Rowe Scientific Depth Study Awards
Year 11 & 12

For eighteen Year 11 & 12 practical investigations or secondary-sourced investigations that **most effectively communicate** how their depth study has enabled the student to develop and acquire a **deeper knowledge and understanding of one or more clearly identified concepts** found within or inspired by the syllabus.

This year the **Rowe Scientific Depth Study Awards** will be awarded to 18 students from 18 different schools, who have not previously won any secondary category awards and at least six of the awards are to be for students from low SES schools.

A Gold Award will be presented to the best entry with five Silver Awards and twelve Bronze Awards to the next best entries.

Judging Rubric

These Rowe Scientific Depth Study Awards are not aimed at the best overall scientific investigations. According to the structure of each Stage 6 Science Syllabus, every depth study must incorporate the outcomes **Questioning and Predicting** and **Communicating**. A minimum two additional Working Scientifically skills outcomes, and further development of at least one Knowledge and understanding outcome, are to be addressed. To cater for every depth study investigation, these awards will be won by the depth studies that best incorporate the mandatory **Questioning and Predicting** and **Communicating** outcomes outlined below:

LEVEL 5

The student has provided clear and convincing evidence that he/she:

Questioning and Predicting outcomes:

- **proposed inquiry questions** to **formally** identify a **concept** found within or inspired by the syllabus
- **evaluated** inquiry questions to select a **final challenging question** for a depth study that can be investigated using a **practical investigation** or a **secondary-sourced investigation**
- **identified** independent and dependent **variables** or sampling techniques in the questioning process
- **developed** selected inquiry question to **formulate** a **testable hypothesis** based on prior research or previous observations
- **modified questions** and hypotheses to **reflect new evidence**

Communicating outcomes:

- had a **well-defined concept** or **phenomenon** that was investigated in the depth study
- **clearly expressed** the **depth of scientific understanding** that was **acquired** by carrying out the depth study
- communicated **all** components of the Working Scientifically processes with **clarity** and **accuracy**
- **effectively** used **scientific language** and **terminology** that is **suitable** for a specific audience or purpose
- selected and **effectively** used **suitable forms** of digital, visual, written and/or oral forms of communication
- used **qualitative** and **quantitative** information gained from the investigation to **effectively** communicate the **major findings** of their depth study
- presented a **sustained**, **logical** and **cohesive** depth study
- **supported** conclusions/ideas with **evidence-based** arguments

LEVEL 4

The student has provided clear and convincing evidence that he/she:

Questioning and Predicting outcomes:

- **proposed inquiry questions** to **clearly** identify a **concept** found within or inspired by the syllabus
- **considered** inquiry questions to select a **final question** for a depth study that can be investigated using a **practical investigation** or a **secondary-sourced investigation**
- **mentioned** independent and dependent **variables** or sampling techniques in the questioning process
- **developed** selected inquiry question to **formulate** a **testable hypothesis** based on prior research or previous observations
- **suggested modifications** for **future research** based on **new evidence**

Communicating outcomes:

- **defined** a **concept** or **phenomenon** that was investigated in the depth study
- **expressed** a **deeper** level of **scientific understanding** that was **acquired** by carrying out the depth study
- communicated **all** components of the Working Scientifically processes with **clarity**
- used **scientific language** and **terminology** that is **suitable** for a specific audience or purpose
- selected and used **suitable forms** of digital, visual, written and/or oral forms of communication
- used **qualitative** and **quantitative** information gained from the investigation to communicate the **major findings** of their depth study
- presented a **well-organised** depth study
- **supported** conclusions/ideas with **structured** arguments

LEVEL 3

The student has provided clear and convincing evidence that he/she:

Questioning and Predicting outcomes:

- **proposed inquiry questions** to identify a **concept** found within or inspired by the syllabus
- selected a **final question** for a depth study that can be investigated using a **practical investigation** or a **secondary-sourced investigation**
- **mentioned** some **variables** or sampling techniques in the questioning process
- **referred** to selected inquiry question when **developing** a **testable hypothesis** based on prior research or previous observations
- **suggested modifications** for **future research**

Communicating outcomes:

- **described** a **concept** or **phenomenon** that was investigated in the depth study
- **expressed** areas of **scientific understanding** that was **acquired** by carrying out the depth study
- communicated **most** components of the Working Scientifically processes with **clarity**
- used **scientific language** and **terminology** that is **appropriate** for a specified audience or purpose
- selected and used **forms** of digital, visual, written and/or oral forms of communication
- used **data** or **information gained** from the investigation to communicate the **major findings** of their depth study
- presented an **ordered** depth study
- **supported** conclusions/ideas with **plausible** arguments

LEVEL 2

The student has provided clear and convincing evidence that he/she:

Questioning and Predicting outcomes:

- **proposed basic questions** to identify a **concept** found within or inspired by the syllabus
- selected a **basic question** for a depth study that can be investigated using a **practical investigation** or a **secondary-sourced investigation**
- **mentioned** one or two **variables** or sampling techniques in the proposal of the **basic question**
- **used** the basic question to develop an **informal hypothesis**
- **no reflection** or **modification** was considered for the basic question at any stage of the depth study

Communicating outcomes:

- vaguely described the **concept** or **phenomenon** that was investigated in the depth study
- **expressed** some **scientific understanding** that was **acquired** by carrying out the depth study
- communicated **some** components of the Working Scientifically processes with **clarity**
- used some **scientific language** and **terminology**
- randomly used **forms** of digital, visual, written and/or oral forms of communication
- communicated some **major findings** of their depth study
- presented a depth study with **some** sections **out of order**
- provided a conclusion with only **fragments** of **supporting evidence**

LEVEL 1

The student has provided clear and convincing evidence that he/she:

Questioning and Predicting outcomes:

- **selected** a topic **without referring to a concept** found within or inspired by the syllabus
- conducted a depth study which is **not based** on any **proposed question**
- had no **formal** mention of **variables** or sampling techniques in the depth study
- had **no proposed question** and hence had **no formal hypothesis**
- **no reflection** was made at any stage to **modify** or **improve** the depth study

Communicating outcomes:

- had no **defined concept** or **phenomenon** that was investigated in the depth study
- **showed little development** in **scientific understanding** that was **acquired** by carrying out the depth study
- **failed** to communicate any components of the Working Scientifically processes with **clarity**
- **failed** to use **scientific language** or **terminology**
- failed to **effectively** use forms of digital, visual, written and/or oral forms of communication
- presented a **poorly structured** depth study
- provided **no conclusion or** provided a conclusion **without supporting evidence**