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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. The course officially starts on Monday 14th September (online, details nearer the time), registration opens on the 1st September.

1.Before beginning the course in 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 booklet to allow you to audit your subject knowledge for 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 the first day of the course (Monday 14th September). This is an important document for you to keep updated throughout the course.

2. To support you in developing your subject knowledge, I would suggest you buy a general GCSE Science textbook 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.

3. If you have not already done it, please provide me with the information I have requested regarding your term-time address, whether you have access to a car, and if there are any particular circumstances I need to know about. I use this information when allocating you to your placement schools; hence, it is in your interests to get this to me as soon as possible. Also, if anything changes from what you have already provided please let me know as soon as you can.

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 and KS4. The second website is the National Strategies site (now archived), which contains useful materials and guidance for all science teachers.

As you know from the emails I have sent you previously, much of the initial teaching on the course will take place online; however there will be a fully structured timetable to support you with this. The content of these teaching sessions will be interactive and will allow you to work with your tutors and peers to develop your approaches to teaching and learning, and to prepare you for beginning your teaching placements on Monday the 12th of October. Additionally, I am currently working with our Estates team to facilitate small group face to face sessions during these teaching weeks.

I look forward to welcoming you personally on Monday the 14th of September, in the meantime I hope you have a restful and relaxing summer.

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.bbc.com/education
4. http://www.education.gov.uk/