

August 2018

Dear Science Trainee,

Many congratulations on securing your place on the PGCE at the University of Manchester Institute of Education. We have an outstanding PGCE course here at Manchester built upon well-qualified and motivated trainees, a well-structured and resourced context for learning, and an experienced team of lecturers and tutors in science education.

I look forward to welcoming you personally on Monday the 10th of September (Samuel Alexander Room SG.16 at 10.00); in the meantime, this letter covers some arrangements that you need to consider in advance of the start of the course.

1. You should have already been informed about our short Subject Knowledge Enhancement course running from Tuesday 28th August to Friday 31st August 2018. This course is designed to support the development of your subject knowledge in advance of the PGCE. It is free to attend and there will be a number of sessions in physics, chemistry and biology that you can select from. It will run in the Ellen Wilkinson Building where you attended the assessment centre. Please email pgce@manchester.ac.uk to confirm your attendance or request further information



Whether you attend the SKE course or not, before September you will want to consider identifying areas of strength and weakness in your subject knowledge. Remember, you are training to teach Science; hence, you will need to be confident delivering content from all three science subjects. To this end, you are advised to spend time becoming familiar with some of the key issues and challenges of teaching science; an important place to start is an audit of your science knowledge and understanding. Enclosed with this letter is a self-audit booklet of the Key Stage 3 science curriculum. It is not a test, but a means of indicating to you and your tutors the current state of your subject knowledge. Work through this audit in your own time but make sure

it is completed before Monday 10th September. You should bring a printed version of it to discuss with your tutor in the first week of the course.

To support you in developing your subject knowledge, I would suggest you buy a general GCSE Science text book together with a GCSE revision guide (which briefly summarises the key science concepts). There are many different examples of these and it does not matter which one you buy. You will also have access to a range of different texts in your placement schools.

2. If you have not already done it, please provide our admin team with the information they have requested regarding your term-time address, whether you have access to a car, and if there are any particular circumstances we need to know about. We use this information when allocating you to your placement schools; hence, it is in your interests to get this to us as soon as possible. You should have received a link to an online form to collect this information, if you do not have it please contact our admin team (teachereducation@manchester.ac.uk).

3. There are a small number of course books focusing on 'teaching and learning' that you will need to refer to whilst on the course. There are multiple copies of these held in our library although you might find it useful to have your own copy. Your core reading should include one general book about teaching in secondary schools and one specific book about teaching science. Examples of these books are listed below; however, if you only get one, we highly recommend **Ross, K., Lakin, L., McKechnie, J., Baker, J. (2015). *Teaching Secondary Science, Fourth Edition*. London: Routledge.**

4. There are a number of useful websites (again listed below) which you may also wish to explore. The first on the list is the National Curriculum website which contains the programme of study for KS3. The second is the draft KS4 curriculum, currently out to consultation. The third website is the National Strategies site (now archived), which contains useful materials and guidance for all science teachers. We will make frequent reference to these sites throughout the year and you may wish to familiarise yourself with their navigation. Links to these and many other resources will be made available online after you have started the course.

We hope you find your time at Manchester enjoyable and rewarding. We are looking forward to working with you throughout the coming year and wish you a very enjoyable and successful course.

Best wishes,

Dr. Rob Buck
PGCE Subject Leader for Science
on behalf of the science PGCE team

Reading List

Core Reading (General)

- Capel, S., Leask, M. and Turner, T. (2013), *Learning to Teach in the Secondary School*, Sixth Edition, Routledge.
- Dillon, J. and Maquire, M. (2007) *Becoming a Teacher: Issues in Secondary Teaching, Third Edition*. Open University Press.
- Ross, K., Lakin, L., McKechnie, J., Baker, J. (2015). *Teaching Secondary Science*, Fourth Edition. London: Routledge.

General Science Education Reading

- Hollins, M. (Ed) (2010), *ASE Guide to Secondary Science*, ASE. Available from the ASE (Association of Science Education) website at www.ase.org.uk
- Osborne, J. and Dillon, J. (2010) *Good Practice in Science Teaching: What Research Has to Say*, Second Edition. Maidenhead: Open University Press
- Wellington, J. and Ireson, G. (2012), *Science Learning Science Teaching*, Third Edition, London Routledge.

Other useful reading for your specialism

- Reiss, M. (ed.) (2011) *Teaching Secondary Biology*, London, Hodder Education. ISBN: 978-1444124316 (ASE Science Practice)
- Sang, D. (ed.) (2011) *Teaching Secondary Physics*, London, Hodder Education. ISBN: 978-1444124309 (ASE Teaching Secondary Physics)
- Taber, K. (ed.) (2012) *Teaching Secondary Chemistry*, London, Hodder Education. ISBN: 978-1444124323 (ASE Science Practice)
- Wilson, E and Wood-Robinson, V., 5th ed (2006) *Handbook for non-specialists Teaching Biology/Physics/Chemistry to KS4*. Stanley Thornes

Useful websites

1. <https://www.gov.uk/government/publications/national-curriculum-in-england-science-programmes-of-study/national-curriculum-in-england-science-programmes-of-study>
2. <http://webarchive.nationalarchives.gov.uk/20110202093118/http://nationalstrategies.standards.dcsf.gov.uk/>
3. <https://www.gov.uk/government/consultations/national-curriculum-reform-england-key-stage-4-science>
4. <http://www.darvill.clara.net/myon.htm>
5. <http://webarchive.nationalarchives.gov.uk/20110813032310/http://www.qcda.gov.uk/>
6. <https://www.bbc.com/education>
7. <http://www.education.gov.uk/>