



# EURO4SCIENCE 2.0

## Forensic Science Educational Toolbox Contents

The *Forensic Science Educational Toolbox* is an output of Euro4Science 2.0 project created and developed by Prof. Luís Souto at University of Aveiro, Portugal.

The toolbox uses the CSI motto through crime cases to create challenges that students can solve using hands on lab techniques mimicking forensic evidences such as “blood” type analysis while learning mathematics, chemistry and other subjects related to school curricula.

Activities are organized in the following themes:

Human Individual Identification

Environment Education

Health Education

Forensic Chemistry

Please refer to the Teachers Guide for details of each activity. A video library with live demonstrations on how to solve the activities proposed is also available in the internet.

Access all contents at [www.euro4science.eu](http://www.euro4science.eu)

Euro4science 2.0 is an Erasmus+ European Union project coordinated by Prof. Luís Souto from University of Aveiro, Portugal ([lsouto@ua.pt](mailto:lsouto@ua.pt)) and includes the following partners:

Bulgaria: Know and Can Association, Sofia.

Greece: EEO GROUP SA, Athens.

Portugal: University of Aveiro; School Cluster Agrupamento de Escolas José Estêvão, Aveiro; Inova + Porto; PlaySolutions - Lisbon.

Poland: INnCREASE, Warsaw.

Turkey: Cinarcik Mesleki ve Teknik Anadolu Lisesi, Yalova.

United Kingdom: Skipton Girls' High School, Skipton



## EURO4SCIENCE 2.0

**Thematic:** Human Individual  
Identification

### Is this Really Blood?

- Evidence#1
- Evidence#2
- Evidence#5
- Negative Control
- Positive Control
- Gloves
- Ethanol 96%
- Hydrogen peroxide 3%
- Kastle Meyer



## EURO4SCIENCE 2.0

**Thematic:** Human Individual  
Identification

### Blood Typing Analysis

- Simulated Blood of Victim
- Simulated Blood of Suspect 1
- Simulated Blood of Suspect 2
- Simulated Blood of Suspect 3
- Simulated Blood of Evidence#4
- Simulated Blood of Evidence#5
- Simulated Anti-A Serum
- Simulated Anti-B Serum
- Simulated Anti-Rh Serum
- Blood Trays
- Toothpicks
- Gloves



## EURO4SCIENCE 2.0

**Thematic:** Human Individual  
Identification

### Fingerprints (Activity (IV) , (V) , (VI) )

- Magnifying Glass
- Clear Adhesive Tape
- Ink Pad
- Fingerprint Brush
- Black Dusting Powder
- Identification Card
- Collection Card
- Fingerprints Characteristics
- Iodine Crystals
- Evidence#6
- Plastic Bag
- Gloves



## EURO4SCIENCE 2.0

**Thematic:** Human Individual  
Identification

### DNA Profiling

- DNA SAMPLES (Evidence#5, Suspect 1, Suspect 3, Victim)
- Paper Squares
- Corn Starch
- Sodium Bicarbonate
- Alligator Clips
- Plastic container
- Comb
- Metal Clips
- Gloves



## EURO4SCIENCE 2.0

**Thematic:** Environment Education

### The Hidden Secrets of Pollen Grains!

- Pasteur Pipette
- Evidence#14a
- Evidence#14b
- Gloves



## EURO4SCIENCE 2.0

**Thematic:** Environment Education

### The Insect Clock!

- Insect Life Cycle (Eggs; First Larval Stage; Second Larval Stage; Third Larval Stage; Pupa and Adult Fly)
- Insect Life Cycle
- Tweezers
- Gloves



## EURO4SCIENCE 2.0

**Thematic:** Environment Education

### Hair and Footprints

- Pasteur Pipette
- Footprints in Resin
- Dog Hair
- Cat Hair
- Gloves



## EURO4SCIENCE 2.0

**Thematic:** Health Education

### Sugar in Blood!

- Pasteur Pipette
- Fructose
- Benedict's Reagent
- Gums



## EURO4SCIENCE 2.0

**Thematic: Chemistry**

### Invisible Ink

- Cotton Swabs
- Invisible Ink (Sunscreen 2:10 dilution)
- Evidence#6
- Gloves



## EURO4SCIENCE 2.0

**Thematic: Chemistry**

### The Colour of Guilt!

- Chromatography Paper
- Evidence#6
- Evidence#7
- Evidence#10
- Gloves