

Teaching –learning module compiled by the PARSEL consortium  
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Popularity and Relevance of Science Education for scientific Literacy



# Can you plan an ideal Ad campaign for Rihanna's new single?

A grade 10-12 mathematics module on  
Mathematical modelling

## Abstract:

This series of student centred activities engages groups of students to apply modelling tools in relation to a fictive AD campaign for a songstress.

| Sections included |  |   |
|-------------------|--|---|
| 1.                | Student activities<br>(for the students) | Describes the scenario in more detail and the tasks the students should perform |
| 2.                | Teaching guide                           | Suggests a teaching approach  |
| 3.                | Assessment                               | Gives suggested formative assessment strategies                                 |

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**Overall Objectives/Competencies:** The students are expected to:

- understand the difference between types of models (i.e. verbal, numerical, graphical and algebraic/symbolic)
- understand and communicate about general aspects of mathematical modeling
- be reflective about mathematical models
- be able to argue from mathematics
- graphing data
- evaluate and construct graphs and functions
- identify dependence relation between phenomena and translate those into dependence relations between weighed variables

**Curriculum content:** Types of functions

**Kind of activity:** thought and model eliciting activities

**Anticipated time:** 4-6 lessons

**Prior Learning:** Concept of function

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This unique teaching-learning material is intended to guide the teacher towards promoting students' scientific literacy and quantitative literacy by recognizing learning in 4 domains – intellectual development, the process and nature of science and mathematics, personal development and social development.

Its uniqueness extends to an approach to science and mathematics lessons which is designed to be popular and relevant. For this the approach is intentionally from society to science and attempts to specifically meet student learning needs.

This uniqueness is specifically exhibited by:

1. a society related and issue-based title (supported in the student guide by a scenario);
2. student-centred emphasis on scientific and mathematical problem solving, encompassing the learning of a range of educational and scientific goals;
3. including socio-scientific decision making to relate the science and mathematics acquired to societal needs for responsible citizenship.