

TM06 – TECHNOLOGY AND DESIGN IN EDUCATION

BRINGING PHYSICS QUESTIONS TO LIFE

ABSTRACT

Conventional physics teaching methodology usually involves the exposition of solutions to physics problems in a more theoretical approach. This **repetitive approach can become mundane over time**, and may **lack opportunities for students to question, appreciate and relate concepts to real-world phenomena and applications**.

In attempt to improve learning experience, we want to introduce **a physical model**, constructed based on questions related to topics in the syllabus. This provides a much **more engaging experience**, both **physically and visually**, and allows students to **better appreciate the significance and application of their knowledge and calculations in the real world**.

USAGE OF MODEL

One possible way to use this model in tutorials is to hold a small-scale **competition** where students can be split into groups of 3 to solve a problem. An example of a problem would be to determine the height at which a ball should be dropped from such that another ball in the model will land at a pre-determined location. Each group may be allowed only 3 attempts to 'check' their answers, by dropping the ball from a calculated height in each attempt. **Failing to achieve the intended outcome indicates that they will have to revise their methods and/or workings as a group and return later to attempt again.**

