

## Pemburuan Maya Forensik: Kes Toksikologi

### Synopsis

Pemburuan Maya Forensik: Kes Toksikologi is an innovative online STEM product developed by UNISEL students with the guidance of lecturers from STEM UNISEL. This online product is hosted on a Google Form and challenges participants to solve a murder case through a series of cryptic riddles, puzzles, brain teasers, and a simple experiment related to forensic science. Using deduction, participants must determine the murderer. The product promotes the development of STEM skills, such as creativity, critical thinking, problem-solving, and decision-making, while challenging fundamental scientific knowledge. The activity takes approximately 3-4 hours to complete and is priced affordably at RM20 per group.

Funded by Dewan Bahasa dan Pustaka (DBP), the product is designed in Bahasa Melayu, promoting scientific terminology in the local language. The product is unique, and there is a lack of similar products in the market, most of which are found in overseas.

The survey feedback from around 512 participants from 4 schools who have experienced the product has been overwhelmingly positive. Pemburuan Maya Forensik: Kes Toksikologi is an excellent tool for promoting STEM education, inspiring students to engage with science in a fun and interactive way, and promoting the use of local language in scientific terminology.

### Product Description

Pemburuan Maya Forensik: Kes Toksikologi is an innovative online STEM product designed and curated by UNISEL students with the mentorship of STEM UNISEL lecturers. It challenges participants to solve a murder case using a variety of puzzles, riddles, brain teasers, and a simple experiment related to forensic science. This product promotes the development of STEM skills, including critical thinking, creativity, problem-solving, and decision-making, while challenging fundamental scientific knowledge. The activity takes approximately 3-4 hours to complete and is priced at an affordable RM20 per group.

The objective of this product is to create a breakthrough in STEM education by not restricting activities to a physical venue, instilling passion in learning STEM through real-life applications, building soft skills such as problem-solving, creativity, and communication skills, carrying out fun and knowledgeable STEM activities without geographical barriers, and producing a commercially viable module for an enhanced STEM learning process. The Pemburuan Maya Forensik: Kes Toksikologi Module is based on a detective role-play setup that is hosted by Google Form, where students attempt to solve crime mysteries virtually. There are 10 different forensic evidence intertwined with puzzles, riddles, and simple experiments. It is divided into 10 sections of varying difficulty levels that students must solve to identify the murderer. This product employs multiple educational theories to enhance the learning experience. Through the constructivism learning theory, participants engage in experiential

learning as they play the role of a detective and solve the murder by deducing clues. The incorporation of gamification learning adds motivation to the learning process, providing a sense of enjoyment and positive feelings to the participant as they solve the mystery. The fun learning approach is reinforced by the role-playing element of being a detective, which ignites the passion of the participants while also challenging their knowledge without causing intimidation or exhaustion.

The Pemburuan Maya Forensik: Kes Toksikologi Module was inspired by a previous STEM Forensic module that was awarded the Gold Medal at the Malaysia Technology Expo (MTE) 2019. This product was introduced for the first time in 2021 at the Program STEM Forensik 2021 organised jointly by Dewan Bahasa dan Pustaka (DBP), National STEM Association and Universiti Selangor. The product offers a good balance between applying learned knowledge and critical thinking to solve the mystery, catering to different IQ levels. It also accommodates various VARK learning strategies, offering students hands-on experience through its experiments, interactive clips, and attractive visuals. Funded by DBP, the product is designed in Bahasa Melayu, promoting scientific terminology in the local language. The product is unique, and there is a lack of similar products in the market, most of which are found overseas.

In conclusion, the Pemburuan Maya Forensik: Kes Toksikologi is a STEM product that fosters the development of essential STEM skills such as critical thinking, creativity, problem-solving, and decision-making in students, while also challenging their fundamental scientific knowledge. Through its fun and interactive approach, this product provides an exciting opportunity for students to engage with science, while promoting the use of local language.