



Maths Lesson Structure - Key Stage 1

Number Bonds (the beginning of each Maths lesson) - declarative knowledge

Purpose is for children to be confident and fluent with their number bonds and ensure that this knowledge transferred into the long-term memory.

5-7 minutes Monday to Thursday, during a session in an afternoon session, using **UL 5-minute** number bond strategy resources.

The Friday checker is used within class to test progress which is tracked over time.

The children learn one number bond every 6 weeks/half-term. Each week the children will have a number fact that they will focus on for the duration of the week. This will also be displayed in classrooms on the back of your door as 'Year X Maths Fact of the Week'.

Year	1:1	1:2	2:1	2:2	3:1	3:2
R	Finger work Show me Up to 5	2	3	4	5	10
1	10	6	7	8	9	doubles
2	10	doubles	9+	8+	7+	6+

Fact of the Week

Take one fact within each bond as focus for the week. This could be sent home or included on the maths fact of the week board within the classroom.

An example:

		۱	/ear 2 1:1	Bonds of 1	nds of 10					
Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8			
10 + 0 0 + 10	9+1 1+9	8 + 2 2 + 8	7 + 3 3 + 7	6 + 4 4 + 6	5 + 5	Go back to a tricky pair of facts	Go back to a tricky pair of facts			

Process

2/3 mins Teacher models with a child or TA.

To begin to use "I say, you say, we all say" strategy.

2/3 mins in pairs children do, teacher moves around the class checking, assessing, tweaking. TA to ensure the children are representing the number correctly with their fingers.

Daily Maths Lesson

60 mins daily:

- 2/3 mins review WR (usually recapping yesterday's learning)
- 45 minutes main lesson using teaching cycles and WR booklets.

Main lesson structure

Review of previous lesson – the purpose to remind children of what came before this lesson and to increase connections between yesterday's learning and the new learning. This will highlight the importance of building upon knowledge. The teacher briefly runs through key flipchart sheets from previous lesson, 2 minutes.

Share the Learning Intention with the children, on a slide but also on the visualiser/flipchart so it is available to be referred to during the lesson. At this point you may need to discuss any new vocabulary. For example: To find an equivalent fraction to a non-unit fraction.



The purpose is that the children know what they are learning in this lesson. Learning Intentions always begin with

- To know (knowledge)
- To be able to (skill)

There may be more than one Learning Intention in a lesson, and it could be taught over more than one day. For example, being able to exchange.

I - Model (I do)

The purpose of modelling is to explicitly and effectively teach what the children need to learn using metacognitive strategies. For example, the teacher models their thought processes and thinking aloud to complete a calculation.

There is **no participation by the children** at this point their role is to watch and listen. The teacher can use manipulatives and the visualiser to model both how to do the maths and how you want the work to be set out with use of teacher's own Maths book.

This usually takes 6-8 minutes in KS1 be mindful of children's concentration span, (usually their chronological age + or- 2 mins up to a maximum of 6-8minutes.)

WE - Guided Practice (Active we do)

The purpose is to give the children time to practice the new learning and give you time **to assess** how well the children have grasped the new learning.

The process:

- Encourage oracy within Maths using the STEM sentences that are displayed permanently on your Maths working wall and what you have modelled previously. Ensure that you are referring to the STEM sentences during the lesson by adults and children.
- The children usually do guided practice (we) in pairs at their tables (rally coach is a good Kagan structure to use) and teacher should be encouraging peer discussions.

Assessment point: (AFL)

- During peer discussion the teacher should be observing to discussion and identifying children that need some additional support before moving on to independent practice alone.
- Use a hinge point question for additional opportunity for assessment (AFL).
- When **80%** of the class is ready, move them to independent practice.
- Any children that you have assessed to need more support you will work with until they are ready. Here you might refer to the use of concrete resources, whiteboard work or work in their blue Maths books.
 - Identify children to be retaught by teacher.
- Remember that the children not only need to get the practice correct, they need to be able to **explain their methodology** and thinking.

Independent practice (You do)

The purpose: The children can practice their new learning without any help, thus the cognitive demand on them is increased.

The process:



- As the teacher works with a group of children, additional children may be added or taken away.
- If all children appear to get the new learning, the teacher will actively monitor (helicopter) the children's independent work. Then any children who are identified as needing help move back to guided practice with the teacher. This can also be an opportunity to deepen thinking related to the skill.
- **SEN children** During independent practice SEN children will receive a more scaffolded approach to the new concept. This may be with a class support (small group), use of manipulatives and incorporating SEN child's own individual targets into their learning.

Please note Independent does not mean that the children cannot **use manipulatives** to complete the task, it is that they can complete the task without being nudged or prompted or helped by another person.

Deepening Thinking

Are there some questions in the workbook that will be good to deepen the thinking of the children who get the learning and romp through the practice and get it all correct (Usually only 1 or 2 children in most lessons).

Problem Solving

Moving forward all children to do a deepening thinking question every week on a Friday where the whole class is taught explicitly how to solve problems (whole class problem solving).

Reteach

From time to time, the lesson just doesn't deliver learning for **most children**, this is when it needs to be retaught in a **different way** ideally then and there or the next day.

NCETM Mastery in Number

The purpose to enable the children to develop number sense.

The process

10 minutes per day, not part of the main maths lesson. Using the NCETM Mastery in Number materials, follow the script. Read at least the day before the lesson so you know what is coming.

Key Stage 2

Times Tables (at the beginning of each lesson) – declarative knowledge

Purpose

For all children to be fluent and flexible with their knowledge of multiplication and ensure that this knowledge is transferred into their long-term memory.

Process

7 minutes at the beginning of each lesson, following the UL times tables strategy. Using the gloves, times table number line and multiplication booklets. The children learn one timestables every 6 weeks/half-term. Each week the children will have a multiplication fact that they will focus on for the duration of the week. This will also be displayed in classrooms on the back of your door as 'Year X Maths Fact of the Week.'



Bank End Primary Academy Teleberi in response		Y3	intro x10 (3wks)	Intro x 5 (3 <u>wks</u>)	Intro × 2 Recap ×1, ×10, ×	lintro Re 5 ×10, 3	o × 4 cap ×5, × 2	Intro × 8 Recap ×5, ×2, ×4	Intro > Reca ×2, ×4,	-3 p ×8	Intro × 6 Recap ×4, ×8, ×3	
Year 3's		_	Intro	7	Intro x 9	latra	× 11	intro x 12	Rovisie	20	Revision	
Maths Fact of		Y4	Recap × 8, × 3, × 6,		Recap × 3 , × 6 , × 7 ,	7, ×9,×	cap 7, × 6,	Recap × 9, × 7, × 11,			ne vision	
the Week:		Fact of	f the Wee	L.								
8 x 4 =		Take of	ne fact wi the week	thin time: board wi	s-table as fo thin the cla	ocus for the assroom.	e week. Ti	nis could be	sent home	e or includ	ed on the	
		An exa	imple:		I	I	Year 3	2:1 ×4				
$4 \times 8 =$			-	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week	
				8 × 4 4 × 8	7×4 4×7	9×4 4×8	12 × 4 4 × 12	6×4 4×6	3×4 4×3	Repeat a tricky fact	Repeat a tricky fac	

Daily Maths lesson

60 mins daily:

- Includes 7 minutes times tables at beginning of the Maths lesson
- 2/3 minutes review WR (usually recapping yesterday's learning)
- 45 minutes main lesson

Main lesson structure

Review of previous lesson

The purpose to remind children of what came before this lesson. Teacher briefly runs through key flipchart sheets from previous lesson, 2 minutes

Share the Learning Intention with the children, on a slide but also on the flipchart so it is available to be referred to during the lesson.

The Purpose is that the children know what they are learning in this lesson. Learning Intentions always begin with

- To know (knowledge)
- To be able to (skill)

There may be more than one Learning Intention in a lesson, and it could be taught over more than one day e.g. being able to exchange.

Model (I do)

The purpose of modelling is to explicitly and effectively teach what the children need to learn using metacognitive strategies. For example, the teacher models their thought processes and thinking aloud to complete a calculation.

There is **no participation by the children at** this point their role is to watch and listen. The teacher can use manipulatives and the visualiser to model both how to do the Maths and how you want the work to be set out with use of teacher's own Maths book.

This usually takes 8-10 minutes in KS1, be mindful of children's concentration span, (usually their chronological age + or- 2 mins up to a maximum of 8 -10 minutes.)

Guided Practice (Active we do)

The purpose is to give the children time to practice the new learning and give you time **to assess** how well the children have grasped the new learning.

The process

• encourage oracy within Maths using the STEM sentences that are displayed permanently on your Maths working wall and what you have modelled previously. Ensure that you are referring to the STEM sentences during the lesson by adults and children.



- The children usually do guided practice (we) in pairs at their tables (rally coach is a good Kagan structure to use) and teacher should be encouraging peer discussions.
- Assessment point: (AFL)
- During peer discussion the teacher should be observing to discussion and identifying children that need some additional support before moving on to independent practice alone.
- Use a hinge point question for additional opportunity for assessment (AFL).
- When **80%** of the class is ready, move them to independent practice.
- Any children that you have assessed to need more support you will work with until they are ready. Here you might refer to the use of concrete resources, whiteboard work or work in their blue Maths books.
 - Identify children to be retaught by teacher.
- Remember that the children need to get the practice correct and explain their methodology and thinking.

Independent practice (You do)

The purpose: The children can practice their new learning without any help, thus the cognitive demand on them is increased.

The process:

- As the teacher works with a group of children, additional children may be added or taken away.
- If all children appear to get the new learning, the teacher will actively monitor (helicopter) the children's independent work. Then any children who are identified as needing help move back to guided practice with the teacher. This can also be an opportunity to deepen thinking related to the skill.
- **SEN children** During independent practice SEN children will receive a more scaffolded approach to the new concept. This may be with class support (small group), use of manipulatives and incorporating SEN child's own individual targets into their learning.

Please note Independent does not mean that the children cannot **use manipulatives** to complete the task, it is that they can complete the task without being nudged or prompted or helped by another person.

Deepening Thinking

Are there some questions in the workbook that will be good to deepen the thinking of the children who get the learning and romp through the practice and get it all correct (Usually only 1 or 2 children in most lessons).

Moving forward all children to do a deepening thinking question every week on a Friday where the whole class is taught explicitly how to solve problems (whole class problem solving).

Reteach

From time to time, the lesson just doesn't deliver learning for most children, this is when it needs to be retaught in a **different way** ideally then and there or the next day.



Daily 15 minutes (during the morning work) arithmetic and retrieval - procedural knowledge Purpose

To develop procedural fluency and to retrieve previously taught skills while developing mathematical connections.

Using Resources from JT follow the script of;

- 7 mins for the children to complete the tasks
- 8-7 mins for the teacher to clearly model using the visualiser and explain explicitly how to solve each question using metacognitive strategies.