

Birmingham City University

**Secondary
PGCE**

**Mathematics Mentor
Training Guide**

2017/18

This mentor guide provides easy access to the overview of the PGCE Core and School Direct Secondary programme and outlines the role of the subject/professional mentor within the partnership. The guide has a subject or professional focus to help you with the explicit demands of your mentoring role so that you can easily plan your mentoring interactions with trainee teachers within your context.

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Introduction to the Partnership

We welcome our partner schools to our PGCE Secondary course which trains specialist teachers of Art & Design, Computer Science, Design & Technology (Food & Textiles), Drama, English, Mathematics, Modern Foreign Languages, Music, Science (Biology, Physics and Chemistry) and Religious Education. In addition to these subjects we also support Geography, History, Psychology and PE via our School Direct route. The course was rewritten in 2016 by a team of tutors and mentors from the Faculty of Health, Education and Life Sciences at Birmingham City University and secondary school partners in the West Midlands. We are very grateful to all who participated in this as part of the practical outworking of partnership.

This mentor guide contains an outline of the activities tutors, mentors and trainee teachers will engage in as part of the partnership in the training and professional development of future teachers in secondary schools. Our intention is that the information contained in this guide will enable all of our partners to have a holistic understanding of the course and a more specific knowledge of the roles and responsibilities of its stakeholders. In the Faculty of Health, Education and Life Sciences we work on specific subject teaching methodologies and develop trainees thinking and understanding of education, pedagogy and professional issues. Trainee teachers are introduced to the concept of profiling their own achievements, setting targets for their future development, and planning ways of ensuring that they achieve the standards which must be met for the award of QTS (*The Teachers' Standards, DfE, 2012*).

The PGCE Secondary Course aims to produce highly skilled graduate teachers who:

- Have a deep knowledge and understanding of learning and teaching enabling them to demonstrate the highest levels of professional practice.
- Are committed early career professionals who are confident, creative, reflective and accountable practitioners, able to teach their subject in contemporary cultural contexts delivering a rich and diverse curriculum.
- Are able to exercise professional judgement, based on an informed understanding of a systematic and coherent body of knowledge related to education and subject pedagogy.

DBS Enhanced Disclosures and Safeguarding

The University, in its role as effectively the employer is responsible for ensuring that all trainees go through the Enhanced DBS Disclosure process, regardless of whether they already have a recent DBS Disclosure, and for ensuring that there are no issues disclosed that would preclude the trainee from working with children or other vulnerable individuals.

In response to recent requests from partnership schools our trainees will receive a letter from the University to confirm that the DBS process has taken place. Trainees will bring this letter to their placement schools. We are grateful to the schools and professional mentors who have guided us in developing this document.

Key Contacts

Name	Role	Contact
Kelly Davey Nicklin	PGCE Secondary Programme Leader & Music Subject Leader	0121 331 5176 kelly.daveynicklin@bcu.ac.uk
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Craig Davis	Partnership Administrator	0121 331 6591 craig.davis@bcu.ac.uk
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Ian Axtell	Music Subject Tutor	0121 331 7322 ian.axtell@bcu.ac.uk
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Fiona Darby	English Subject Tutor	0121 331 7736 fiona.darby@bcu.ac.uk
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Simon Tresidder	SKE Programme Lead & Science Subject Tutor	0121 331 7660 simon.tresidder@bcu.ac.uk
Shane Walsh	Mathematics Subject Tutor	shane.walsh@bcu.ac.uk
Jennifer Whitford	Religious Education Subject Leader	0121 331 7614 jennifer.whitford@bcu.ac.uk
Kevin Mattinson	Head of School of Education	0121 331 7337 kevin.mattinson@bcu.ac.uk
Simon Spencer	Deputy Head School of Education & Drama Subject Tutor	0121 331 7356 simon.spencer@bcu.ac.uk
Davinder Dosanjh	Head of Dept. Secondary & Post Compulsory Education	0121 331 6865 davinder.dosanjh@bcu.ac.uk
Helen Yorke	Director of Education Partnerships	0121 331 7355 helen.yorke@bcu.ac.uk

*Please note that the best method of contact for a swift response from a subject tutor is email contact.

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Strategic Leadership Committee

The purpose of the Strategic Leadership Committee is to ensure that the future direction of the BCU PGCE programme is driven by a focus on school-led issues. The role of the Chair, professional and subject mentor reps on the Strategic Leadership Committee is to collect feedback from regional schools and to represent them to ensure that the future workforce requirements of partner schools are gathered, collated and implemented as focussed actions for the PGCE programme.

The Strategic Leadership Committee:

- Directly challenges the course team on their improvement plan and their self-evaluation documentation.
- Gathers mentor feedback on placements and the course, and considers trainee feedback through evaluations.
- Provides an essential bridge between HE research and school practice leading to evidence based research and evidence based practice.

If any of our partners would like to provide an input to the Strategic Leadership Committee please contact our Chair Kirsten Pearce kirsten.pearce@ctckingshurst.academy

Birmingham City University Secondary School Training Routes



Secondary ITT

Secondary Teacher Training Routes

Birmingham City University School of Education supports Secondary School trainee teachers through three distinct teacher training pathways which all provide the opportunity for trainees to be awarded with QTS and a PGCE. The three pathways include a Core PGCE programme, School Direct and the Teach First PGCE. Some schools support our trainees through more than one training route and university tutors work across the three programmes. There are key contacts that you can communicate with on each of the three teacher training routes if you have a specific question about the route that your trainee is following, and any communication that university makes with school will indicate specifically on the correspondence which route we are contacting about.

It is important for our mentors to recognise that the three routes follow different programmes of study, and therefore the requirements of our mentors on each programme are different. Trainees will follow different modules and will be assessed at different times within the academic year. Where possible university tutors within the School of Education have tried to ensure that practice across the three routes is consistent and comparable, however we suggest that mentors are aware of the route that their trainee is following and recognise that this training route may be different to other routes that Birmingham City University trainees are following within their school.

Route	Description	Partnership Page	Trainee Assessments	Key Contacts
Core PGCE	The Core PGCE route places trainees in two contrasting schools over the training year. Trainees gain substantial school based experience whilst studying theory at weekly university workshop days. The partnership trains secondary school teachers of Art & Design, Design and Technology (Food, Product Design and Textiles), Drama, Mathematics, Music, Science (Biology, Chemistry and Physics), RE and Computer Science. Partnership schools receive payments for their work with trainees.	http://www.bcu.ac.uk/education/partnerships-and-collaborations/secondary-partnerships	Block Placement A: Midpoint Review, End of Placement Report, Internal School Moderation Block Placement B: Midpoint Review, End of Placement Report, Internal School Moderation Assignment Module 1 (Professional Studies) Assignment Module 2 (Subject Pedagogy) Assignment Module 3 (Professional Enquiry) School Experience Progress Journal (SEPJ): Year Long	Kelly Davey Nicklin- Programme Leader 0121 331 5176 Sarah Bonser – Partnership Lead 0121 331 7736 Craig Davis – Placements Programme Administrator 0121 331 6591
School Direct PGCE	The School Direct route offers a tailored training programme that will meet the needs of training schools, their pupils, their teachers and their trainees. The training programme is designed by schools working in partnership with our university	http://www.bcu.ac.uk/education/partnerships-and-collaborations/school-direct	This will depend on the agreement between the partner school and the university	Kelly Davey Nicklin – Programme Leader 0121 331 5176 Sarah Bonser – Partnership Lead 0121 331 7736 Craig Davis – Placements Programme Administrator 0121 331 6591
Teach First PGCE	Teach First offer trainee teachers a two-year Leadership Development Programme (LDP) and the University awards the PGCE and QTS. Trainees are placed in a local employing school and begin to teach 60% of a qualified teacher's timetable from September 1 st . Trainee progress is continually monitored and supported by employing schools, Birmingham City University and Teach First.	http://www.bcu.ac.uk/education/partnerships-and-collaborations/teach-first	Summer Institute: June & July including a written assignment that must be passed to begin the course in September Termly Reports: December, March, June Assignment Module 1 (Emerging Philosophy of Teaching and Learning): January Assignment Module 2 (Leading Learning in the Community): May year 1 Assignment Module 3 (Collaborative Learning and Development): May year 2 Assignment Module 4 (Extending Impact and Influencing Others): May year 2 BlueSky Journal: Year long QTS Portfolio: Year long year 1	Caroline Montgomery - Programme Director (West Midlands) 0121 331 7277 Leanne Gould – Programme Director (East Midlands) 0121 331 6742 Sarah Bonser – Partnership Lead 0121 331 7736 Nathan Hawkins - Programme Administrator 0121 331 7699 Michelle Young - Programme Administrator 0121 331 7608

Course and Placements Overview PGCE and School Direct

Prior to enrolment at BCU trainee teachers spend one week in a Secondary School of their choice '**Home-Based School Experience**' and follow faculty suggested guidance to prepare them for the start of their PGCE training programme. Over the training year trainee teachers undertake teaching practices in two contrasting schools which provide a supportive training environment with progressively more challenging learning opportunities. For the **Block A placement**, trainees are usually paired in their subject on the Core route. For the **Block B placement** trainees are not paired and are placed in a contrasting school from their Block A placement. School Direct trainees are likely to be placed in two different schools during the Block B placement (usually returning to the host school for the last part of the course).

Block A Experience - Introductory weeks before half-term (Tuesday to Friday, 26th September - 20th October 2017)

- Structured observations and relevant directed tasks.
- Agree teaching timetable.
- Draft and revise units of work.
- Trainees experience a limited amount of teaching in a supported framework the expectation is that full teaching of some lessons takes place before half-term (enough to inform the midpoint review assessment on 10th November 2017).
- Completion of specific tasks in their School Experience Progress Journal (SEPJ).

Block A Experience – After half-term (Tuesday to Friday, 31st October- 22nd December 2017)

- Midpoint Review due in on **Friday 10th November 2017**.
- Trainees teach **14 hours of a subject timetable between them** (teaching can include team teaching with mentor, paired teaching with other trainees and solo teaching). Each individual trainee must lead on 7 hours of teaching and partner for 7 hours making 14 hours in total. For School Direct trainees the same number of hours applies (7 per trainee).
- Timetabled opportunity (one day) to spend time in a feeder **Primary school**.
- Completion of relevant SEPJ tasks.
- Gathering of evidence toward the Teachers' Standards.
- Gain familiarity with a second subject where appropriate.
- Mentors complete an assessment of trainees' progress called the 'end of placement report' due in by **22nd December 2017**.

Block B Experience – Introductory weeks before half-term (Tuesday to Friday, 23rd January - 16th February 2018)

- Structured observations and relevant directed tasks.
- Agree teaching timetable for block placements including form tutor role and a one week 'Enrichment' placement. 'Enrichment' placements should enable trainees to further develop their experience and understanding in an aspect of their training not yet addressed (e.g. post-16 teaching, EAL, SEND, etc.) Post-16 should be prioritised for the 'Enrichment' placement if there is no provision for this in either the trainees' Block A or Block B placements. The 'Enrichment' placement should take place in a different school.
- Draft and revise units of work/ undertake preparatory tasks.
- Completion of specific tasks in the SEPJ.

Block B School Experience – After half-term (Monday – Friday, 26th February- 25th May)

- Midpoint Review due in on **Friday 9th March 2018**.
- Trainees teach **15 hours of their first subject per week**.
- Trainees undertake the range of duties and responsibilities expected of NQTs (form tutoring, break duties, reporting to parents, meetings and contributing to the life and ethos of the school).
- Completion of relevant SEPJ tasks.
- Gathering of evidence toward the Teachers' Standards.
- Trainee to complete their 'Enrichment' placement (5 days) as outlined above.
- Mentors complete an assessment of trainees' progress called the 'end of placement report' due in by **Friday 25th May 2018**.

Progress Review Days

These are days when trainees are required to attend University for all or part of the day to meet with their Personal Development Tutor to discuss the trainees' progress to date.

Year Overview

	2017/18 W/C	Monday	Tuesday	Wednesday	Thursday	Friday
05	28 August	HBSE (in advance)				Induction & enrolment
06	04 September	University-based training week (Professional Studies)				
07	11 September	University-based training week (Professional Studies)				
08	18 September	University-based training week (Professional Studies, Mentor training Weds 20th Sept)				
09	25 September	Subject Workshop BCU	School 1	School 1	School 1	School 1
10	02 October	Subject Workshop BCU	School 1	School 1	School 1	School 1
11	09 October	Subject Workshop BCU	School 1	School 1	School 1	School 1
12	16 October	Subject Workshop BCU	School 1	School 1	School 1	School 1
13	23 October	Block A Planning & Preparation/School Half Term				
14	30 October	Subject Workshop BCU	School 1	School 1	School 1	School 1
15	06 November	Subject Workshop BCU	School 1	School 1	School 1	School 1
16	13 November	Progress Review Mtg BCU	School 1	School 1	School 1	School 1
17	20 November	Subject Workshop BCU	School 1	School 1	School 1	School 1
18	27 November	Subject Workshop BCU	School 1	School 1	School 1	School 1
19	04 December	Reading & Study Day BCU	School 1	School 1	School 1	School 1
20	11 December	Subject Workshop BCU	School 1	School 1	School 1	School 1
21	18 December	Subject Workshop BCU	School 1	School 1	School 1	School 1
22	25 December	Christmas Holiday				
23	01 January					
24	08 January	University-based training week (Professional Studies)				
25	15 January	University-based training week (Professional Studies, Mentor training Weds 17th Jan)				
26	22 January	Subject Workshop BCU	School 2	School 2	School 2	School 2
27	29 January	Subject Workshop BCU	School 2	School 2	School 2	School 2
28	05 February	Prof Studies Day BCU	School 2	School 2	School 2	School 2
29	12 February	Prof Enquiry Day 1 BCU	School 2	School 2	School 2	School 2
30	19 February	Block B Planning & Preparation/School Half Term				
31	26 February	School 2	School 2	School 2	School 2	School 2
32	05 March	School 2	School 2	School 2	School 2	School 2
33	12 March	Progress Review Mtg BCU	School 2	School 2	School 2	School 2
34	19 March	School 2	School 2	School 2	School 2	School 2
35	26 March	School 2	School 2	School 2	School 2	Easter
36	02 April	Easter Holiday				
37	09 April					
38	16 April	Prof Enquiry Day 2 BCU	School 2	School 2	School 2	School 2
39	23 April	School 2	School 2	School 2	School 2	School 2
40	30 April	School 2	School 2	School 2	School 2	School 2
41	07 May	Bank Holiday	School 2	School 2	School 2	School 2
42	14 May	School 2	School 2	School 2	School 2	School 2
43	21 May	School 2	School 2	School 2	School 2	School 2

44	28 May	School Half Term – End of Block B placement
45	04 June	Research Phase
46	11 June	
47	18 June	
48	25 June	University- Final Week

Subject Workshop days and other BCU days in blue indicate sessions where external School Direct or SCITT trainees attend BCU (as agreed with the partnership director – this may not apply to all external partners).

Key Dates

Assignment Submission Dates

Module / Assignment	Formative Feedback Date	Final Submission Date
Pre course task Diagnostic Assignment	N/A	22/9/17
EDU7344 School Experience 1	10/11/17 (Midpoint Review)	22/12/17 (End of placement report)
EDU7343 Professional Studies	13/11/17	8/1/18
EDU7346 Secondary Subject Pedagogy	12/3/18	16/4/18
EDU7344 School Experience 2	9/03/18 (Midpoint Review)	25/5/18 (End of placement report)
EDU7342 Professional Enquiry	12/03/18	‘Core’ Presentations: 19/6/18 or 20/6/18 ‘School Direct’ Presentations (RSA, Haybridge, Coventry SCITT): 18/6/18

Block A School Experience Key Dates

School Experience 2		
Midpoint Review	10/11/17	Send via email to secondarytpdocuments@bcu.ac.uk
Progress review meeting 2	13/11/17	Trainees are required to attend University for all or part of the day to meet with their Personal Development Tutor to discuss the trainees’ progress to date.
End of Placement Report	22/12/17	Send via email to secondarytpdocuments@bcu.ac.uk
Placement Evaluation	22/12/17	A link to the online placement evaluation will be emailed out to all subject and professional mentors.

Block B School Experience Key Dates

School Experience 2		
Midpoint Review	10/3/18	Send via email to secondarytpdocuments@bcu.ac.uk
Progress review 4	12/3/18	Trainees are required to attend University for all or part of the day to meet with their Personal Development Tutor to discuss the trainees' progress to date.
Professional Enquiry Day 2	16/04/18	Trainees are required to attend University for the day for activities relating to their Professional Enquiry assignment.
End of Placement Report	25/5/18	Send via email to secondarytpdocuments@bcu.ac.uk (Please note that part of this document needs to be signed using a hand written signature, Scanned versions sent via email are accepted.)
Placement Evaluation	25/5/18	A link to the online placement evaluation will be emailed out to all subject and professional mentors

Maths Training Overview

Throughout the training year the University runs compulsory professional and subject training days which trainees attend before either the school 1 or school 2 placements and on Fridays during the placement period. The university based training days develop the trainee's knowledge of professional and subject teaching issues.

Week Beginning	Monday Taught Session
18-Sep	What is mathematics and what does effective mathematics teaching look like? Fluency, reasoning, problem solving.
25-Sep	Issues in teaching and learning of Number 1
02 Oct	Issues in teaching and learning of Number 2
09-Oct	Issues in Teaching and learning of Algebra 1
16-Oct	Issues in Teaching and learning of Algebra 2
30-Oct	Issues in the teaching and learning of Geometry and Measures 1
06-Nov	Issues in the teaching and learning of Geometry and Measures 2
20-Nov	Issues in teaching and learning of Statistics 1 - Probability
27-Nov	Issues in the teaching and learning of Statistics 2
11-Dec	Teaching of Proof
18-Dec	Teaching of A Level mathematics 1.
22-Jan	Teaching of A Level mathematics 2
29-Jan	Maths Mastery

Key Mentor and Trainee Documentation

Partner schools are reminded that the Secondary Partnership website includes the key documents relating to the PGCE Secondary and School Direct course for partner schools. The resources below can be found by navigating the tabs on the partnership homepage: <http://www.bcu.ac.uk/education/partnerships-and-collaborations/secondary-partnerships/overview>

Placement documentation:

- **Midpoint Review-** Analyses the progress at the midpoint of the placement against the Teachers' Standards. A Midpoint review is completed during both school placement 1 and 2 by the subject mentor and the trainee. The professional mentor and university tutor will moderate this process.
- **Trainee Support Framework-** Outlines the process of extra support through support plans to a cause for concern.
- **End of Placement Report Form-** A summative report of the trainee's attainment at the end of the school placement. The end of placement report form is completed by the subject mentor and the trainee. The professional mentor and university tutor will moderate this process.
- **Internal School Moderation Form (school 2 placements only) -** A record of internal school moderation of trainee teachers. Moderation should be conducted by the professional mentor or a mentor from a different subject area in discussion with the subject mentor with responsibility for the trainee.
- **Placement Evaluation-** This will be sent out to partner schools with further instructions via the BCU placements office.

Weekly documentation:

- **School Experience Progress Journal (SEPJ) -** Evidences progress over a placement. It provides a structure for weekly target setting, reflection and the collection of evidence and should be used to inform weekly mentor meetings. The SEPJ contains tasks that must be completed during the school placement.
- **Review and Analysis Forms (R&A) -** These are the forms where formal observations must be recorded. It is expected that trainees will be observed twice per week as a minimum. Written formative feedback will be provided on an R&A form which focusses on three Teaching Standards. These standards will be assessed using the university formative descriptors for trainees which grades trainees as 'Emerging, Establishing, Embedding or Enhancing'.
- **Formative Descriptors for Trainees (teaching standards tracker) -** Formative feedback guidance produced through collaboration between UCET and the HEA. The guidance provides a set of statements that outline the minimum standard that can be expected of trainee teachers at each stage of their development 'Emerging- Enhancing'. This document is used during observations and when completing formal/informal reviews of trainee progress.

Documents for Trainees:

- **Unit of work and lesson plan template-** For mentors to sign off prior to a trainees teaching.
- **BCU Timetable Template-** For trainees to upload to Moodle so that university tutors know trainee timetables.
- **Professional Practice Audit**
- **Professional Progress Pen Portrait** Should be reviewed by mentors to support the setup of the placement.
- **Subject Knowledge Action Plan**
- **Subject Knowledge Audit**

Roles and Responsibilities

The Professional Mentor:

- Organises and quality assures a trainee teachers' programme of activities during any induction stage and outside of the specialist subject
- Ensures that trainee teachers will not at any point be asked to cover for absent teachers
- Ensures that at all times trainee teachers are under the supervision of a qualified teacher
- Assigns trainee teachers to a tutor group
- Arranges opportunities for observation outside the specialist subject
- Arranges opportunities for experience in a second subject during block placements
- Arranges for trainees to visit feeder Primary schools in Block A and for post 16 experience in Block B (if not experienced in Block A)
- Provides opportunities for trainee teachers to attend appropriate school meetings
- Provides an appropriate CPD programme to complement the professional training provided at university covering whole school issues
- Monitors and contribute to a trainee teachers' completion of the SEPJ tasks
- Observes the trainee teaching **at least once** per placement through the completion of a **joint observation** with the subject mentor and gives feedback using the university R&A form
- Moderates the subject mentor's assessment of the trainee teacher
- Provides support for subject mentors in target setting and assessment
- Contributes to the completion of the End of Placement Report
- Quality assures subject mentoring in school, ensuring that subject mentors complete the duties outlined below.

The Subject Mentor:

- Organises a programme of observation and teaching within the specialist subject across different ages and abilities
- Supports the development of subject specific pedagogies and strategies for learning and teaching whilst developing a subject ethos and philosophy
- Provides access to the subject department's units (schemes) of work and relevant examination specifications materials
- Supports and guides the lesson planning process for the preparation of units of work
- Ensures the opportunity for trainee teachers to teach their specialist subject, as appropriate to the stage of training, including KS3, KS4, and, where possible, post-16 groups
- Provides access to relevant pupil information, such as assessment records and IEPs
- Assesses the quality of the SEPJ tasks
- Observes the trainee teaching **two times per week as a minimum** and provides written feedback on the university R&A form.
- Completes **at least one joint observation with the professional mentor** and **at least one joint observation with a university tutor** per placement.
- Signs off units of work before the trainee begins to teach.
- Provides a timetabled weekly review and guidance session.

- Reports progress of trainee teachers 'with professional mentors and university tutors.
- Provides opportunities for checking, signing and grading (where appropriate) SEPJ tasks which contributes to the achievement of the Teachers' Standards.
- Sets future Teachers' Standards targets, using the Weekly Review sheet.
- Regularly scrutinises trainee teachers' School Experience Files, including their written evaluations of teaching and their assessment records during Block placements
- Contributes to the Mid-point review indicating the trainee teacher's current progress and identifying any areas that might be a cause for concern
- Contributes to End of Placement Report at the end of each placement.
- Provides a final assessment of the trainee teacher's achievement of the Teachers' Standards (**Block B only**).
- Assists with drafting the Career Entry and Development Profile (**Block B only**).

Where trainees are teaching classes other than the subject mentor's we would encourage the class teacher to observe, both formally and informally, and give feedback. However, it is important that the subject mentor manages the process to ensure that the training experience remains coherent and targeted.

The University Tutor:

- Is a subject specialist tutor who supports the trainee throughout the PGCE programme.
- Is responsible for placing the trainee in their Block A and Block B placements (with the exception of School Direct) and ensuring that these offer a contrasting experience.
- Holds termly progress review meetings with trainees to discuss their progress towards achieving the Teachers' Standards.
- Is accountable for the delivery of PGCE modules and the marking and feedback of assignments (for those trainees following the Core route).
- Quality assures the quality of the SEPJ tasks.
- Agrees and monitors targets in relation to subject knowledge based on the subject knowledge audit.
- Provides an initial visit to each placement school to quality assure the provision.
- Visits the trainee **at least once** during Block A and Block B placements.
- Liaises with subject and professional mentors to ensure that appropriate training and CPD is provided throughout the placement.
- Jointly **observes the trainee teaching at least once** per placement **with the subject mentor**.
- Moderates the assessments made by school including lesson observations, feedback and the end of placement report.
- Liaises with placement schools to ensure that trainees are provided with Post- 16 experience.
- Recommends and assists in the organisation of visits by external examiners.
- Supports the trainee to complete their Career Entry Development Profile.
- Provides the trainees with a reference.

The Trainee Teacher:

- Will attend all taught sessions in the Faculty and carefully read all the information they are given to prepare themselves for school experience.
- Must attend timetabled progress review meetings in the Faculty and prepare for these as appropriate.
- Must be aware of the requirements for each placement and professionally negotiate an appropriate timetable which must include weekly timetabled training with mentors.
- Are responsible for their development towards meeting their agreed targets and the accumulation of appropriate evidence.
- Are responsible for their SEPJ and the evidence within it to demonstrate their progress towards the Teachers' Standards.
- Must follow guidelines for the professional behaviour expected in schools and demonstrate that they are meeting Part Two of the Teachers' Standards.
- Must work within the safeguarding protocols of the placement school.
- Must follow the requirements for school experience in relation to medium and short term planning, and ensure that units of work are signed by subject mentors before they can begin teaching.
- Should act upon advice given and targets set by mentors and tutors.
- Should negotiate appropriate learning opportunities for themselves.
- Is responsible for supporting the learning of pupils and passing on information to the class teacher.
- Is responsible for keeping their subject knowledge up to date.
- Is responsible for setting cover for classes that they would be teaching if they are not in school.

Observation and feedback in Maths

Subject mentors should formally observe trainees teach **at least two lessons per week** and give trainee teachers written feedback using Review and Analysis forms. The Review and Analysis form alongside the formative descriptors for trainee teachers on the Birmingham City University Teachers' Standards tracker should be used to indicate trainees' progress towards meeting the Teachers' Standards. The use of the formative descriptors helps the trainees and mentors to devise and take 'next steps' towards progress targets. Additionally, the descriptors strengthen consistency across the partnership by helping mentors, tutors and trainees to articulate the expectations that we have for achieving each of the Teachers' Standards.

Formative Descriptors for Trainees (Teachers' Standards Tracker)

Formative feedback guidance is set out for each Standard using progressive headings:

Emerging → Establishing → Embedding → Enhancing

S1: Set high expectations which inspire, motivate and challenge pupils				
Standard Prompts	Emerging (EMG)	Establishing (EST)	Embedding (EMB)	Enhancing (ENH)
a) Establish a safe and stimulating environment for pupils, rooted in mutual respect	<p>Unable to demonstrate the ability to encourage pupils to participate and contribute and/or create an atmosphere conducive to learning.</p> <p>Inadequate or inconsistent rapport developed with individuals and groups such that engagement in learning is hampered.</p> <p>Regularly require the intervention of other professionals to assist in maintaining a purposeful and safe learning environment.</p>	<p>Demonstrate the ability to encourage pupils to participate and contribute in an atmosphere conducive to learning.</p> <p>Develop a rapport with a range of individuals and groups so that most pupils are engaged in their learning.</p> <p>Routinely demonstrate the necessary understanding, presence and management skills to maintain a purposeful and safe learning environment.</p>	<p>Usually encourage pupils to participate and contribute in an atmosphere conducive to learning.</p> <p>Show respect for, and be well respected by, learners and effectively promote pupils' resilience, confidence and independence when tackling challenging activities.</p> <p>Demonstrate an extended range of strategies to establish and maintain a purposeful learning environment.</p>	<p>Consistently encourage pupils to participate and contribute in an atmosphere highly conducive to learning.</p> <p>Show high levels of mutual respect between the trainee and pupils. Very effective in promoting learners' resilience, confidence and independence when tackling challenging activities.</p> <p>Demonstrate innovative and creative strategies to establish and maintain a purposeful and safe learning environment.</p>
b) Set goals that stretch and challenge pupils of all backgrounds, abilities and dispositions	Routinely requires the support of another professional to set goals that stretch and challenge pupils.	Routinely set goals that engage most pupils in their learning including those from the range of backgrounds represented and with special educational needs and/or disabilities.	Set goals that motivate, enthuse and motivate most pupils.	Set goals that generate high levels of enthusiasm for, participation in and commitment to learning in all pupils.
c) Demonstrate consistently the positive attitudes, values and behaviour which are expected of pupils	<p>Unable to demonstrate positive attitudes, values and behaviour. Shows inconsistent or unequal respect for pupils, colleagues, parents/carers and lacking support for the ethos of the school. Unable to demonstrate sufficient enthusiasm for working with pupils and/or for teaching and learning.</p>	<p>Be able to demonstrate positive attitudes, values and behaviour. Show respect for pupils, colleagues, parents/carers and support the ethos of the school. Demonstrate enthusiasm for working with pupils and for teaching and learning.</p>	<p>Usually demonstrate positive attitudes, values and behaviour. Show respect for pupils, colleagues, parents/carers and actively support the ethos of the school. Most learners are enthused and motivated to actively participate in their learning.</p>	<p>Consistently demonstrate positive attitudes, values and behaviours. Show high levels of respect for pupils, colleagues, parents/carers and energetically support the ethos of the school. Generate high levels of enthusiasm, participation and commitment to learning for all pupils.</p>

For formative feedback purposes only, guidance is given for each sub-heading of each Standard. The language of the formative descriptors should be adopted during written and verbal feedback. This is to support trainees and mentor to *track progress against the standard, to determine areas where additional development might need to be observed, or to identify areas where a trainee or teacher is already demonstrating excellent practice relevant to that standard* (DfE). Please see the notes on summative assessment below.

The statements in relation to Part One of the Teachers' Standards set out typical characteristics of the practice of trainees. The expectation is that their practice will demonstrate improvement throughout their training and beyond. The formative feedback helps trainees and their assessors to identify progress in their achievement towards the Standards through the levels. Judgements from observations will be based on an assessment of the available evidence to decide which descriptor provides the 'best fit'. Formative feedback must be given for **achievement only**, not effort, intention or as a motivator

Review and Analysis Forms

All formal lesson observations must be completed using the BCU Review and Analysis forms (R&A). A copy can be downloaded at: <http://www.bcu.ac.uk/education/partnerships-and-collaborations/secondary-partnerships/documentation>

<p style="text-align: center;">PGCE Secondary Review and Analysis Form</p> <p style="text-align: center;">Part B: Lesson Summary and Targets:</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 45%;"> <p>Lesson strengths: (three minimum)</p> <p>List strengths linked to the 3 focus standards, refer explicitly to the standard strands</p> </div> <div style="width: 50%;"> <p>Teachers' Standard(s) no(s) to be added:</p> </div> </div> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 45%;"> <p>Developmental targets arising out of the lesson: (one minimum, no more than three).</p> <p>How can the trainee promote better pupil learning and progress?</p> <p>Provide targets that are linked to the 3 focus standards- try not to use the same strands as a strengths and developmental area</p> <p>Subject specific target(s)</p> <ul style="list-style-type: none"> • • </div> <div style="width: 50%;"> <p>Teachers' Standard(s) no(s) to be added:</p> </div> </div>	<p style="text-align: center;">PGCE Secondary Review and Analysis Form</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 45%;"> <p>Trainee Name:</p> <p>Date of Observation/Discussion:</p> <p>Subject:</p> <p>Placement (circle):</p> </div> <div style="width: 50%;"> <p>School:</p> <p>Sheet Number:</p> <p>Class Taught:</p> <p>Sch 1 Sch 2</p> </div> </div> <p><i>List below the Standard(s) being targeted during the lesson observation or review and guidance session:</i></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 80%;">Teachers' Standard(s) and Standard Prompts observed or discussed:</th> <th style="width: 20%;">Formative Feedback</th> </tr> </thead> <tbody> <tr> <td>Choose only 3 standards to focus on</td> <td>Assessment (Emerging)</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </tbody> </table> <p>PART A: Formative comments from observations OR summary of training session/discussion:</p> <ul style="list-style-type: none"> • Use the language on the Standards Tracker to provide feedback on what is observed. • Comment on the progress within the 3 identified standards • Refer explicitly to the standard strands (5a, 6b) within the feedback • Strengths and areas for development are determined in terms progress against the teaching standards 	Teachers' Standard(s) and Standard Prompts observed or discussed:	Formative Feedback	Choose only 3 standards to focus on	Assessment (Emerging)				
Teachers' Standard(s) and Standard Prompts observed or discussed:	Formative Feedback								
Choose only 3 standards to focus on	Assessment (Emerging)								
<p>Signed (Mentor): _____ Date: _____</p> <p>Signed (Trainee): _____</p>									

List below the Standard(s) being targeted during the lesson observation or review and guidance session:

Teachers' Standard(s) and Standard Prompts observed or discussed	Formative Feedback
6. Make accurate and productive use of assessment 6b Make use of summative and formative assessment to secure pupils progress	Establishing (EST)
5. Adapt teaching to respond to the strengths and needs of all pupils 5a Know how and when to differentiate appropriately. Recognise different needs of learners to facilitate good progress.	Establishing (EST)
5. Adapt teaching to respond to the strengths and needs of all pupils 5d Have clear understanding of pupils additional needs	Establishing (EST)

Part A: Comments from observations or summary of training session/discussion:

Expectations and behaviour are embedded clear within the ethos of the group, use of "tracking" and clapping seen to focus with great effect (1c, 2e).

Starter identified pupils tiered/ differentiated main activity (5a, 6b).

Targetted questioning and differentiated material for High Achievers (5d). A lovely amount of time left between questions to allow thinking time and get the best out of students responses. Could you have used a higher order question to allow thinking time around a bit more to deepen knowledge further?

Video role modelling used to secure knowledge in all students (5c). With a drawing/ skill based topic is it useful for students to see the final outcome drawn/ practiced by yourself instead of ICT based? What might the benefits be to this? How might you execute it?

Sheets were already on tables to avoid dead time handing sheets out or students wondering round finding them (5b).

Students identified starting points independently. How might you verify their choices? Were there any students that did not choose appropriate tier of work (GREEN, AMBER, RED)? Some students did under sell their ability.

Feedback given verbally was effective at moving students on in particular questions, but limited progress seen during the main activity. Could those who chose the AMBER sheet be moved on to the RED task before the mini plenary.

Think about timely points in the lesson when rapid progress, based on your assessment of the pupil, instead of completing an exercise that is manageable (6b).

Mini plenary answers were confusing to students as they were using RAG in the opposite way they were used to. This did not phase AC but took time to explain.

From the mini plenary students were encouraged to assess again in terms of colour and make a choice to move onto the next activity or secure knowledge by continuing (6b/ 5a). How many moved on? What did the students who started on the highest tiered activity do if they were able to complete the mini plenary? Could you have deepened their knowledge by asking "Why do some regular shapes tessellate and others don't?" this then include angle facts in parallel lines and knowledge of shape properties (3a).

A nice link to transformations by describing tessellations on terms of transformation titles (3a)

Could some students be encouraged to use pencil and a ruler and possibly tracing paper to remove barriers to learning as this hindered learning in some cases. Eg 'my regular pentagon does tessellate!' 5b

Lesson strengths: (three minimum) Starter determining the main activity for individuals. Differentiation three ways. Targetted questioning for High Achievers Encouraging students self reflection and assessment of ability	Teachers' Standard(s) no(s) to be added: 5a, 6b, 2e
Developmental targets arising out of this lesson: (one minimum, no more than three). How can the participant promote better pupil learning and progress? <ul style="list-style-type: none"> Guiding students to make rapid progress and appropriate points in the lesson Deeper questioning to stretch the higher ability Support learning with correct equipment (tracing paper) Subject specific target(s) <ul style="list-style-type: none"> Correcting students terminology if incorrect Deeper questioning to encourage flexibility into other areas of maths. EG Tessellation and angles 	Teachers' Standard(s) no(s) to be added: 2c 5b 3a

Weekly mentor meetings

A weekly mentor meeting between the trainee teacher and the subject mentor should be timetabled, so that progress and achievement can be evaluated systematically and future targets set. To prepare for this meeting and to ensure that time is used productively, trainee teachers should complete the first part of the Weekly Review sheet (found in the SEPJ) in advance. This will then be discussed with the mentor and future targets agreed.

Weekly review meetings provide the opportunity to:

- Regularly work in partnership with their subject mentor
- Review progress made over the previous week
- Agree developmental targets to support progress over the forthcoming week
- Specifically discuss developments in subject knowledge and any emerging needs related to subject pedagogy
- Provide the opportunity for the trainee to discuss and make further progress towards the Teachers' Standards which have a subject specific dimension
- Identify any individual training needs and take actions to ensuring that needs are met
- Support the trainee to work collaboratively with other colleagues and professionals in school to support trainee professional development
- Monitor the SEPJ tasks

References and Additional Information

BCU (2017) Secondary Partnership Website. Available at: <http://www.bcu.ac.uk/education/partnerships-and-collaborations/secondary-partnerships>

Holden, G (2016) *National Standards for school-based initial teacher training (ITT) mentors*. Crown copyright 2016. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/536891/Mentor_standards_report_Final.pdf

Key text for the PGCE Mathematics course:

Capel, S., Leask, M. & Younie, S. (eds.) (2016) *Learning to Teach in the Secondary School (7th edition)* London: Routledge

Subject associations:

Association for Teachers of Mathematics (ATM) – www.atm.org.uk

Mathematical Association (MA) – www.m-a.org.uk

National Centre for Excellence in Teaching Mathematics (NCETM) – www.ncetm.org.uk

Strategies for Learning by Developing Reasoning/Making sense of...

- 1) Which one doesn't belong? (wodb.ca)
- 2) Open middle Questions (www.openmiddle.com)
- 3) Solve me (www.solveme.ed)
- 4) Clothesline activities (www.clothesline.com)