

TEACHING FOR MASTERY LESSON STUDY TOOLKIT SECTION 2:

RUNNING A LESSON STUDY GROUP

Information and guidance for those undertaking a leadership role in
lesson study



Teaching for Mastery Lesson Study Toolkit

Section 2: Running a Lesson Study Group

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RUNNING A LESSON STUDY GROUP

Lesson Study as an activity is collaborative but needs leadership: someone needs to become the LS Lead. They need to coordinate, support collaboration and cajole when necessary.

The LS Lead plays a crucial role in ensuring the success of the group's endeavours. They are usually responsible for initiating the programme and ensuring meetings of each LS cycle takes place at a time when attendance is maximised. Their role during meetings is to coordinate, facilitate and ensure the goals of the session are achieved. The goals not only focus on developing teaching practice, but also collaboratively establishing a common vision, set of priorities, and language. Thus, the role should not be viewed as an 'expert' sharing 'best practice'; instead, we have found the programme works best when the LS Lead is sensitive to, and builds on, what members of the group already know and do in the classroom.

To establish the current range of practices, priorities and pressures of a group of teachers requires much listening and learning from others. This will be the foundation from which the lead teacher shares the ideas encapsulated in the programme.

The role could be undertaken either as an individual or as a pair. The advantage of working in a pair is that both will have different experiences, strengths, and perspectives.

This section of the toolkit provides guidance for anyone undertaking a Leadership role in LS role.

2.1 GETTING STARTED

Before beginning the first lesson-study cycle, it is a good idea to have a preliminary start-up meeting in which the group thinks through the overall process and there is an opportunity for participants to ask any questions that they may have.

It is important in this meeting to consider the aims and purposes of the group and make sure that there is a common understanding of what the group is attempting to do. Before the meeting everyone will have agreed to take part on some loose understanding of what you are aiming to do. In this meeting make sure that this is clarified.

In the initial meeting of the group, you should also address issues such as:

- The purpose of the lesson-study process.
- A Research Theme that guides the inquiry that you will be working on throughout your lesson study cycles.

Possible research themes:

- Problem solving
- Teaching for Mastery
- Connecting maths with vocational subjects

For example, in the CFEM research trials the research theme was Teaching for Mastery and each of the research lessons had two research questions: one with a mathematical focus, the other with a pedagogical focus. The key principles that informed the Teaching for Mastery approach are described fully in the [Teaching for Mastery Handbook](#). The important point to make here is that whatever the research theme of your Lesson Study work it needs to be thought about carefully and all of your

Lesson Study group should know as much as they can about it. There may not be a single Handbook setting out details - BUT everyone needs to understand it as much as they can.

- Who is participating, in what ways and what commitment is expected
- When planning meetings will be scheduled and who will attend them (see below)
- How participants will keep in touch in between meetings (e.g., email, whatsapp group,...)
- When the first research lesson will be and who will teach it
- Whether or not to involve outside expert (advised) and what role they will play.

A presentation you could use to introduce Lesson Study may be found here: [Lesson Study Overview](#)

A word about research lessons

Central to LS is the research lesson. This is not just any old lesson, it is a lesson that is carefully designed to allow the group to explore a question that they have identified that is important to their teaching within the overall focus of the research theme that informs all of their work. You should expect the eventual lesson plan to have considerable detail in it. [Akihiko Takahashi and Tom McDougal \(2016\)](#) write, "[the] planning team creates a written document, called the lesson research proposal, to communicate what the team learned from their kyouzai kenkyuu [study of curriculum materials], and to explain their instructional thinking. It includes learning goals for a unit, an overview of the unit, a detailed teaching–learning plan for one particular lesson within the unit (the research lesson), a rationale for the design of the unit and research lesson, and a clear statement of how the research lesson aims to address the research theme and the learning goals. In our experience, a thorough lesson research proposal may be 9 pages long."

You can see how this relates to the [research lessons](#) that were part of the Teaching for Mastery Trial.

2.2 PEOPLE, ROLES AND RESPONSIBILITIES

People

Lesson Study primarily involves teachers. The aim is to establish a group of teachers who are keen to work together over a sustained period to improve their practice for the benefit of their learners. The Lesson Study group can also include other (maths) educators, trainee teachers, teaching assistants and so on.

Roles and responsibilities

There are a number of key roles that people involved in lesson study need to identify - and make sure that someone in the group takes on - to make sure that the group works. Below is a brief description of the main roles that a successful group needs to identify.

- The overall coordinator. Most successful lesson study groups have a single coordinator. Their role is to identify and invite participants and assign responsibilities. They need to come up with a schedule of meetings (see a suggested timeline [here](#)), which at an early stage needs to include where and when the research lesson will take place, and make sure that as many as possible from the group can attend. If you are working across colleges (or college sites) it is good to distribute your activity across sites.
- The research lesson coordinator. For each cycle of lesson study one of the group will need to volunteer to teach the research lesson. They will have to become the research lesson coordinator and organise all of the details of the group visiting their college, observing the lesson and so on. If there is more than one teacher at the host college maybe it is better that someone other than the teacher of the research lesson takes on this role.

- An outside 'expert'. This expert should be well grounded in research on the research issue and also have experience of teaching and working with teachers. This person could, for example, be involved in initial teacher education in an HE institution.

Working with other colleges

It can be particularly powerful to work with a cluster of colleges, maybe from a CfEM partnership network. It may be useful to identify a coordinator/lead teacher within each college. This is the person who will organise the research lessons within each school. This lead teacher will identify, maybe two or three, other colleagues who will join the lesson study group.

Other responsibilities

There are other responsibilities that will need to be considered during the work of the lesson study group:

- Planning research lessons. It is advisable for a small team to plan the lessons to be used in the lesson study process for the wider group. This is a substantial undertaking and time should be set aside for this. To start you may wish to use some of the [CfEM Trial lessons](#) that in addition to having a lot of guidance also have research questions that were used in the CfEM Trials.
- Teaching research lessons. One teacher from the planning team should take responsibility for teaching the lesson. It is unlikely, therefore, that any individual teacher will teach more than one research lesson per year. It is important that there is group ownership of the research lesson - the group is responsible for the lesson and the outcomes belong to everyone. Observing the teaching of it does not lead to any form of judgement of the teacher of the research lesson.
- Observing and analysing research lessons. Each teacher and will be invited to each of the research lessons. The group may wish to invite others with appropriate expertise to attend the research lesson and post-lesson discussion. Organising a post-lesson discussion of the research lesson should be the responsibility of the planning team within the college in which it was held.

2.3 CO-ORDINATING LESSON STUDY

Lesson Study is most effective when it is an ongoing activity rather than a 'one-off'. This means that the group needs to make sure that there is some form of leadership. Although motivation for the group will come from across those who are interested it is useful to have someone who takes a leadership role: the group coordinator. It is also useful if this role is taken on by different people at different times - this makes sure that a number of people gain useful experience and the group is more likely to continue if, and when, a coordinator moves on.

The Lesson Study Group coordinator will need to do the following:

Set up the group

After it has been decided to establish a Lesson Study Group it is important to have an organisational meeting where you work through issues relating to both organisational matters (such as developing a work schedule and so on) and making sure that there is agreement about the (research) focus of the group. You may hold the meeting online although it is probably advisable to have a face-to-face meeting so that everyone gets to know each other. Advice about this meeting can be found in section 3.3.

Scheduling issues

It is sensible to set the date of the research lesson as soon as you can, so that everyone knows that that is the date that they are working towards. This will need to fit in with everyone's college constraints, holiday dates, the availability of an outside expert and so on.

Planning meetings

It is sensible to schedule about three planning meetings, of perhaps 1-1.5 hours each. In between these, participants can email various draft versions of the lesson plan to each other for comments/modifications. Suggestions for what you might do at each meeting are given in **section 3.3**.

Reflection meetings

It can be useful to schedule reflection meetings after the first cycle and at the end of a year. This gives participants the opportunity to think through what has been learned so far and to consider the future aims of the group. (If there is time, there could also be one in the second term, but this is not essential, and not shown in the timeline below).

Timeline

A typical timeline is shown below. Lesson study can begin at any point during the year, so "Term 1" does not need to be the Autumn term. Do not be too ambitious. One Lesson Study cycle per term is enough. If you do it most effectively it is a lot of work.

Lesson study programme

Term 1					
Set up	Planning 1	Planning 2	Planning 3	Research lesson	Reflection 1
Term 2					
Set up	Planning 1	Planning 2	Planning 3	Research lesson	
Term 3					
Set up	Planning 1	Planning 2	Planning 3	Research lesson	Reflection 2

2.4 PLANNING FOR LESSON STUDY

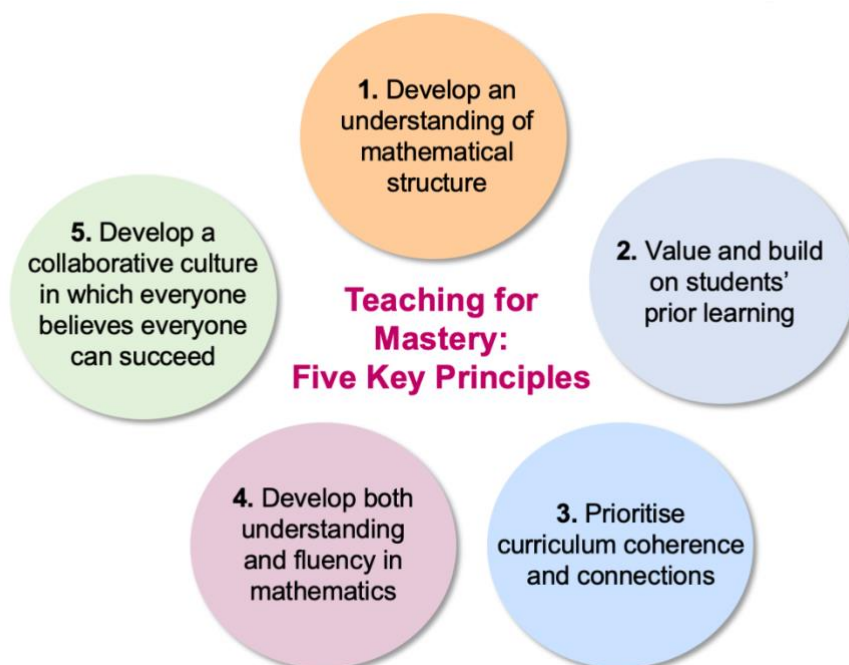
Central to LS is the research lesson. But there is an awful lot that needs to be done before you get to the research lessons of your Lesson Study work. There is much detailed advice throughout this toolkit, but here we give a high-level overview of how you might work strategically to ensure that the group hits the ground running.

1. Clarify with all members of the group what the aims and purpose that the Lesson Study work is trying to achieve.
What are you trying to achieve? (and why?)
How does Lesson Study inform the bigger picture.
2. What is Lesson Study? How will it work?
Prepare for the initial meeting with the group so that this will go smoothly.
You can find advice about getting started in [section 2.1](#).
3. Be very clear about the level of commitment.
Have a planned schedule (there is advice about this in [section 2.3](#)). Make sure that this is not too ambitious and works around other commitments in the college year.
4. Think carefully about the research theme for the work of the group. Make sure that you have some starting point for discussion about this. Ideally the research theme is addressing issues that are already identified as being of interest, or even problematic.

Think about how you will introduce important ideas relating to research lessons. It may be that newcomers to lesson study don't understand their central role.

The research lesson is not just any old lesson, it is a lesson that is carefully designed to allow the group to explore a question that they have identified that is important to their teaching within the overall focus of the research theme that informs all of their work.

For example, in the CFEM research trials the research theme was Teaching for Mastery and each of the research lessons had two research questions: one with a mathematical focus, the other with a pedagogical focus. The key principles that informed the Teaching for Mastery approach are illustrated in the diagram below. (You can read more about these in the [Teaching for Mastery Handbook](#)). The important point to make here is that whatever the research theme of your Lesson Study work it needs to be thought about carefully and all of your Lesson Study group should know as much as they can about it. There may not be a single Handbook setting out details - BUT everyone needs to understand it as much as they can.



2.5 PRE-LESSON BRIEFING

The pre-lesson briefing

It is helpful to have a briefing for everyone who attends the research lesson. This can be on the day of the research lesson. It is helpful to allow 30 minutes for this.

This briefing usually involves the following:

a) Introduction to the college and practical matters

The host of the group from the college should make sure that arrangements for the research lesson, are clear (e.g., how long it will last, any restrictions on taking photographs of students' work and so on).

In addition, they should point out anything that observers should know about the class and anything about any individual students (such as their sensitivity about being observed and so on).

It is also important for the class teacher to point out anything that has been specifically changed in the lesson to cater for the students in the class.

Everyone should be reminded of the research question for the lesson.

b) Advice for the observers

Make sure that everyone is clear about how they should behave during the research lesson. They should:

- Observe student learning, not judge the teaching.
- Focus on observations that may help address the research question(s).
- Avoid distracting students by talking to them or interacting with them in any other way (apart from maybe saying hello and being overtly friendly at the start of the lesson). (This is important because if an observer, for example, helps a student or group of students during the lesson, it interferes with the reality of teaching the actual lesson. The intention is to research how the lesson works when taught by an individual teacher).
- Make detailed notes about specific examples of student learning (for example their written work, discussions in pairs, and so on) so that they can contribute to the post-lesson discussion.
- Observers might find it useful to focus on only one group or pair of students to start with. This can be used to provide valuable insight during the post-lesson discussion after the lesson. It is very unusual to get detailed evidence of students' reactions during a lesson.

Some lesson study observers around the world have enjoyed recording their observations using [Lesson Note](#) on an iPad.

2.6 CHAIRING THE POST-LESSON DISCUSSION

It is important to designate someone to chair the post-lesson discussion well in advance of the day of the research lesson, so that they can prepare for the meeting - and ensure that they do as good a job as possible in making sure that everyone has a positive experience and learns as much as they can.

Before the day

The person who will chair the post-lesson discussion should make sure that they have the lesson plan in advance. They should work through it carefully anticipating how the lesson will go, and how students will respond and how the teacher will respond to these types of responses. More than anyone else, the post-lesson discussion chair should read around the topic and consider possible misconceptions, alternative approaches. In many ways they should engage in an independent version of *kyouzai-kenkyuu* where they consider curriculum materials, and research that is appropriate to the lesson topic and how it sits in relation to conceptual development across the curriculum.

The post-lesson chair should also think about the overall direction of travel of the lesson study group, how this research lesson sits within their sequence of lesson studies and how this will add to their understanding of the research. They should consider how they might handle this concluding aspect of the discussion.

On the day

If possible, try to ensure that the post-lesson discussion is held in the same room as the lesson, so that participants can refer to student work or materials used in the lesson.

If possible, it is also often helpful, if the research lesson is the last lesson of the day.

Duration?

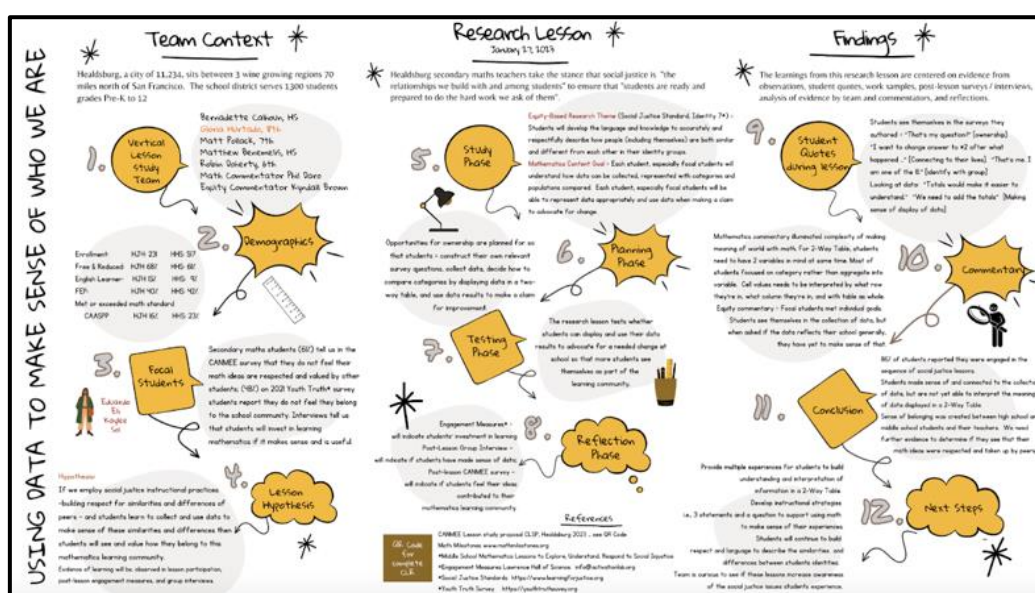
About an hour to an hour and a quarter seems a productive length of time for a discussion. However, if everyone is still actively engaged and enjoying the discussion, and is possible, there may be no need to terminate it that soon. You will need to use your judgment. This is a good reason why it might be helpful to have the research lesson as the last lesson of the day.

2.7 PULLING THINGS TOGETHER

It is important to celebrate the work of the Lesson Study group by recording it in a way that can inform future work of the group, and potentially publicise this work more widely.

There are many ways in which this might be achieved. Here we give some suggestions and advice.

- Consider how you will report outcomes from each separate Lesson Study and the group of Lesson Studies that relate to a particular research theme.
You could, for example,
 - Put together a document with a double page spread for each individual research lesson, and which brings together all of the research lessons in an individual document.
 - Make a poster for each research lesson that provides opportunities to include photographs of students' work.
 - A website that captures research lessons and groups these into their appropriate research themes can provide a good space to use as it can be updated easily, and can ensure that research lesson plans, lesson reports, and so on can all be kept in one place. Videos can also be captured - but make sure that you have permission from everyone before uploading.
- Keep your records brief, but make sure all the necessary information is given and most importantly what your group learned from the Lesson Study.
- Colleagues may be interested in using the lessons in their future teaching. Consider how you are going to make these available in ways that link to your learning from the lesson study process.
- Consider holding a seminar where you share your Lesson Study work more widely that the Lesson Study group. This could be for other teachers in your college, or maybe you could open the invitation more widely and invite teachers from other colleges.



Summing up a cycle of Lesson Study in a poster can be a really useful record of your work allowing dissemination of what was learned.

The Worlds Alliance of Lesson Study offers a template you can find [here](#).

2.8 THINKING ABOUT THE FUTURE

Fundamental to involvement in Lesson Study is the expectation that it is not a one-off activity: it is sustained over time in a way that embeds it as part of professional practice. Lesson Study involves a cost, especially a cost in terms of the time of the participants. The group at the outset needs to consider how they will cope with this. There is also much else to consider, put in place and maintain the ongoing work and the infrastructure that will sustain the group. Monitoring and discussion of the group's capacity to maintain their activity needs to be considered on a regular basis. The coordinator of the group should ensure that this happens ([see section 2.2](#)).

There is also a need to consider how to build capacity in leadership of the group, and in other key roles associated with the different components of the Lesson Study cycle, for example, in providing the outside expertise that knowledgeable others provide.

If the group wants to ensure that their Lesson Study work is sustained beyond a few cycles the group needs to move their thinking on from considering CLR as a project. We should consider how to make Lesson Study move beyond an initiative that will make sure of a quick-fix: try to consider it as long-term professional learning that becomes a part of what it means to be a teacher in your department/college/group. How you embed it as part of the normal expectations of work will be different in different colleges: as coordinator you will have to know the context of the college very well, and be respected as someone who can facilitate this in the medium to long-term.

A project at the University of Nottingham looked at issues of sustainability and scalability of Lesson Study and in the [final publication](#) recommended that at a college level, college leaders should:

- Ensure that policy and management values and reward the development of expertise in subject teaching.
- Support a culture of inquiry into what constitutes subject teaching expertise and focus this by establishing specific research themes within the school for periods of time.
- Ensure that time and energy is allocated to Lesson Study work.
- Facilitate and support cross-college collaboration to ensure cross-fertilisation of ideas.
- Support the work of the group so that they can draw on expertise from outside of Lesson Study group to ensure that participants can benefit from research, professional knowledge and state-of-the-art practice to stimulate future work of the group.

We recommend that the leadership of a CLR community pays careful attention to not only the initial stages of setting up their operational processes and structures but that these need revisiting and careful attention over time with a view to ensuring sustainability of the group.

2.9 SHARING YOUR LEARNING

Lesson Study aims to improve professional practice by providing a professional learning community. The process of engaging in cycles of LS supports both individual and collective learning. Individual learning is immediate and personal - although it can become shared with others as we progress through cycles of LS. But what of the collective learning of the group?

In Japan collective learning of the LS group may be captured in a number of different ways - and likewise disseminated using a range of strategies.

For example, the group (or college) may decide to summarise their learning from a year of LS around a particular theme. This might happen by bringing together a number of different teams at the end of the year (or an appropriate length of time) to share learning across a number of LS cycles. They may choose to put together a booklet that gives details of the different LS cycles that were carried out. Ideally, this will have many illustrations from the lessons to try to give as much authentic detail from classrooms as is possible. For greater potential for sharing widely this might be captured on a website. Alternative strategies are for different lessons to be 'captured' as posters. It seems important to consider how best to

summarise what was learned - possibly framing this around key ideas relating to the overarching research theme.

You can find some further practical advice about how to organise your sharing of learning in the advice about 'Pulling things together' in [section 2.7](#).

In the CfEM lesson study work which was part of the [National Trials](#) some of the 'data' that teachers collected, such as photographs, were used to add authenticity to the TfM Handbook which set out the TfM key principles as well as suggesting how these can be embedded in teachers' and students' practices. This allows teachers to share their experiences and learning in ways that can inform teacher groups more widely than might otherwise be the case.

Whilst the CfEM Teaching for Mastery in FE Handbook has been developed over a substantial period and with professional publishing expertise you may wish to consider producing a booklet that sets out your lesson study learning journey to share within the group and with colleagues more widely.



2.10 NETWORKING

Colleges, especially since the Centres for Excellence in Mathematics programme, seem ideal communities in which to develop a Lesson Study network as a number of regional partnerships have already been established.

It may be helpful if the leaders of in-college (or cross-college) Lesson Study Groups in a region meet together to consider how they might build a supportive network of operational Lesson Study groups. Perhaps one way to do this is through a local NCETM Maths Hub. Hubs have a record of supporting initiatives in professional development through their work group programme. A network of college Lesson Study group leaders may be something that they could support.

One outside source of inspiration and energy, and opportunities to meet with like-minded professionals are overarching organisations such as [Collaborative Lesson Research](#) and [Lesson Study Alliance](#) in the U.S.A., that support lesson study at a regional and/or national level. Organisations such as these can help provide high level direction and put you in touch with a community of CLR advocates and leaders. We recommend that you invest some time and energy in supporting such organisations so that they might develop their status so as to potentially influence policy at a system level.

However, lesson study as a form of professional development in the UK is at a relatively early stage of development. There are not ready made networks of lesson study practitioners ready to join. Hopefully supportive resources such as those of the CfEM programme and this toolkit will encourage to reach out to others, share your evolving Lesson Study practices and work with others to grow a base of lesson study in the U.K.

Finally, no matter what your experience to date, we recommend that you continue to engage with, and enjoy your journey in, CLR and the professional learning that results.



<https://www.collaborative-lesson-research.uk/>

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