nustem

Science and Technology Facilities Council

Northumbria University NEWCASTLE

E3 Research Study

Information for Teachers (2021)

You are recieving this information because you have been invited to take part in the Exploring Extreme Environments Research Study. Your participation is voluntary and if you decide not to take part, this should not disadvantage you in any way.

Before you decide whether you want to take part, it is important for you to know what your participation will involve. This leaflet is designed to give you further information.

What is Exploring Extreme Environments (E3)?

Exploring Extreme Environments (E3) is an education project that supports children's STEM education journeys by engaging them with science, poetry and art linked to the extreme environments found on the Sun and in the Antarctic. It is funded by the Science & Technology Council (STFC) and Northumbria University. It began in September 2018 and will end in July 2021.

During the 3 years of the project children, their families and teachers in E3 schools have engaged with STFC science and technology through assemblies, workshops, family sessions, whole school projects and teacher CPD sessions in a cross-curricular approach. E3 aimed to extend children's formal science learning and bring them face-to-face with STFC scientists, their research, and the technology that supports them. Simultaneously, their teachers will be exposed to a range of real-world STEM applications to highlight the benefits of integrating STEM careers examples and language into everyday teaching practice. Among teachers, the project aims to increase primary school teachers' confidence to teach science and technology.

Why are we doing research?

The research study is investigating the effects of the E3 project on teachers in participating schools and seeks to measure how successful (or otherwise) the project is in meeting its aims. We will ask teachers in participating schools to answer some questions each year (2019, 2020 and 2021).

This is also described as a research study because we would like to write about out what we find out and share this with the wider education research community and other people interested in improving STEM education.

Who is doing this study?

NUSTEM will be delivering the research study. They are a STEM outreach and research group at Northumbria University, who deliver a wide variety of STEM interventions with schools and the public. NUSTEM's education work is research informed and we are conducting our own research to inform the STEM engagement practice of others. You can find out more at **nustem.uk**.

If you have any questions about the project or the research study, you can contact the project's lead researcher, Annie Padwick on **annie.padwick@northumbria.ac.uk**.

Research Ethics and General Data Protection Regulation (GDPR)

We know it is important that we conduct our research to a high ethical standard. We abide by the Northumbria University Code of Ethics and all research activities are approved by an Ethics Committee. Since the introduction of the GDPR regulation in May 2018, we have looked carefully at our previous data collection and research practices to ensure that the collection and processing of data from children in our partner schools complies.

NUSTEM at Northumbria University collects and processes data from children, families and teachers in its partner schools. The lawful basis for use processing this data 'Public task' where "processing is necessary for the performance of a task carried out in the public interest or in the exercise of official authority vested in the controller" (Article 6(1)(e) GDPR Regulations). In the case of the University, our public task is to undertake research and develop knowledge. This means for GDPR we do not require informed consent from individuals (or their) parents in order to collect and process data.

What happens if I take part?

Teachers who would like to take part in the research study will be asked to complete an online questionnaire during the three years of the project. For 2021 we would like teachers to complete the questionnaire even if they have not completed the previous questionnaires. It should take around 5-10 mins to complete. The questionnaire will be issued via email or paper copies will be sent to the school.

Items in the questionnaire will include your personal view of science, your attitudes and perspectives towards science teaching and some demographic information about you and your career. This is not a test and there are no right or wrong answers. We would like you to answer the questions honestly. The answers on this questionnaire will form the data for our research.

Personal data is collected so that we can track participants over the course of the study. We will not tell anyone you have taken part. Your contributions will be anoymous and de-identified in any of our reports or publications.

Will my data be kept safely?

We will keep our research data secure in line with University Policy and GDPR legislation. This means that it will be stored securely on the University servers and anonymised where appropriate.

What are the advantages of taking part?

We hope that you will find the questionnaire provides an interesting opportunity to reflect on your science teaching.

We want to make sure that we have a positive impact on the children, teachers and families taking part, and we want to learn lessons from activities such as this. This way, we can improve similar projects, to the benefit of children and families in other schools across the North East and beyond.

What are the possible disadvantages of taking part?

There is a time commitment involved with your participation. We have sought to keep this as minimal as possible.

Do I have to take part?

No. No one will be annoyed if you don't want to take part. You can always agree now and change your mind later. If at any time you would like to stop being part of the study, please email **annie.padwick@northumbria.ac.uk**.