TECHFEST

STEM NEXT
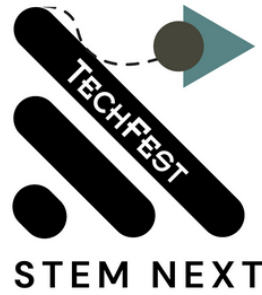
MEDICINE & LIFE SCIENCES

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MEDICINE & LIFE SCIENCES

TechFest's STEM Next essay competition is open to all 16 - 18 year olds.

This is a solo project that will require independent research and writing. However, it is encouraged that participants get feedback from their peers or teachers before the final submission.

Entrants are invited to submit an essay that addresses one of the essay titles or questions outlined below. There is the option to write broadly about a general topic, or you can choose to go into greater detail on a specific aspect or question. Essay questions are provided below. You must select one of the topics provided, however, you have the freedom to tailor the question to your preference. In addition, regardless of your approach, your essay should fulfil the below requirements.

ESSAY REQUIREMENTS

The essay should be **between 1000 to a maximum of 3000 words** in length (excluding footnotes, figure captions and references). All sources must be appropriately acknowledged and cited (including all websites and personal correspondence), and a full reference list should be included. In addition, **at least** one external industry professional must be interviewed as part of the research for the essay. A database of industry professionals (including their area of expertise and contact details) will be provided to each participating student as potential sources they could contact. However, students are also free to make their own connections, or to get in touch for help identifying an expert in a particular field.

There is no rigid requirement for the structure and format of the essays, but good submissions will present clear arguments, a detailed reference list of sources, include illustrations (which could be graphs, plots, diagrams or pictures) and where possible provide some specific examples or cases. A good level of technical content is expected, but you should aim to make the essay interesting and accessible to an intelligent non-specialist audience. The essays will be judged by a panel of experts from various fields and prizes will be awarded to the winning entries.

TECHFEST'S STEM NEXT
ESSAY COMPETITION IMPORTANT DATES

Deadline to register interest – 14/06/24
Deadline for essay submission – 30/08/24
(don't forget to submit the cover sheet as well!)
Winning essays announced – November 2024

STEM NEXT

TECHFEST'S STEM NEXT MEDICINE& LIFE SCIENCE ESSAY COMPETITION PRIZES

First place - Amazon vouchers - amount TBC
Second place - Amazon vouchers - amount TBC
Third place - Amazon vouchers - amount TBC

Please note Amazon vouchers cannot be exchanged for cash or alternative prize.

ESSAY CRITERIA SUMMARY:

- **Between 1000 to a maximum of 3000** words in length (excluding footnotes, figure captions, in text references and reference list).
- 12-point font minimum
- 2cm margins minimum
- 1.5 line spacing minimum
- Harvard style referencing for in text citations and full reference list (downloadable referencing guide as well as online tutorials will be available).
- At least one illustration (this could be a graph, plot, diagram, table or picture) with appropriate figure or table legend and source material reference.
- An interview with at least one external industry professional (TechFest can help you find an appropriate interviewee, or you are welcome to find your own).
- Submissions must include a cover sheet (which can be downloaded from TechFest's website).

REGISTRATION

Students that wish to take part should register their interest **no later than 14/06/24** by submitting the online form --> **CLICK**.

The project officially launches on **17/06/24** - at that point registered students will be sent a starting pack with all the information they will need to complete the project.

In addition, throughout the course of the competition we will be posting pre-recorded lectures on topics related to essay writing that will provide additional support and information. What is more, students are encouraged to contact us should they have specific questions about their essay.

If you have any questions, please check the FAQ section on our website first. If your query is not there, get in touch with gabijablazyte@techfest.org.uk

ESSAY QUESTIONS

Question 1.

The process of transplanting genetically edited organs from animals to humans is an emerging technology. Discuss the ethics of this process, e.g. is the welfare of a pig more important that the survival of a human?

Question 2.

The birth rates in some countries are decreasing. Among the possible explanations for this observation, it has been suggested that lack of in-person interaction among young people or the changing personal choices of people of childbearing age are contributing factors. Discuss these and other potential explanations.

Question 3.

Wearable medical technology has developed rapidly over recent years. Discuss the benefits that this brings to patients who live with chronic disease e.g. diabetes

Question 4.

Photo editing of images and videos within social media, including the use of filters, is widespread. As a result, content shown on social media may be a distortion of reality. Viewers of these images may confuse reality with these manipulated images to the detriment of their own self-image and self-confidence. Discuss the impact of this type of digital manipulation on the body image and self-confidence of people.
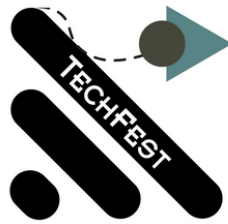
Question 5.

Artificial Intelligence (AI) has developed rapidly in recent years and it is becoming a useful tool in many STEM endeavours. One of these is medical imaging, in which images obtained from modalities such as CT, MR, PET etc are used for diagnosis of disease and in the direction of treatment. Discuss the use of AI in this context, highlighting the advantages and possible disadvantages of this application.

Question 6.

What emerging medical technologies/treatments are available to deal with mental health issues?

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