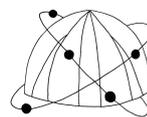


Franklin Society Essay Competition 2020



MURRAY EDWARDS
FRANKLIN SOCIETY

Questions - choose one to answer

1. "I think in the next five years the most profound thing we'll see in terms of CRISPR's effects on people's everyday lives will be in the agricultural sector." - Jennifer Doudna (April 2019)

Describe the mechanism of the CRISPR/cas9 genome editing system. How could it be used to revolutionise agriculture?

2. Discuss the potential of new solar technologies, such as dye-sensitised solar cells and perovskite solar cells, in the move towards a renewable energy future.
3. In December 2019 the first cases of a pneumonia-like disease caused by the Wuhan coronavirus were reported, and fears that the virus will be spread are prevalent.

How do vaccines work to prevent viral infections? Could an effective vaccine be developed against the Wuhan coronavirus?

4. What are the characteristics of a good scientist? Discuss with examples of women in science (historical and/or contemporary).

First place: £50

Second place: £30

Third place: £20

Submit your entry as a PDF via email to franklinsoc@gmail.com by the **20th of April 2020** at 12 noon

Essays should be between 1,000 and 3,000 words

The competition is open to any Sixth Form student (or equivalent)

Please include your full name and school/college with your submission

Judging Criteria

Your essay will be judged on the following criteria:

- Clear presentation of information and focus on answering the question;
- Scientific accuracy of the essay;
- Creativity and originality in approach to the question;
- Academic level of essay and demonstration of understanding beyond the AS/A level syllabus;
- Use of examples and evidence;
- Range, credibility and validity of sources used;
- Spelling punctuation and grammar

Top Tips

- Plan your essay before you start and use a structure that is clear, coherent, and presents the information in an engaging way
- There is no need to meet the upper word limit — try to keep your points concise and highlight key pieces of evidence, rather than telling us everything you know about the topic
- Consider several different approaches to the question and try to include a range of ideas in your essay
- Use reliable scientific sources to back up your claims, such as textbooks, articles from *New Scientist* or the BBC News Science Section, and scientific articles
- Feel free to use subheadings to help you structure your essay clearly
- You can use diagrams to illustrate key points — remember to include a caption and refer to your diagram in the essay
- Include a list of references at the end of your essay and make sure you keep your referencing style consistent — you can use this website as a guide:
www.mendeley.com/guides/apa-citation-guide
- There is no need to cite facts from your AS/A level textbook
- Try to avoid colloquial language or a conversational tone
- Make sure you proofread your work before submitting!

Good luck!