COLOURS IN SCIENCE

(CLIL – Science through English)

Exploring CLIL in the classroom

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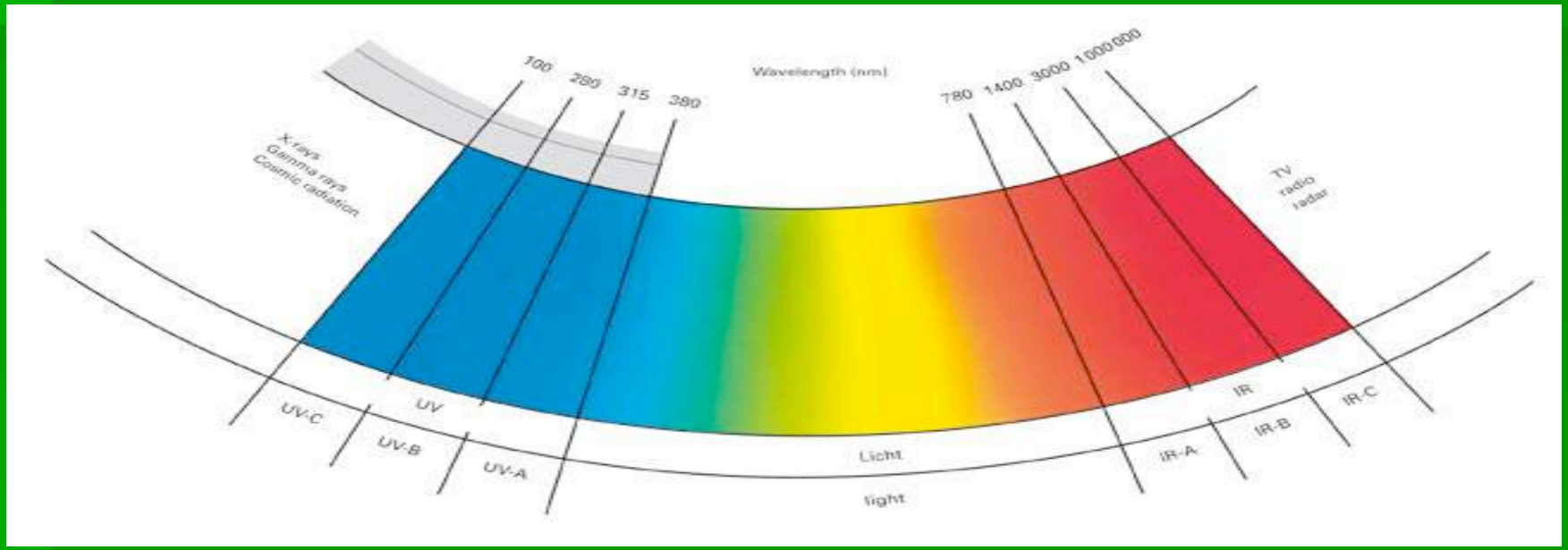

What is it?

- The didactic project below is based on the CLIL approach (Content and Language Integrated Learning), which calls for the teaching of a course content through an additional language. Although CLIL is a bottom-up approach born out of a myriad of highly diverse experiences, and is thus extremely flexible, the acronym suggests the following fundamental precept: balanced integration between language and content. Thus, a CLIL project must include both linguistic and non-linguistic subject matter.

WHY?

- CLIL has already been widely developed throughout Europe (http://www.mp.gov.rs/resursi/dokumenti/dok36-eng-CLIL.pdf); in Italy, a law (Legge Moratti, 53/2003; DL 17.10.2010 n. 226) requires its adoption as a methodological approach during the final year of *Liceo, Istituto Tecnico non professionale* and from the third year of the *Liceo Linguistico*.

MATERIALS

- There are at present only a few textbooks on the subject, since the approach suggests material prepared *ad hoc* by the teacher, with adapted authentic texts and appropriate demanding input activities. This clearly is extremely enriching on the one hand, but on the other requires much time and effort from the teachers.

THE PROJECT

- *Colours in Science* goes down three flexible paths in three areas:

  Electromagnetism (Physics), *Patterns of Inheritance* (Biology), and *Gem Colours* (Earth Science). The idea is to combine these three disciplines using the common thread of colour: hereditary colours, colours of the electromagnetic spectrum, and mineral colours. The three areas could be taught in different classes so as to offer a concluding moment when the three classes meet together to exchange what they have learned. Only *Patterns of Inheritance* will in part be described so as to provide an example that can be extended and adapted by teachers based on their particular contexts. The other two paths can instead be freely undertaken by teachers.

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- *PATTERNS OF INHERITANCE*
- **LANGUAGE:** English
- **LEVEL:** Upper Secondary School
- **SUBJECTS:** English and Biology
- **CONTENTS:** Patterns of Inheritance, Mendel, Mendelian Laws
- **LENGTH:** At least 20 hours

- **GENERAL OBJECTIVES:** Working in groups. Talking in front of an audience and preparing materials for a presentation.
- **LINGUISTIC OBJECTIVES:** Understanding, acquiring and using scientific terms regarding content. Describing processes and expressing concepts adequately in a foreign language. Understanding an oral/written text in L2 and summarizing the contents. Being able to participate in a discussion using argumentation.
- **SCIENCE OBJECTIVES:** Learning the content presented and how to apply this to appropriate exercises. Developing a critical approach to some scientific topics. Observing, describing and discussing a specific scientific discovery. Making inferences on the basis suggestions and observations. Collecting information and data from a variety of sources. Drawing conclusions from suitable aspects of evidence.