

# **UNIVERSITY OF SYDNEY SLEEK GEEKS SCIENCE EUREKA PRIZE – SECONDARY**

The University of Sydney Sleek Geeks Science Eureka Prize – Secondary asks students with a passion for science to produce a 1-3 minute film that communicates a scientific concept, discovery or invention in an entertaining and accessible way.

Entries may be submitted by an individual student or a team of up to six students. Full conditions prize information and conditions of entry can be found on our [website](#).

## **CURRICULUM OUTCOMES**

The Sleek Geeks Science Eureka Prize provides the means of combining outcomes from the Science syllabus with those from other subjects.

### **Australian curriculum - Science outcomes**

#### **Year 7-8**

##### Science Understanding

Dependent on topic chosen.

##### Science as a Human Endeavour

Nature and development of science:

- Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available (ACSHE119 – Year 7, ACSHE134 – Year 8)
- Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures (ACSHE223 – Year 7, ACSHE226 – Year 8)

Use and influence of science:

- Solutions to contemporary issues that are found using science and technology, may impact on other areas of society and may involve ethical considerations (ACSHE120 – Year 7, ACSHE135 – Year 8)
- People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity (ACSHE121 – Year 7, ACSHE136 – Year 8)
- Science knowledge can develop through collaboration across the disciplines of science and the contributions of people from a range of cultures (ACSHE223 – Year 7, ACSHE226 – Year 8)

### Science Inquiry Skills

#### Communicating:

- Communicate ideas, findings and evidence based solutions to problems using scientific language, and representations, using digital technologies as appropriate (AC SIS133 – Year 7, AC SIS148 – Year 8)

## **Year 9-10**

### Science Understanding

Dependent on topic chosen.

### Science as a Human Endeavour

#### Nature and development of science:

- Scientific understanding, including models and theories, is contestable and is refined over time through a process of review by the scientific community (ACSHE157 – Year 9, ACSHE191 – Year 10)
- Advances in scientific understanding often rely on developments in technology and technological advances are often linked to scientific discoveries (ACSHE158 – Year 9, ACSHE192 – Year 10)

#### Use and influence of science:

- People use scientific knowledge to [evaluate](#) whether they accept claims, explanations or predictions, and advances in science can affect people's lives, including generating new career opportunities (ACSHE160 – Year 9, ACSHE194 – Year 10)
- Values and needs of contemporary society can influence the focus of scientific research (ACSHE228 – Year 9, ACSHE230 – Year 10)

### Science Inquiry Skills

#### Communicating:

- Communicate scientific ideas and information for a particular purpose, including constructing evidence-based arguments and using appropriate scientific language, conventions and representations (AC SIS174 – Year 9, AC SIS208 – Year 10)

## **Year 11-12**

Please consult your syllabus documents to identify specific objectives, outcomes and suitable forms of assessment for your state.

## **SUGGESTED LESSON PLAN**

### **STEP 1**

#### **Introduce the Sleek Geeks Science Eureka Prize**

**40-60 minutes**

Preparation: read the Sleek Geeks Science Eureka Prize entry form available at [eureka-entry.australianmuseum.net.au/school-science/sleek-geeks-science-eureka-prize-%E2%80%93-secondary](http://eureka-entry.australianmuseum.net.au/school-science/sleek-geeks-science-eureka-prize-%E2%80%93-secondary) and organise internet access.

- a) Introduce the Sleek Geeks Science Eureka Prize. Provide students with a print out of the prize details which outline the purpose and the prizes to be won. Read through with the class pointing out the entry requirements.
- b) Lead a class discussion and brainstorming exercise on the possible scientific concepts, discoveries or inventions which students could use in their video. These concepts must be based on real science. Stimulus questions could include:
  - Name one scientific concept, discovery or invention associated with the study of living things? [E.g. surface area to volume ratio; treatment of burns; osmosis; structure of viruses; DNA; photosynthesis; genetic variations; stem cells etc.]
  - What are some other science related concepts you have learnt about recently?
  - What creative ways can you think of to present this/these concepts?
- c) Read about and view [2016](#) and [2017](#) winning and highly commended entries at

Facilitate a discussion of why students think a particular secondary school entry was successful, referring to the judging criteria.

- What was the concept, discovery or invention portrayed in the film?
- Why is that concept important to the understanding of science and society?
- In what way was the film presentation made creative and appealing to the viewer (e.g. use of humour, unusual approach to presentation etc.)?

### **STEP 2**

#### **Decide on the 'scientific concept' to be covered**

**40-60 minutes plus own time**

Preparation: Organise access to library, science related literature or internet.

- a) Ask students to browse books, magazines or internet sites for scientific ideas they could use in their video. Students decide whether they are working as individuals or in groups and decide on the scientific concept they will represent in their video.
- b) Students write a brief plan for the video. The plan should include an explanation of the concept, discovery or invention and details of how the concept is to be communicated in an original and entertaining way.
- c) Students prepare a storyboard, outlining a scene by scene account of their video.

### **STEP 3**

#### **Producing the video (in own time or with teacher supervision)**

- a) Students record their video and edit it so as it is 1–3 minutes in length. Note the preferred format in which entries should be submitted. We should stress that good sound and visual quality is important – judges won't be able to score an entry highly if they can't understand what they see or hear. Many students tend to speak too quickly when filming.

### **STEP 4**

#### **Judging the class films**

#### **40-60 minutes, depending on number of films to be viewed**

Preparation: Organise access to screen for presentation of films.

- b) Conduct a screening and competition of the student's videos. Students are to award a mark out of 10 for each video with a class winner announced.

### **STEP 5**

#### **Submitting your entries**

#### **30 minutes**

Preparation: Organise internet access and printer.

#### **Submit the entries!**

**Complete** and submit an online entry form at [australianmuseum.net.au/eureka](http://australianmuseum.net.au/eureka). Print a copy.

To successfully do this, you must provide a link to your uploaded file when you complete your online entry **or** indicate that you will be sending a hard copy entry by post. Options for submitting your vide are further explained below.



Submitting your video

Upload your entry to [Vimeo](#) and enter the file link in your online entry form. Note: You will need to create an account with either of these tools to upload your entry.

OR

Prepare the hard copy entry by attaching a copy of your printed entry form to a copy of your film and submit the entry to:

Sleek Geeks Science Eureka Prize – Secondary  
Australian Museum  
1 William Street  
SYDNEY NSW 2010