

Dear prospective mathematics teacher,

We look forward to having you on the programme in Bristol in September.

On the programme, you will need to be reading quite widely as you complete assignments, so you may find it useful to begin now to explore books and articles on education and teaching mathematics. We will also give you a booklist and readings when you start the programme. We will also be expecting you to be working further on some of the mathematical ideas from sessions at the University that you have come across in schools. You may find yourself working on some mathematics that you have not covered before but will need for your teaching. What does it mean for you to be a learner of mathematics? What are the joys and enthusiasm for you and how can you then share these with your pupils?

Before the programme begins is a good time to start exploring mathematics! It is better to get involved and really enjoy working on a few things rather than try to do too little or too much. The following suggestions are linked to some commonly asked questions or concerns.

* *I want to work on some mathematics to update my skills:*
* A-level courses have changed a lot in recent years and you may like to look at some of the newer text-books which cover the new content specifications. You will find these in education bookshops and online. For a shorter overview of the relevant mathematics in less depth there are several A-level “revision guides” available.
* *I want to see how technology is being used to support mathematics teaching in schools*:
* Try visiting the website <http://nrich.maths.org>. You will find a rich range of ideas and activities as well as many links to other websites. Note the sites you find useful – this will be the start of a useful collection.
* Download the (free) programme GeoGebra (http://www.geogebra.org/) and use it to try and explore some mathematics for yourself (e.g., find out what Euler’s line is and see if you can re-create it for a general triangle). Desmos (<https://www.desmos.com/>) is another package worth becoming familiar with, we are likely to use both of these packages during the course.
* *I have not sat down and done mathematics for its own sake for a long time*:
* Anything by Martin Gardner, Ian Stewart or Brian Bolt provides a source for interesting articles, puzzles, paradoxes and challenges which, if you yourself become interested in them, can provide stimulus material for lessons even on quite dry topics.
* Try to find out about a new branch of mathematics to you e.g. *Decision Mathematics*, or chaotic dynamics (general iterative processes are now on the GCSE syllabus).
* Try the historical “Chaos” by James Gleick and then start exploring for yourself.

Please also look out for “education stories” in the media – especially any relating to mathematics teaching. You may find it useful to read the Times Education Supplement occasionally.

During the first few days of the programme, we shall ask each member of the group to work with the rest of us so that we learn something non-mathematical. It will be a short lesson of ten minutes and might arise from a hobby (eg knitting, rock climbing) or a skill (eg saw sharpening, juggling) or an interest (eg Sex Stereotyping in Roman Britain). Please come prepared to involve us. You could, if you wanted to, start thinking about this task before the beginning of the course.

The PGCE year promises to be an interesting one – we hope you will find it to be stimulating and rewarding. You will be receiving a few more communications from us between now and when the course begins so look out for those.

We look forward to working with you as you continue your own mathematical learning journey during the PGCE year!

Yours faithfully

Tracy Helliwell, Elliot Malkin, Rachel Helme, and Alf Coles

PGCE Mathematics Tutors