



Capturing the rainbow

Introduction

Leicester Greek School proudly announces its collaboration with the Institute of Physics (<http://www.iop.org/>) for the project *Capturing the rainbow*. The project was submitted by Marina Charalampidi and won a very competitive grant scheme that enables our school to implement the proposed idea.

The project is interdisciplinary and involves the teaching of physical phenomena related to light and optics, and the Greek language. This is a great opportunity for our school as it will allow the children to engage with fun and hands-on activities and learn Greek through science!

The project

This is a 2-day event combining Optics, Photography, Colour Science and the Greek language.

During Day 1, *Tuesday, the 7th of June*, the older students (GCSE and A level) will learn through simple and fun experiments about light and how it affects the way we see the

objects around us. Specifically, the students will be taught by Dr Neophytos Lophitis, University lecturer and scientist, about electromagnetic waves, reflection and refraction by:

- using mirrors and prisms,
- creating water prisms to break light into the seven colours of the rainbow,
- looking at half-submerged straws in glasses of water,
- spinning a coloured wheel,
- making pinhole cameras and observing the idol of a candle flame.

We will then link the pinhole camera to photography and move on to the lighting in photography. James Hollingsworth, photographer and former professional lecturer in Video Production & Film Studies, will explain the concepts of brightness, colour and contrast and lead a photography workshop. At the end of the day, the students will be given the task of taking pictures with their mobile phones during Day 2 and applying the above knowledge acquired.

Day 2, *Saturday, the 11th of June*, will include a series of hands-on activities for the younger students, led by Fanoulla Georgiou, a creative practitioner. The goal is to allow students to learn how different colours of light can interact and mix to produce various new colours. Examples include:

- Rainbow paper – Children will observe colourful patters and designs when we combine milk, food colouring and washing up liquid
- Marbling: this experiment is similar to the above but instead of milk, we will use water and cooking oil
- Pour-painted jars: children will observe the three primary colours changing from primary to secondary colours and creating beautiful rainbow effects
- Tie dying: using white t-shirts and fabric dyes the children will create a spiral rainbow!

What we ask from you

This is a funded project hence *free of charge*. However,

- during Day 1, the children need to have (a) their **cameras** (or mobile phones) and (b) their favourite **picture** (one that they took) printed. If for any reason you cannot print the photo, please email it to charalampidi.marina@gmail.com by Sunday, the 5th of June and we will print it for you.
- During Day 2 the children will need to have **aprons** and **a white t-shirt** with them as one of the activities involves tie dying white t-shirts (see picture below).

We would also like to ask anyone who can, to provide old **sheets to cover and protect the tables and the floor!!**

