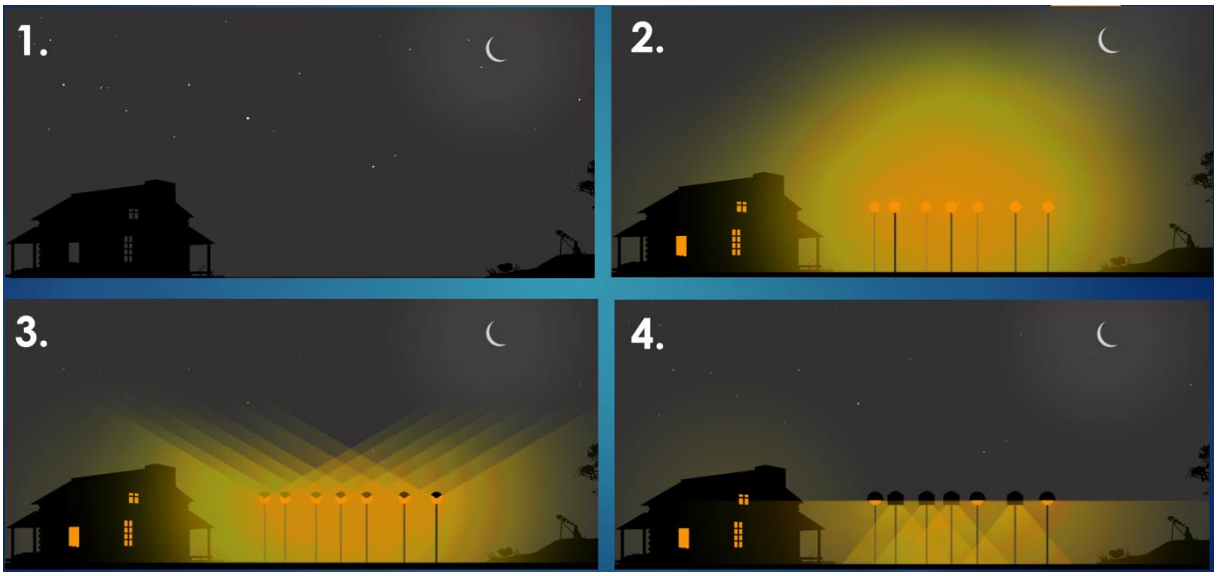
Introduction

This report delves into the issue of light pollution and its environmental impacts. It highlights a range of educational resources and tools, from interactive maps to simulators, designed to foster awareness and understanding of light pollution among students.

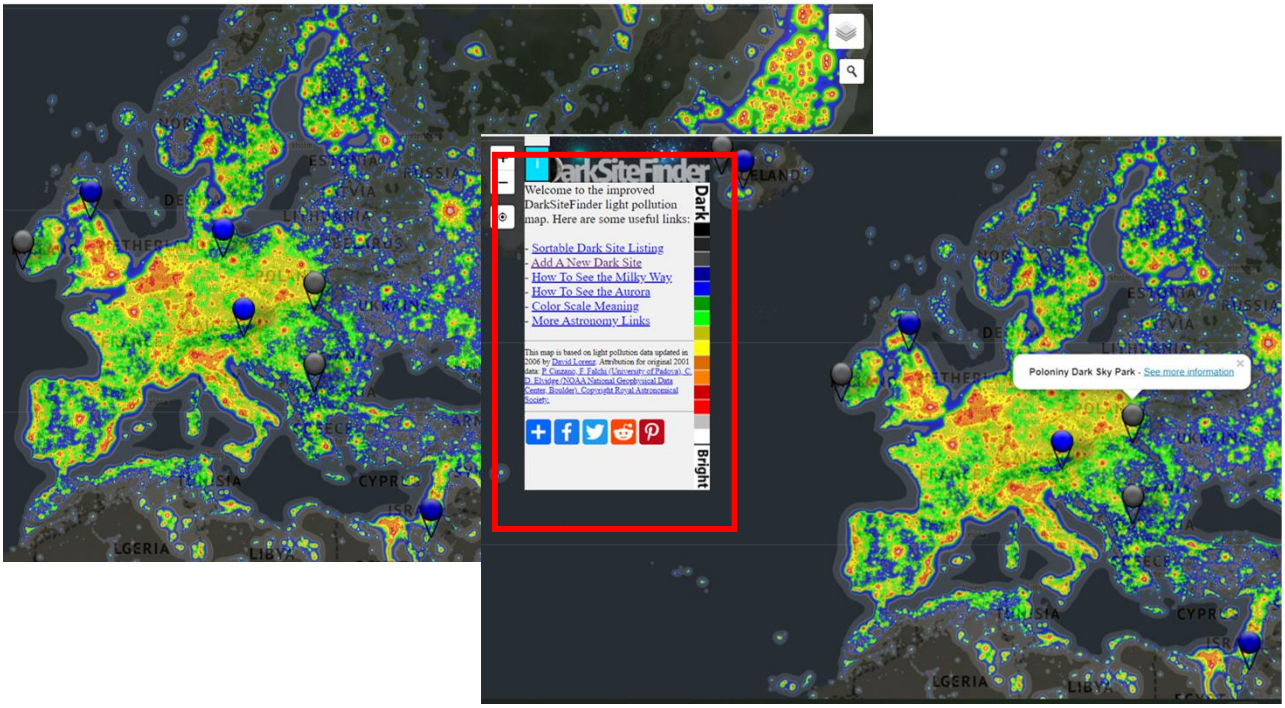
Light Pollution Simulator (Grades 3 - 5):

This section introduces a user-friendly simulator that engages young learners in understanding the effects of artificial light on the environment. Students can experiment with different scenarios to observe the changes in light pollution and its consequences.



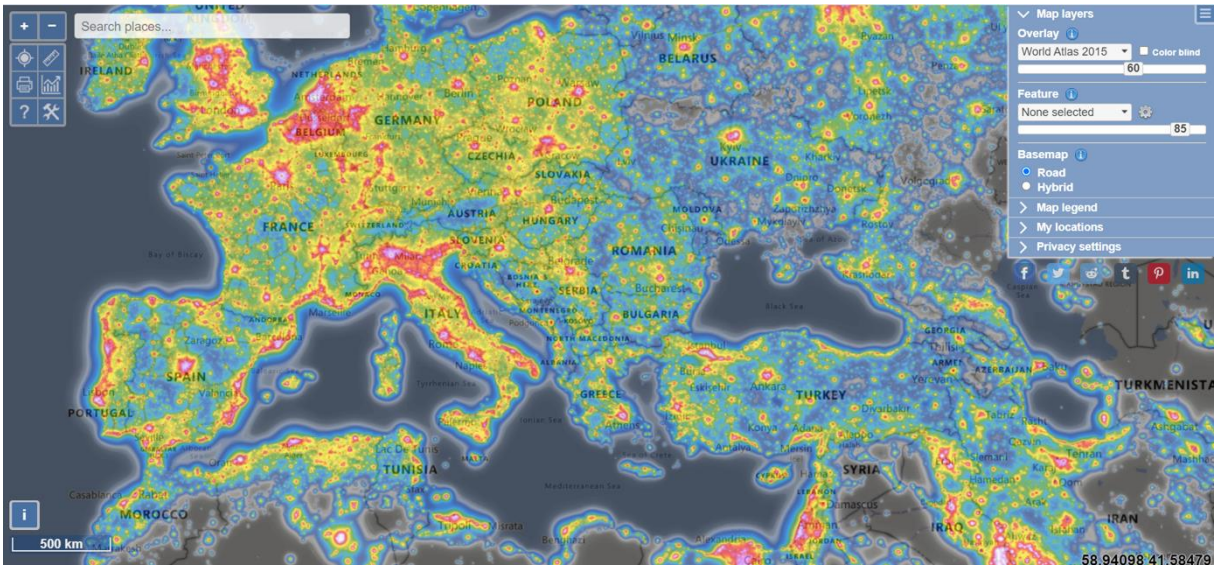
DarkSiteFinder and Creating Dark Sky Sites (Grade 3-9):

Here, we explore the DarkSiteFinder tool, which helps identify areas with minimal light pollution for stargazing and astronomical observations. Additionally, instructions are provided on how individuals can contribute to creating and maintaining dark sky sites.



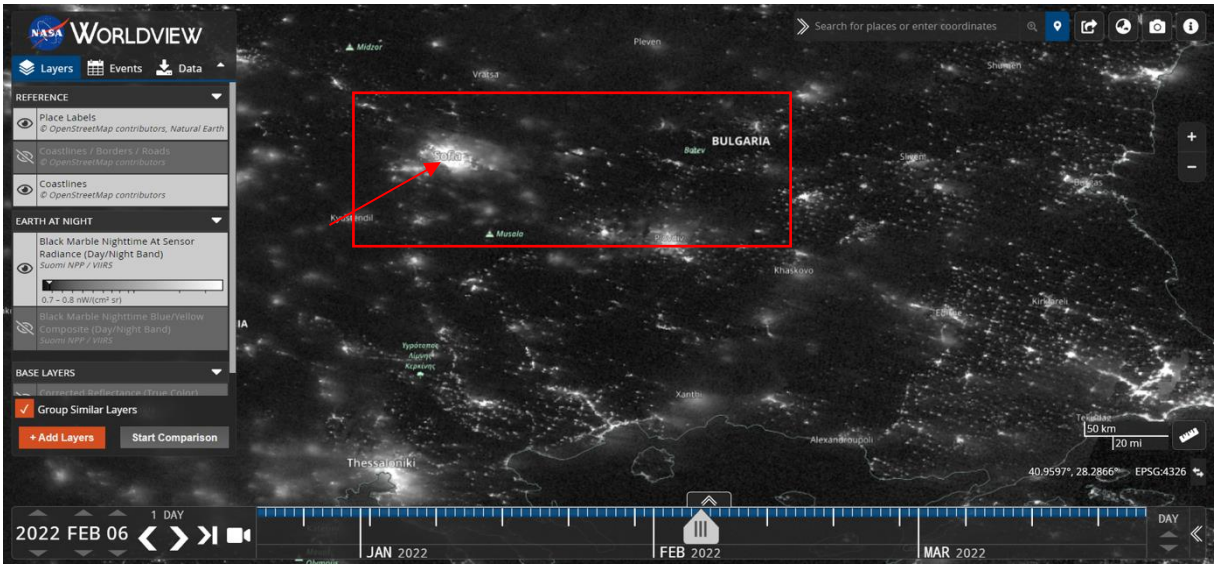
Light Pollution Interactive Map (Grades 6 - 9):

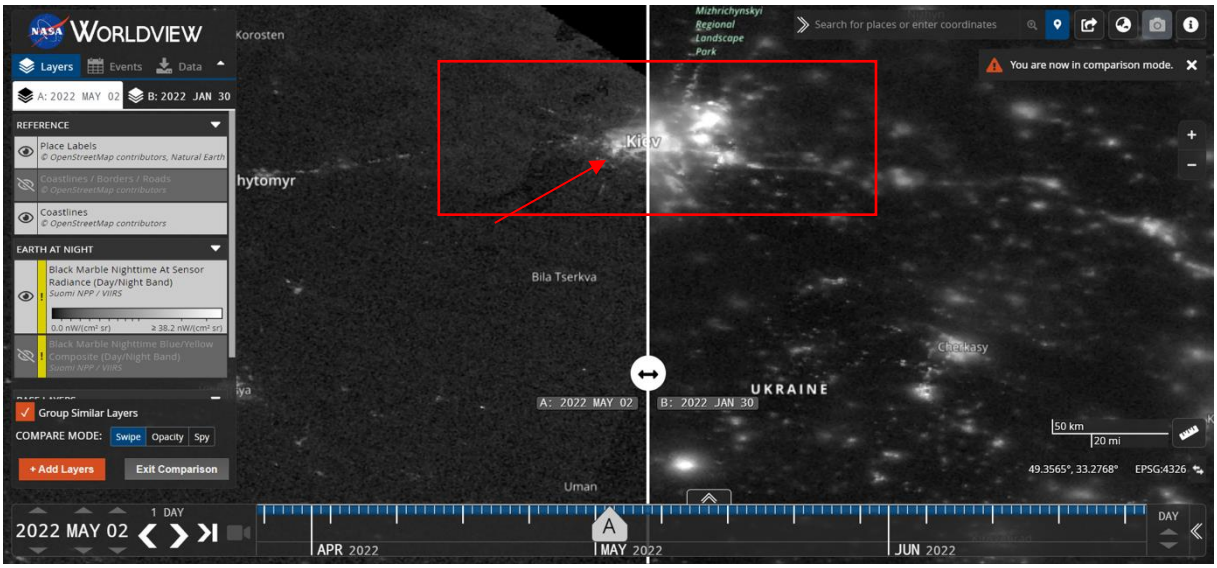
This section focuses on an interactive map that enables students to analyze light pollution data over the years since 2012. By downloading data and studying graphs and statistics, students gain insight into the evolving trends and impact of light pollution.



NASAWorldView: Satellite Perspectives on Light Pollution (Grade 6-9):

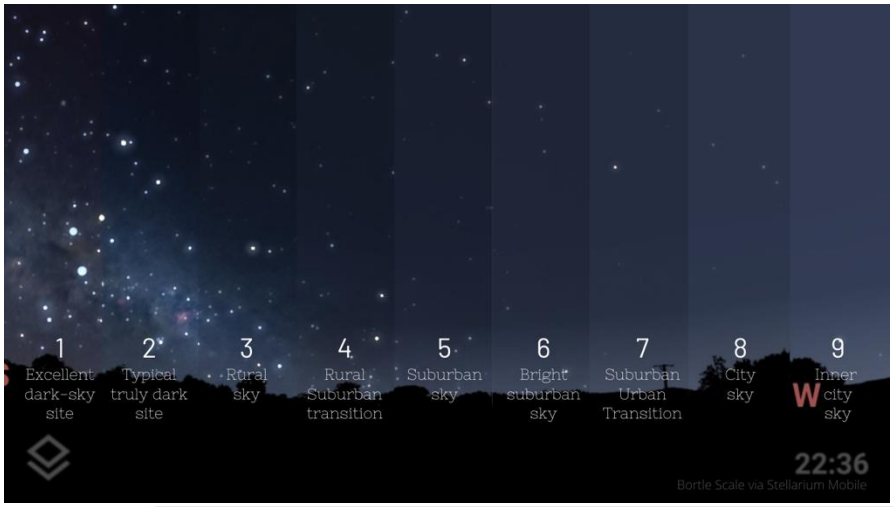
Highlighting NASAWorldView, this part showcases real satellite photos that depict light pollution's global extent and variations. Students can compare images from different satellite missions, enhancing their understanding of the issue's scale.





Stellarium: Immersive Night Sky Exploration (Grade 3-9):

Discussing Stellarium, both in its mobile app and PC versions, this segment offers students an opportunity to virtually explore the night sky. They can witness first-hand the effects of changing light pollution levels on celestial observations.



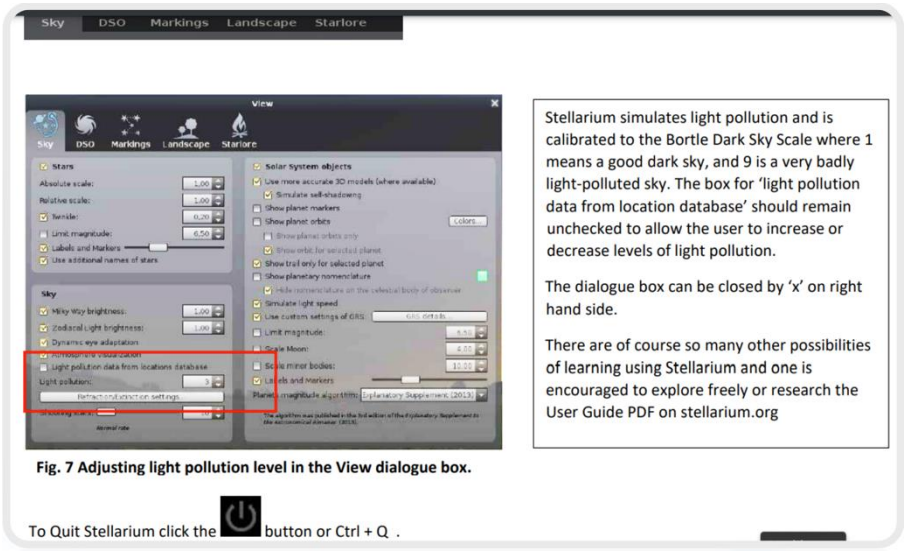


Fig. 7 Adjusting light pollution level in the View dialogue box.

⇒ <u>Note to Educators:</u>

The highlighted resources and tools empower educators to engage learners at various grade levels.

By utilizing these educational tools and resources, students are equipped to comprehend, monitor, and actively contribute to mitigating the pervasive issue of light pollution