

## Using Copernicus EO data and services in compulsory education

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## Introduction

They say a picture is worth a thousand words. In such case satellite images can be worth a lot more, especially to school children



of local events that your students relate to

and build a simple interdisciplinary classroom activity around it, tailored to your local needs



## Aim of the study

To demonstrate the feasibility of designing an educational activity which exploits free and open satellite images without requiring any satellite data processing expertise. To explore its localization potential and flexibility. To study the classroom benefits in terms of .....

## **Data & Methodology**

We designed a ready-to-use, customizable classroom activity for mapping burnt areas based on satellite images. Sentinel Hub EO Browser was the satellite imagery tool used, because of its free license policy and the ease with which non-expect users can acquire very usable images. The activity, which was modeled after **ESA's** classroom activities, contains a wild fire quiz and supporting info, as well as original graphics for explaining how satellite remote sensing works and how light reflects on different surfaces.

As a case study we chose the deadliest wildfires in Europe that devastated the surrounding Athens area (*Mati*, *Kineta*) in the summer of 2018 both for educational and public interest reasons . The case of the two wild fires occurring in the same day, allow for students to discover how urban compare to rural burnt scars as seen from space in "true color"

Kostas Hantzis for the graphics and Copernicus Academy

If you are a teacher and you want to capture your students interest with eye catching visualizations

(%) 

you don't need to rely on available pre-processed satellite images. You can produce them yourself using free satellite imagery tools







The results from student trials showed a 60% mapping accuracy in the case of Kineta and 20% in the case of Mati. The +70% overestimation of the burnt scar in Mati was anticipated rural area burnt scars are easily noticeable in "true color" satellite images compare to urban. However our findings revealed, that students who ignored the supporting info about the way light reflects on different surfaces included the residential area in the case of Mati due to public awareness and excluded them in the case of Kineta. Students showed great interest and maintained their focus all through out the activity





