



Open Schools Journal for Open Science

Vol 3, No 4 (2020)

Special Issue - 2nd Encontro de Ciência Cidadã

			UV: Friend or Foe? A. Santos, C. Pontes, E. Chaves, F. Oliveira, M. Ribeiro, R. Abreu, T. Visinho doi: <u>10.12681/osj.23417</u>
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VOLUME 3 - ISSUE 4 - 2020 ISSN: 2623-3606			

To cite this article:

Santos, A., Pontes, C., Chaves, E., Oliveira, F., Ribeiro, M., Abreu, R., & Visinho, T. (2020). UV: Friend or Foe?. *Open Schools Journal for Open Science*, *3*(4). https://doi.org/10.12681/osj.23417



UV: Friend or Foe?

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¹Escola Secundária Jaime Moniz, Funchal, Portugal

Abstract

For about four months, in the 2018-2019 school year, students from Escola Secundária Jaime Moniz were involved in the project "UV-friendly or enemy?". The project went through various activities that promoted interdisciplinarity between the disciplines of Physics, Chemistry, Biology and Geology, and established contacts with their community. They also had the chance to conduct surveys and share the responses obtained on the Goballab platform, gaining awareness of the relevance of the problems associated with sun exposure at local and global levels. In the end, each group of students from each of the classes, created a product to present to the educational community, raising awareness of the problem studied. The products created were: posters, leaflets, games and a song (original lyrics and music) warning about the dangers and benefits of ultraviolet radiation for human health and the use of sunscreens.

Keywords

Cancer; D vitamin; electromagnetic spectrum; O₃; photochemical reactions; ultraviolet (UV-A, UV-B, UV-C).





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Pavilhão do Conhecimento - Centro Ciência Viva 14 Fevereiro 2020

UV – FRIEND OR FOE?

Escola Secundária Jaime Moniz – Funchal • Arlindo Santos, Carlos Pontes, Elisabete Chaves, Fátima Oliveira, Marco Ribeiro, Ricardo Abreu e Teresa Visinho • Classes: 10°10, 10°14, 10°16, 11°5 e 11°14; Disciplines: FQA e BG

Abstract

For about four months in the 2018-2019 school year, ESJM students involved in the "UV-friendly or enemy?" Project went through various activities that promoted interdisciplinarity between the FQA and BG disciplines and established contacts with their community. They also had the chance to conduct surveys and share the responses obtained on the Goballab platform, gaining awareness of the relevance of the problems associated with sun exposure at local and global levels. In the end, each group of students from each of the classes involved created a product to present to the educational community, raising awareness of the problem studied. The products created were: posters, leaflets, games and a song (original lyrics and music) warning about the dangers and benefits of ultraviolet radiation for human health and the use of sunscreens.

Key words: Electromagnetic spectrum; Ultraviolet (UV-A, UV-B, UV-C); Photochemical reactions; O3; D vitamin; Cancer.

Sentir Feel



ultraviolet radiation that are widely reported in the media. Investigate the health effects of UV radiation

How to determine the levels of

Distinguish the various types of electromagnetic radiation

Personal geography



Criar

radiation;

radiation:

Create

interactive posters on the advantages and disadvantages of human exposure to UV

dice game with different activities on UV

game "hit the objects" to use on the beach;

game using QR code and mobile phone;

with useful information about UV;

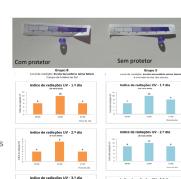
disadvantages of UV radiation;

flyers on UV radiation;

game adapted from "how much do you want"



- Evolution of UV radiation levels during the day. Comparison of radiation levels in different locations at the same time.
- Effectiveness of using sunscreens and the meaning of the different values of Sun Protection Factors
- The students did Globallab surveys trying to reach individuals: of both sexes, of different age groups, of different nationalities and different professions So they were:
- Farmers' market: Tourists and local traders Pharmacy of Santa Maria: Pharmacists. Bom Jesus Health Center: Nurses and family doctors. Escola Secundária Jaime Moniz: Teachers, students and staff. Home / residence: Family and friends.
- Finally, surveys were registered and processed on the Globallab platform.







Imaginar Imagine



The products made by the students were presented to the . community, in a session that took place on June 6, 2019 in the afternoon in the school garden.









interactive cardboard about advantages and song (original lyrics/music) about the FPS



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