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# Introduction

Television! For over 50 years parents and the public at large have blamed television for the creation of self-indulgent, couch hugging youngsters. They say the youth of today have simultaneously developed shrinking attention spans and expanding ideas of the need for every toy and game seen on TV.

But there is currently another phenomenon attached to television. In the past several years there seems to be an unquenchable thirst for crime investigation shows, both real-life and drama, prime time and syndication, factual and “enhanced” for the television audience and for those all-important ratings!

Science educators have been watching this phenomenon unfold as well. They have recognized that a perfect marriage of science concepts and skills with the “real world application” of science knowledge can be found in the area of forensic science. The students, now intensely interested in the field of using science to solve crimes, as portrayed in the crime scene investigation shows, find that they can carry out simulations of these investigations right in their high school laboratories.

## The Pedagogy

Scientific inquiry is at the heart of forensic science. In a forensic science course, students, just as the professionals in the field, are expected to develop testable hypotheses and create logical connections between the design of the experiment and the scientific concepts that underlie the situation. They carry out their investigations, collect and analyze data, formulate explanations, revising their hypothesis if necessary, re-work their investigation, and draw conclusions.

**Knowledge** — Students will have an opportunity to use the science knowledge they have already collected throughout their school experience, such as concepts in biology, geology, weather, chemistry, and physics as a basis for their continued investigations.

**Skills** — Students will use and refine already acquired science process skills such as observing, inferring, analyzing, evaluating, as well as those technical skills specific to forensic investigation in order to solve the crimes.

**Application** — Students will discover that “real-world” science requires a great deal of creativity. They will be expected to take knowledge from all the fields of science, researching where necessary to fill any gaps, in order to make their own meaning about their tasks and come to conclusions about the investigation.

In addition, students will be using mathematics concepts, such as trigonometry as applied to trajectories, as another invaluable tool to aid in the explanation of particular crime scenes.

The premise of this course of study is that students have the knowledge and skills to solve problems. They may not, initially, have the knowledge to determine, for example, the exact location of the perpetrator based on the range of blood spatters. However, they have the knowledge and skills to creatively figure it out. They might have to work to do it, but they have the capacity and, if years of testing these lessons is any indication, they enjoy the challenge.