Modelling or problem-solving task design template

This editable document, with checkboxes, may be of assistance to teachers as a ***guide*** for designing modelling or problem-solving task with two parts.

**Title of the modelling or problem-solving task**

<This indicates the context for investigation>

**Introduction**

<This provides a general description of the context, background for the task, an overview of the nature of the mathematics involved, and links to relevant source material or other contextual information>

**Part 1**

<Brief introductory statement/stem indicating what is covered in this Part as applicable, and any relevant information or data. Use of sub-sections with relevant stem text to indicate various aspects of modelling and/or problem-solving required>

a.

b.

c.

.

.

.

**Part 2**

<Brief introductory statement/stem indicating what is covered in this Part as applicable, and any relevant information or data. Use of sub-sections with relevant stem text to indicate various aspects of modelling and/or problem-solving required>

a.

b.

c.

.

.

.

**Mapping of content with respect to the areas of study**

<Complete the following table as applicable using content dot points from the study design ordered numerically from 1 to *n* for each area of study. Use a row in the table for each area of study. Leave blank any areas of study not covered>

The following content from the listed areas of study is addressed through this modelling or problem-solving task. <Complete as applicable for the relevant study>

General Mathematics

|  |  |
| --- | --- |
| **Area of study** | **Content dot points** |
| Discrete Mathematics  – Recursion and financial modelling |  |
| Discrete Mathematics  – Matrices |  |
| Discrete Mathematics  – Networks and decision mathematics |  |

Mathematical Methods

|  |  |
| --- | --- |
| **Area of study** | **Content dot points** |
| Functions and graphs |  |
| Algebra |  |
| Calculus |  |
| Probability and statistics |  |

Specialist Mathematics

|  |  |
| --- | --- |
| **Area of study** | **Content dot points** |
| Functions and graphs |  |
| Algebra |  |
| Calculus |  |
| Vectors |  |
| Mechanics |  |
| Probability and statistics |  |

**Mapping of key knowledge and key skills with respect to the outcomes**

<Complete the following table as applicable using key knowledge and key skill dot points from the study design ordered numerically from 1 to *n* for each outcome>

Outcomes

The following outcomes, key knowledge and key skills are addressed through this modelling or problem-solving task.

General Mathematics

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Key knowledge dot point** | **Key skill dot point** |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |

Mathematical Methods

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Key knowledge dot point** | **Key skill dot point** |
|  |  |  |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |

Specialist Mathematics

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Key knowledge dot point** | **Key skill dot point** |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |

Outcomes

The following outcomes, key knowledge and key skills are addressed through this modelling or problem-solving task.

General Mathematics

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Key knowledge dot point** | **Key skill dot point** |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |

Mathematical Methods

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Key knowledge dot point** | **Key skill dot point** |
|  |  |  |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |

Specialist Mathematics

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Key knowledge dot point** | **Key skill dot point** |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |