



## Chemical Engineering & Biotechnology

Engineering is about solving problems: about designing processes and making products that can make a real difference to individuals and society. Engineers require a strong academic knowledge, but engineering is more than just mathematics or science. It's the ability to analyse a problem and find a solution in a practical and cost-effective way.

### Question

The task for this year's Caius Explore is to **examine the food supply in the UK**. The total food consumption in the UK can be split into plant- and animal-based sources. Evaluate the environmental and financial cost of each of these and make recommendations as to how the UK should proceed in ensuring that everyone has sufficient food to eat and that the environmental impact is limited.

The task is to decide how the UK should be sourcing its food and what actions (if any) the government should be taking to direct this. Your strategy must consider a number of issues:

- How much food does the UK need?
- Where should the food come from? Consider the location of production and the source type.
- Should the government be setting food policy and how can it influence the allocation that we eat?
- How does the environmental impact of each food source compare with the impact of other activities?

The strategy you come up with is entirely up to you. Ignore the current actions of the UK farming and grocery market! **Base your design on what you think an ideal system would look like**. We need a sustainable system that can reliably supply as much food and as much choice as is needed to everywhere in the UK.

### Format

Your task should include two parts:

- (1) The developed design as a high-level presentation to a government minister. This could be a text document or a PowerPoint presentation. It should succinctly convey the important aspects of your design.
- (2) Explanatory notes detailing the decisions you have made and, crucially, why you made them. This can be as long as you wish and can contain calculations to justify your thinking if appropriate.

Please submit your entry in electronic form as a PDF.