

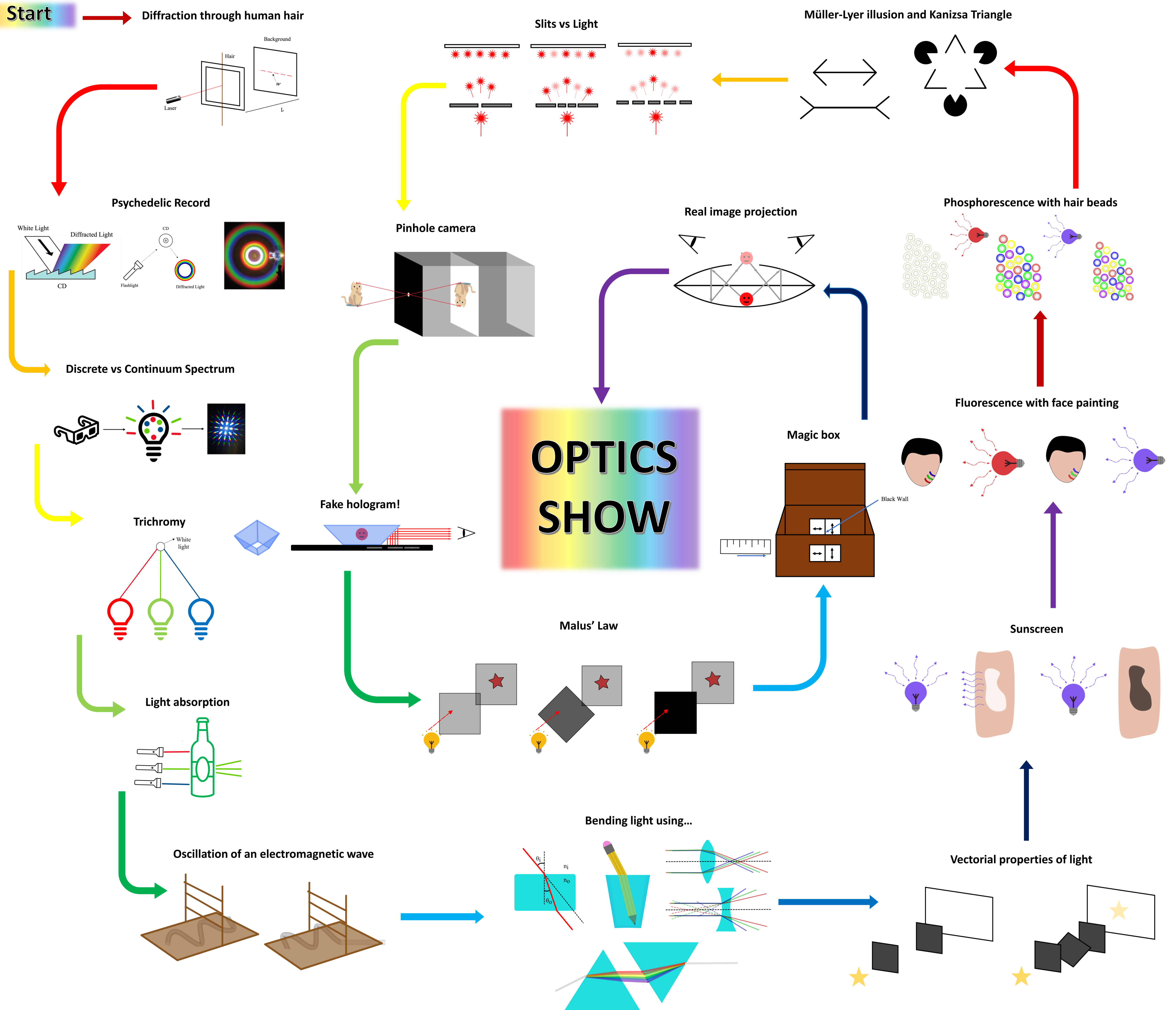
Pablo Bedoya-Ríos, Samuel I. Zapata-Valencia, Ana M. Muñoz R., Rafael A. Casalins-Hernández, Camilo Hurtado, Francisco D. Londoño García, Thomas Serna-Restrepo, Rafael Duván Ricardo-Romero, Andrea C. Hinestroza-Caicedo, Dayana C. Madrid-Alean, Edgar Yesid Rentería Rojas, Alejandra Zapata-Tamayo, Steven Nacir Olivares Araque, Carlos M. Rojas-Ibarra, Sara Ximena Bello-Gómez, Laura D. Becerra-Largo, Cristhian Alfredo Goyez-Rodríguez, Luis Felipe Holguín Villada, Jesús Bonilla, and Román Castañeda

## Abstract

There is a lack of knowledge among the community that prevents them from pursuing a career in the science of light. Due to the importance of introducing optics and photonics fields and their relevance in both, industry, and academy to pre-college students, outreach activities such as showing optical experiments become relevant. The method used to present science to students impacts their perspective directly; therefore, an adequate optics show oriented to the comprehension of pre-college students is required to improve the knowledge transmission. Here we present how an optics show is carried out by our student chapter at Universidad Nacional de Colombia, Medellin campus, along with recommendations hints and suggestions, as well as a useful guide for beginners in outreach. The explanation methodology and the needed materials and components and setups to perform common optics phenomena experiments such as diffraction, color theory, polarization, fluorescence, phosphorescence, and optical illusions are presented.

## Optics show guidance

An optics show is an activity of scientific divulgation, where the main objective is to bring knowledge that could be complex to people who are not experts in the subject or who ultimately know nothing about the area, in an accessible and easy to understand way. These activities are usually more of an informative approach, and not a teaching method, because although something can be learned, there may not be a social appropriation of knowledge. Additionally, the optics shows are not rigorous in terms of phenomena or the mathematical development of the topics.



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