Nuffield Future Researchers
Programme Summary

Introduction
The **Nuffield Future Researchers** programme has been developed in response to the coronavirus (COVID-19) pandemic and the need to move to an online model of the Nuffield Research Placement programme during summer 2020.

Nuffield Future Researchers will develop their essential STEM skills through collaboration with knowledge experts on a research question, using innovative ways of working where assignments and tasks will be set within a Virtual Learning Environment (VLE).

Students who take part will, as in previous years, complete a meaningful and rewarding experience that will challenge and develop their research, critical thinking, planning and communication skills. Participation will also provide the students with valuable supervision from knowledge experts thereby allowing for additional scope to become more confident about working on novel situations. In many cases, the collaboration on a research question will allow the students to make a notable contribution to the work of their research supervisor.

Aims of the programme:

- **Support students from low socio-economic backgrounds, First in Family, those with low science capital and under-represented groups (e.g. females, BAME) to progress to STEM-related further study and employment using STEM skills**
- **Equip and develop students' STEM research skills through high quality online activities and remote access to knowledge experts thereby providing an opportunity to be guided and supported in their career choices**

The **main objectives** of the programme:

- As before, to identify and select students who have been eligible for free school meals and/or are the first in in their family to pursue higher education.
- Students will engage with online research activities to broaden and deepen their understanding of STEM and STEM-related research including qualitative social science.
- Students will collaborate on a research question facilitated online by a knowledge expert and communicate the research findings through high quality outputs
- Students develop essential and transferable skills such as problem solving, analysis, confidence, self-efficacy, communication, and time and resource management.

Nuffield Future Researchers Timetable
Students will be expected to journey through 5 x online modules (see Pages 2 &3) which will include a series of activities to be completed over May – September.

May 2020 onwards	Students to begin and complete '*Building essential professional skills'* Module
Jun onwards	• Coordinators to hold virtual inductions • Following induction, students to begin '*Developing research skills'* Module and '*Developing data analysis and numerical skills'* Module via VLE • Following induction, student <> supervisor introduction to start via VLE
Jul onwards	Students to begin and complete '*Investigating a research question in collaboration with a knowledge expert'* Module and '*Communicating your research evidence'* Module with ongoing collaboration with supervisor
September	Deadline of completed report and poster upload to online system

Module	*Key learning outcomes*	*Method of delivery*	*Proposed outputs and monitoring*	*Time to complete*
Building essential professional skills These skills and attributes include communication, problem solving, confidence, self-efficacy and time and resource management.	Show that students know what is meant by the key essential skills. Explain what essential skills will be required during the research experience.	In collaboration with the Skills Builder Partnership, the Nuffield Foundation have developed 4x online Kahoot activities that are completed via student independent study before the final activity takes place during online inductions with regional coordinators.	This module will not be formally assessed; however, regional coordinators will monitor students and their completion of the Kahoot activities. The Kahoot activities will be informally reviewed by coordinators to help identify any topics/areas that would be of benefit to cover within the induction to help students feel confident and prepared. Students will also be asked to submit a separate reflective piece on the critical skills required for their project. There will also be an evaluation of responses after the summer when the research experience has concluded in order to identify areas of improvement for the programme; responses will be anonymised.	**1-2 hours**
Developing research skills	Identify, evaluate and synthesise information from relevant subject-related sources Use the internet effectively and critically as a research tool e.g. to complete a literature review.	Activities and tasks addressing each learning outcome have been curated by the Nuffield Foundation and will be made available to students for their independent study via the VLE.	This module will not be formally assessed; however, regional coordinators will monitor students and their completion of the activities. Students will be asked to complete several core activities with an opportunity to complete further optional activities if desired. Part of the core activities will be that students submit a reflective piece on the research skills required for their project.	**10 - 15 hours**
Developing data analysis and numerical skills	Describe how data can be collected and managed. Give examples of how data can be analysed. Track the development of specific numeracy skills including student's numeracy/data strengths and areas to develop.	Activities and tasks addressing the data analysis learning outcomes have been curated by the Nuffield Foundation and will be made available to students for their independent study via the VLE. Numerical skills will be developed via completion of the National Numeracy Challenge.	This module will be monitored in part via completion of the National Numeracy Challenge and resulting upload of the certificate to the VLE. Regarding the development of data analysis skills, these will be monitored by regional coordinators to identify whether students have completed the activities or not via the VLE. Students will also be asked to submit a separate reflective piece on the data analysis and numeracy skills required for their project.	

Module	*Key learning outcomes*	*Method of delivery*	*Proposed outputs and monitoring*	*Time to complete*
Investigating a research question in collaboration with a knowledge expert	Summarise the aim and objectives of the project within the wider context of the research (to include ethical, social and economic implications).Identify a range of approaches, select the most appropriate approach to investigate the research question and justify this choice. Make good use of materials and sources available. Select and use the research skills and applications (e.g. software packages etc.) required to investigate, gather information, analyse and interpret data and findings as identified in earlier modules. Employ essential skills.	Activities and tasks set and supported by the project supervisor within the VLE that can be completed by the student in order to present a conclusion to a research question outlined by the supervisor. It is anticipated that the research question will be investigated either through analysing data or a literature review though other proposals from supervisors are welcome.	This module will be monitored via the project supervisor on an ongoing basis via completion of activities and tasks uploaded by the supervisor to the VLE and through video conferencing. To aid this process, students will complete a project plan via a template supplied by the Nuffield Foundation.	**60+ hours**
Communicating your research evidence	Complete a written research report in the area of research against a given brief for submission to the Nuffield Foundation. Complete a research poster in the area of research against a given brief for submission to the Nuffield Foundation. List the different avenues where their research findings could be communicated.	Students will complete a written report which contains the following features (Abstract, Introduction, Methodology, Results and discussion, Conclusion, Evaluation, Appendix, References, Bibliography, Acknowledgements). Students will complete a poster presentation in guided by a template supplied by the Nuffield Foundation.	Students will be required to submit a research report and video presentation / poster to summarise and communicate their research effectively. The report and poster will be reviewed by both the project supervisor for specialist subject and technical knowledge and by the regional coordinator to ensure all required elements are present before they are uploaded to the Nuffield Foundation's online application system. They will also need to be submission of a reflective piece by the student on the process and their skills development.	