Observatory for Mathematical Education

Lead teacher guide: secondary (11-18) 2025-26

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1. Introduction

Welcome to the second year of the Observatory's longitudinal cohort study. We are delighted to be working with your school again for this ground-breaking research project.

This guide has been created for the lead teacher at our research partner secondary schools that teach A level Mathematics. The lead teacher is responsible for coordinating the project from the research partner end.

"Welcome to cycle two of the secondary cohort study. I hope you managed a good break over the summer. Here at the Observatory, we are delighted to be working with you again for the coming year.

There was a quite remarkable response from partner schools last year. Over 50,000 surveys were completed by learners, teachers and parents/guardians in primary schools, secondary schools and sixth form colleges across England. Our team have been analysing the responses from your school along with the other research partners and have gained new insights into mathematics learning and teaching. The headlines will be published in the Review of Mathematical Education 2025 in November, and we are meeting with the Department for Education in late September to share the emerging results.

Whilst last year was an amazing effort by everyone who took part, the real value of the research is in tracking changes over time. This means that it is crucial to the study for pupils and teachers to complete surveys again this year, and I very much appreciate your support in helping us to secure as many responses as possible. We could not do this important work without you, so I would like to express my thanks to you as the lead teacher for your continued and invaluable support."

Dr Catherine Gripton, Associate Director (Cohort Studies) for the Observatory for Mathematical Education and Associate Professor at the University of Nottingham

In this guide, you will find:

- An overview of the study, its purpose and aims.
- A summary and detailed breakdown of activity in the second year of the study (2025-26).
- The responsibilities of the research partner school.
- Contact details for the Observatory team.

We recommend you read through this document at the start of the year and then refer to key sections as needed.

There are a couple of changes to the research activities this year, so we encourage you to read through everything, even if you were the lead teacher last year.

Note: It can be confusing to talk about which year group the students are in and how this relates to which year of the study we are in. Therefore, to keep things simple, from now on we will refer to years of the study as "cycles" and year groups as "Years". For example: in cycle two of the study, we will be surveying pupils in Year 8.

2. Study overview

The Observatory is following three cohorts of pupils in schools and colleges across England. The pupils in these cohorts are largely the same as those that were surveyed last year.

- Primary cohort: Starting with pupils in Reception, this cohort will be followed until the end of Year 6. This cycle, the cohort is in Year 1.
- Secondary cohort: Starting with students in Year 7, this cohort will be followed until the end of Year 11 or Year 13. This year, the cohort is in Year 8.
- A-level cohort: Starting with students in Year 12, this is the final year for this cohort study. This year, the cohort is in Year 13.

The cohort studies form the largest ever longitudinal study of mathematics education in England. Over 7 years, the Observatory will build a picture of maths education in England through detailed exploration of a number of areas of interest, including thorough review of pupil attainment, attitudes, progression and experiences.

2.1 Purpose

We all know the importance of mathematics education for children's future lives and employment. Within the complexities of the education system in England, many factors contribute to a child's mathematics education. The Observatory is taking a longitudinal, cohort approach, collecting data on attitudes and experiences from the same group of pupils over several years in a representative sample of schools across England. The data will be analysed to identify trends across different approaches, resources, school types and pupil groups over time.

We will build a picture of the maths education landscape from a range of viewpoints: students, teachers, subject leaders and parents/guardians.

2.2 Aims

There are two broad aims to this study:

1. To gain a comprehensive understanding of the current maths education landscape in England. This means seeking to understand patterns in children's attainment, attitudes, experiences and progression in mathematics.
2. To identify how these patterns vary by region, school and classroom; and for different groups of children (ethnicity, gender, SEND, language and socio-economic status). This will provide understanding of the impact of curriculum and teaching choices which will inform maths education policy and practice in the future.

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3. Year 8 and Year 13: September 2025 – July 2026

This section provides an overview and a detailed breakdown of the research activities in the second cycle of the study.

3.1 Cycle two overview (Year 8 and Year 13)

On the next page, you will find a timeline outlining the key research activities in cycle two (2025-26). The key differences from cycle one (2024-25) are:

- The **staff audit** will **only** ask for details of **Year 8 and Year 13 teachers**.
- There will be **no teacher** survey if your school completed this last cycle.
- There will be **no Year 8 parent/guardian survey** this cycle.
- The **Year 8 pupil surveys** will take place in **November**.
- The **Year 13 pupil surveys** will take place in **February**.
- There will be **no Head of Maths survey** if this was completed last cycle.

Activities for Year 13 students and teachers are only for those studying/teaching A level Mathematics. Students/teachers of other qualifications (including Core Maths) should not complete these activities.

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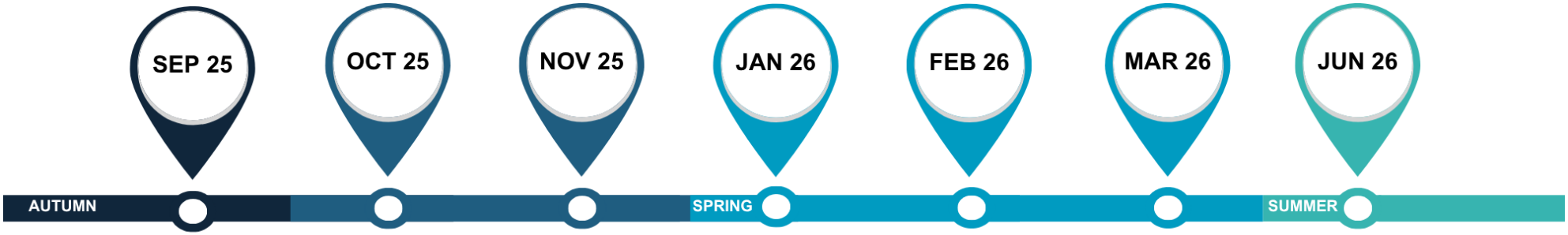
SECONDARY COHORT STUDY (11-18) TIMELINE

Year 8 and Year 13, 2025-26



Staff audit

The Head of Maths sends a list of all teachers teaching Year 8 and Year 13 classes this year.

Letters to Y8 parents

Send out a letter for parents/guardians of Year 8 students.

Y8 class lists

The Observatory will collect class lists for Year 8 via Wonde (no action needed).

Y8 pupil surveys

Complete and return in the packaging provided.

Y8 pedagogy survey

Year 8 teachers complete an online survey about pedagogical approaches.

Letters to Y13 parents

Send out a letter for parents/guardians of Year 13 students.

Y13 pupil surveys

Ask Year 13 students to complete an online survey using the link provided.

Y13 pedagogy survey

Year 13 teachers complete an online survey about pedagogical approaches.

Y13 class lists

The Observatory will collect class lists via Wonde for Year 13 students who completed the survey (no action needed).

Payment

Receive annual payment as a thank you for being a research partner of the Observatory.

3.2 Cycle two planner 2025-26

Month	Activity	Who	What
September 2025	Letter to Year 8 parent/guardian	Administrative contact	Send a letter from the Observatory to the parent/guardian of all Year 8 students. The letter includes information on withdrawing children from the study. The letter should be sent using your usual method. Send this letter promptly and let us know when you do so. We cannot collect class lists or print pupil surveys unless this is done.
September 2025	Staff audit	Lead teacher	We will email you an Excel spreadsheet template. Fill this in with the name, work email address and class name of all Year 8 and Year 13 teachers of maths and share it with us by secure upload[1].
October 2025	Class list	Wonde administrator	Your school should be connected with the University of Nottingham on Wonde and so not need to take any action for us to collect the class list information[2]. We will contact your Wonde administrator if we have any queries. Please contact us if you have any issues.
November 2025	Year 8 pupil surveys	Administrative contact and Year 8 students	Your school will receive a package by courier containing the pupil surveys, instructions and return packaging. You have several weeks to complete the surveys. The administrative contact will arrange a collection date with us for the completed surveys.
November 2025	Year 8 teacher pedagogy survey	Year 8 teachers	We will email your Year 8 teachers a link to complete an online survey about the pedagogical approaches they use in their teaching. If you are a Year 8 teacher, you should also complete this.
January 2026	Letter to Year 13 parent/guardian	Administrative contact	Send a letter from the Observatory to the parent/guardian of all Year 13 A level Mathematics students. The letter should be sent using your usual method.
February 2026	Year 13 pupil surveys	Year 13 A level Mathematics students	Ask all Year 13 A level Mathematics students to complete an online survey using the link provided.

[1] Instructions for how complete a secure upload will be provided.
[2] Pupil name, date of birth, unique pupil number, class name and teacher name. Your school has consented to this in a data sharing agreement.

February 2026	Year 13 pedagogy survey	Year 13 A level Mathematics teachers	We will email your Year 13 A level Mathematics teachers a link to complete an online survey about the pedagogical approaches they use in their teaching. If you are a Year 13 teacher, you should also complete this.
March 2026	Year 13 class list	Wonde administrator	Your school should be connected with the University of Nottingham on Wonde and not need to take any action for us to collect the class list information. We will contact your Wonde administrator if we have any queries.
June 2026	Incentive payment	Finance contact	Your school will receive a payment by bank transfer from the Observatory. This payment is to thank you for being a research partner. We will ask your finance contact to confirm bank details and raise an invoice for this payment.

3.3 Administering the pupil surveys

Year 8

The Observatory will send paper surveys for your Year 8 students by courier. These will arrive arranged in packs for each class, with the student's name printed at the top of the survey.

The surveys should be completed in one maths lesson. While some students will take the entire lesson to complete their surveys, most will take 10-15 minutes. The completed surveys should be put in the return packaging and returned to the school office. The administrative contact will contact the Observatory to arrange collection of the completed surveys by courier.

Year 13

The Year 13 pupil survey is completed online. The link for the survey will be emailed to you to share with your Year 13 A level Mathematics students (not Core Maths or Further Maths). We suggest sharing the link in a maths lesson and it should take your students about 10 minutes to complete. In the survey, the students will be asked to consent to the Observatory requesting some information about them (class list) from the school. We will use Wonde to collect this information.

Our team will be on hand to help with any queries about completing the pupil surveys (see section 4. Information and support).

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4. Information and support

We appreciate you are busy people with many demands on your time. We want to make your participation in this research as easy as possible.

Here's what we will do to help you:

- ✓ Provide as much notice as possible for when to expect research activities.
- ✓ Make our email subjects clear and indicate when you need to action something.
- ✓ Keep emails brief and instructions clear.
- ✓ Make copies of documents and information available on our website, where possible.
- ✓ Respond to your emails as quickly as possible.
- ✓ Have our phone lines open Monday-Friday, 8.30am-4.30pm. (If we are out of the office, we will respond to answer phone requests as quickly as possible.)

To make your participation straightforward, we ask you to help us by:

- ✓ Reading emails from us carefully.
- ✓ Completing the actions we request (or letting us know who else to speak to).
- ✓ Asking for clarification if something is not clear.
- ✓ Contacting us if you are concerned about meeting a deadline (with as much notice as possible).
- ✓ Contacting us if you have any concerns about your involvement with the research.

4.1 Our contact details

You can send us an email at any time, and we will aim to reply in 1 working day.

You can call to speak to someone in the office Monday-Friday, 8.30am-4.30pm.

Email: mathsobservatory@nottingham.ac.uk

Telephone: 0115 95 14426

Please do not hesitate to get in touch with any questions – our team are always happy to help.