



EARLY CAREER FRAMEWORK

SESSION OUTLINE | CONFERENCE 1

TITLE	TIMING
Understanding how pupils learn and developing practice to support this process. 2.1; 2.2; 2.3; 2.4; 2.5; 2.6; 2.7; 2.8; 3.2; 3.3; 3.7; 4.2; 4.3; 4.4; 4.5; 4.6; 4.8; 4h	6 hours

OUTCOMES
<ul style="list-style-type: none">> Understand how pupils learn by developing an in-depth understanding of the simple model of memory (Willingham 2009).> Know how their understanding of how pupils learn can be applied to subject and curriculum planning.> Know how their understanding of how pupils learn can be applied to instruction and classroom practice.

THE BIGGER PICTURE

This is the first face to face session of the programme. NQTs will have two full days of content during the course of the programme; one at the start of each academic year.

In this session, teachers develop their understanding of how pupils learn and explore why it is important to apply this knowledge to subject and curriculum planning and to ensure effective classroom practice to support the learning process.

Before this session takes place, teachers should have had exposure to key knowledge from ITT Core Content Framework on multiple areas of focus from today's session:

How Pupils Learn

- 2.1. Learning involves a lasting change in pupils' capabilities or understanding.
- 2.2. Prior knowledge plays an important role in how pupils learn; committing some key facts to their long-term memory is likely to help pupils learn more complex ideas.
- 2.3. An important factor in learning is memory, which can be thought of as comprising two elements: working memory and long-term memory.
- 2.4 Working memory is where information that is being actively processed is held, but its capacity is limited and can be overloaded.
- 2.5. Long-term memory can be considered as a store of knowledge that changes as pupils learn by integrating new ideas with existing knowledge.
- 2.6. Where prior knowledge is weak, pupils are more likely to develop misconceptions, particularly if new ideas are introduced too quickly.
- 2.7. Regular purposeful practice of what has previously been taught can help consolidate material and help pupils remember what they have learned.
- 2.8. Requiring pupils to retrieve information from memory, and spacing practice so that pupils revisit ideas after a gap are also likely to strengthen recall.

Subject and Curriculum

- 3.2. Secure subject knowledge helps teachers to motivate pupils and teach effectively.
- 3.3. Ensuring pupils master foundational concepts and knowledge before moving on is likely to build pupils' confidence and help them succeed.
- 3.7. In all subject areas, pupils learn new ideas by linking those ideas to existing knowledge, organising this knowledge into increasingly complex mental models (or "schemata"); carefully sequencing teaching to facilitate this process is important.

Classroom Practice

- 4.2. Effective teachers introduce new material in steps, explicitly linking new ideas to what has been previously studied and learned.
- 4.3. Modelling helps pupils understand new processes and ideas; good models make abstract ideas concrete and accessible.
- 4.4. Guides, scaffolds and worked examples can help pupils apply new ideas, but should be gradually removed as pupil expertise increases.
- 4.5. Explicitly teaching pupils metacognitive strategies linked to subject knowledge, including how to plan, monitor and evaluate, supports independence and academic success.
- 4.6. Questioning is an essential tool for teachers; questions can be used for many purposes, including to check pupils' prior knowledge, assess understanding and break down problems.
- 4.8. Practice is an integral part of effective teaching; ensuring pupils have repeated opportunities to practise, with appropriate guidance and support, increases success.

And – following expert input – by taking opportunities to practise, receive feedback and improve at:

- 4h. Combining a verbal explanation with a relevant graphical representation of the same concept or process, where appropriate.

While NQTs may come from different initial teacher training programmes, this conference day gives us the opportunity to address any misconceptions they might hold and fill any gaps in knowledge around these key areas. Though teachers may apply this learning in different formats in their classroom the learning in this session is pertinent for educators in all phases.

SUGGESTED THREAD AND ACTIVITIES

1-20 minutes: Welcome and reflection

This section could give an overview of the programme including dates for the diary. This might be an opportunity to get buy in from teachers and explain how the programme will support them and help them to develop their practice.

As you may have teachers who are new to the school and as this is possibly the first time all teachers will be together, this would also be a good opportunity to include an ice breaker activity where teachers get to know their colleagues.

20-110 minutes: Understanding how pupils learn

- 2.1. Learning involves a lasting change in pupils' capabilities or understanding.
- 2.2. Prior knowledge plays an important role in how pupils learn; committing some key facts to their long-term memory is likely to help pupils learn more complex ideas.
- 2.3. An important factor in learning is memory, which can be thought of as comprising two elements: working memory and long-term memory.
- 2.4. Working memory is where information that is being actively processed is held, but its capacity is limited and can be overloaded.
- 2.5. Long-term memory can be considered as a store of knowledge that changes as pupils learn by integrating new ideas with existing knowledge.
- 2.6. Where prior knowledge is weak, pupils are more likely to develop misconceptions, particularly if new ideas are introduced too quickly.
- 2.7. Regular purposeful practice of what has previously been taught can help consolidate material and help pupils remember what they have learned.
- 2.8. Requiring pupils to retrieve information from memory, and spacing practice so that pupils revisit ideas after a gap are also likely to strengthen recall.

This section should help to develop a shared understanding of what learning is before developing teachers' understanding of how pupils learn. This may include identifying key components of the learning process such as working and long-term memory, discussing the role of prior knowledge in learning and considering the challenges teachers may face where prior knowledge is weak and pupils have misconceptions.

You could also consider the limitations of working memory, the impact of cognitive load on learning and consider strategies to overcome these challenges. You may also wish to discuss the importance of developing opportunities for pupils to retrieve and consolidate learning.

Potential further reading can be found [here](#) and [here](#).

110-200 minutes: Exploring subject and curriculum planning

- 3.2. Secure subject knowledge helps teachers to motivate pupils and teach effectively.
- 3.3. Ensuring pupils master foundational concepts and knowledge before moving on is likely to build pupils' confidence and help them succeed.
- 3.7. In all subject areas, pupils learn new ideas by linking those ideas to existing knowledge and organising this knowledge into increasingly complex mental models (or "schemata"); carefully sequencing teaching to facilitate this process is important.
- 4.8. Practice is an integral part of effective teaching; ensuring pupils have repeated opportunities to practise, with appropriate guidance and support, increases success.

In this section you could discuss the importance of having clear learning goals when planning the curriculum. This will help teachers to be clear on what they want pupils to know and be able to do by the end of a period of learning but it will also help them to identify any gaps in their own knowledge which they will need to fill and be secure in before they begin to teach this content as secure subject knowledge helps teachers to motivate pupils and teach effectively.

It may be also useful at this point to encourage teachers to identify colleagues or networks who can support them in this process. Examples could be drawn from the directory of subject associations found [here](#), the [SSAT](#) or any other networks which are used in your context.

This section could also be used to help teachers develop their understanding of how pupils learn and how this knowledge will inform subject and curriculum planning. Points to cover when planning curriculum could include:

- Breaking down learning into smaller steps: Identifying essential concepts, knowledge, skills and principles of the subject and providing opportunities for all pupils to learn and master these critical components.
- Sequencing teaching so that we build on pupils' prior learning and support them to develop more complex mental models.
- Identifying particularly challenging concepts or potential misconceptions and planning how to overcome and address them.
- Planning opportunities for pupils to retrieve and practice, applying prior learning in order to consolidate material and help pupils remember what they have learned.
- Increasing challenge by ensuring the key knowledge is cumulative in its difficulty and that pupils have opportunities to apply their knowledge across a variety of contexts.

Teachers could practice applying these strategies across a unit of learning in a specific subject area.

Potential further reading can be found [here](#), [here](#) and [here](#)

200-280 minutes: Planning for effective classroom practice

- 4.2. Effective teachers introduce new material in steps, explicitly linking new ideas to what has been previously studied and learned.
- 4.3. Modelling helps pupils understand new processes and ideas; good models make abstract ideas concrete and accessible.
- 4.4. Guides, scaffolds and worked examples can help pupils apply new ideas, but should be gradually removed as pupil expertise increases.
- 4.5. Explicitly teaching pupils metacognitive strategies linked to subject knowledge, including how to plan, monitor and evaluate, supports independence and academic success.
- 4.6. Questioning is an essential tool for teachers; questions can be used for many purposes, including to check pupils' prior knowledge, assess understanding and break down problems.

Make good use of expositions, by:

- 4g. Combining a verbal explanation with a relevant graphical representation of the same concept or process, where appropriate.

This section could also be used to help teachers develop their understanding of how pupils learn and how this knowledge impacts their classroom practice. You may wish to explore elements of classroom instruction such as **explicit/direct instruction, dialogic teaching, developing metacognition and self-regulated learning, questioning** and **feedback**.

You could consider how combining a verbal explanation with a relevant graphical representation of the same concept or process, can support learning. Potential further reading can be found [here](#), for example on page 23. You may also introduce teaching and learning models based on the gradual release of responsibility such as 'I-We-You' or similar.

Teachers could practice applying these strategies to a single lesson, setting clear learning goals before planning how they will be achieved through classroom instruction.

Some links have been included in the text for possible sources of information and potential further reading can be found [here](#) and [here](#).

280-300 minutes: Action planning and next steps

This section is to provide teachers with time to consolidate and reflect on the learning from the conference. Teachers could be encouraged to identify specific steps they will take next to implement their learning.

This time should also be used to share any updates on the next components of the programme.

ECF 'LEARN THAT...' COVERED

2. How pupils learn

- 2.1. Learning involves a lasting change in pupils' capabilities or understanding.
- 2.2. Prior knowledge plays an important role in how pupils learn; committing some key facts to their long-term memory is likely to help pupils learn more complex ideas.
- 2.3. An important factor in learning is memory, which can be thought of as comprising two elements: working memory and long-term memory.
- 2.4. Working memory is where information that is being actively processed is held, but its capacity is limited and can be overloaded.
- 2.5. Long-term memory can be considered as a store of knowledge that changes as pupils learn by integrating new ideas with existing knowledge.
- 2.6. Where prior knowledge is weak, pupils are more likely to develop misconceptions, particularly if new ideas are introduced too quickly.
- 2.7. Regular purposeful practice of what has previously been taught can help consolidate material and help pupils remember what they have learned.
- 2.8. Requiring pupils to retrieve information from memory, and spacing practice so that pupils revisit ideas after a gap are also likely to strengthen recall.

3. Subject and curriculum

- 3.2. Secure subject knowledge helps teachers to motivate pupils and teach effectively.
- 3.3. Ensuring pupils master foundational concepts and knowledge before moving on is likely to build pupils' confidence and help them succeed.
- 3.7. In all subject areas, pupils learn new ideas by linking those ideas to existing knowledge, organising this knowledge into increasingly complex mental models (or "schemata"); carefully sequencing teaching to facilitate this process is important.

4. Classroom practice

- 4.2. Effective teachers introduce new material in steps, explicitly linking new ideas to what has been previously studied and learned.
- 4.3. Modelling helps pupils understand new processes and ideas; good models make abstract ideas concrete and accessible.
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- 4.8. Practice is an integral part of effective teaching; ensuring pupils have repeated opportunities to practise, with appropriate guidance and support, increases success.

ECF 'LEARN HOW TO...' COVERED

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SESSION PREPARATION AND LOGISTICS

AREA	REQUIREMENTS
Session type and length	6-hour conference
Groupings	Suggested approximately 30 teachers
Facilitators	Two facilitators per session.
Room set-up	N/A
Printing Specifications	None
Materials	– PowerPoint/presentation materials
Pre-session activities for participants	N/A
Post-session activities for participants	N/A
Facilitator pre-session preparation	<ul style="list-style-type: none"> – Facilitators should prepare resources, exemplifications and gather materials for the session. – Facilitators should, where possible, take into consideration the context of the teachers in the session and adjust accordingly.