

*Teaching &  
Learning Guide*  
**EYFS**

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Lead	TS & KM
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## Aims

- To ensure progression in depth and content through well thought through lessons where every minute is learning driven.  
**Intelligent sequencing**
- To ensure retention of key knowledge through regular retrieval practise.  
**Interrupt forgetting**
- To ensure appropriate scaffold and challenge at every stage of the Maths learning journey.  
**Teach up & Keep up**
- To dispel negative perceptions around Maths (Maths anxiety) and instil a belief in growth mindset in all our students.  
**Make Maths Magical**

## Teaching Sequence

### Long term planning

Long term planning is taken from the Maths Nav (<http://mathsnave.com/ks1.html>). This is broken down into weeks in the excel document entitled "Maths Long Term Plan 2019-2020".

To see how the curriculum progresses from one stage to the next, the "Curriculum Progression Document" should be used.

Reference should also be made to the ELGs in order to understand what the goal is for the end of EYFS. Reference also needs to be made to the Characteristics of Effective Learning.

In order to "interrupt forgetting, key units are repeated throughout the year. This ensures that content is revisited as well as ensuring appropriate new content is introduced.

### Medium term planning

Medium term planning documents are found on the Maths Nav by clicking on the "Scheme of Work" tab. The schemes of work offer advice on learning hours, suggested learning intentions, vocabulary and misconceptions.

They also indicate the curriculum statements that are being covered in this unit.



The "Maths Planning Document - Front Sheet" should be used to record the learning intentions and vocabulary (both taken straight from the schemes of work) you will be teaching for a unit.

Unit Title			
Learning Intention 1	Learning Intention 2	Learning Intention 3	Learning Intention 4
Vocabulary	Learning Intention 7	Learning Intention 6	Learning Intention 5
	Learning Intention 8	Learning Intention 9	Learning Intention 10
Learning Intention 14	Learning Intention 13	Learning Intention 12	Learning Intention 11

### Short term planning

There is no specific proforma that you must use for short term planning and if you prefer you might like to plan using your slides for your smart board. However, it is expected that you are well prepared for each lesson and have carefully thought through the different stages. If it becomes apparent you are struggling with this, it may be recommended that you use the "Daily Maths Planning" format.

Date:		LT:	
Responding to marking Max of 10 minutes	Children enter room and get out their <u>maths</u> books. They respond to closing the gap marking from you. This will involve either: Re teach Check Challenge		
Establishing the LJ Max of 3 minutes	What did we do last time? What is the goal for our learning for this unit? What are we covering this time? What is the key vocabulary?		
Teacher modelling and TA modelling			
Independent learning and guided groups	Do it	What are the key misconceptions addressed here?	Solve it
		Prove it	
Challenge/Plenary Max of 3 minutes			

### Vocabulary

Mathematical language is extremely important. In the Medium Term Plans, the vocabulary for each unit is indicated. During direct teaching, attention should be paid to what mathematical language should be introduced. This language should then be reinforced during learning conversations and through the environment. Given the evidence on



how long it takes to make new vocabulary stick, words should be constantly re-visited.

### Direct Teaching

Everyday, there should be direct teaching of Maths in EYFS. In Recognition of the age of the pupils, this should be no longer than 25 minutes. In addition, the teaching should be broken up by opportunities for pupil partner talk and learning activities. The direct teaching will also be made accessible by making full use of stories, rhymes and songs to support teaching whenever possible.

The structure of the Long Terms Plans is such that two units run concurrently (a number unit and a SSM unit). Each week there should be three number direct teaching slots and two SSM direct teaching slots.

### Maths in the provision

The provision is where pupils will demonstrate what they can do and what they have learnt from the direct teaching. As such, we expect the evidence gathered to be

**N** - natural

**I** - independent

**C** - consistent

**E** - embedded

The provision, therefore, should provide opportunities for the pupils to independently apply both Number and SSM.

Provision should be made exciting for the pupils in order to excite them about Maths and motivate them to choose Maths activities.

Use of the role play area should be used where possible to support Maths learning.

Adults in the environment should seek to scaffold mathematical conversation and prompt use of mathematical language.

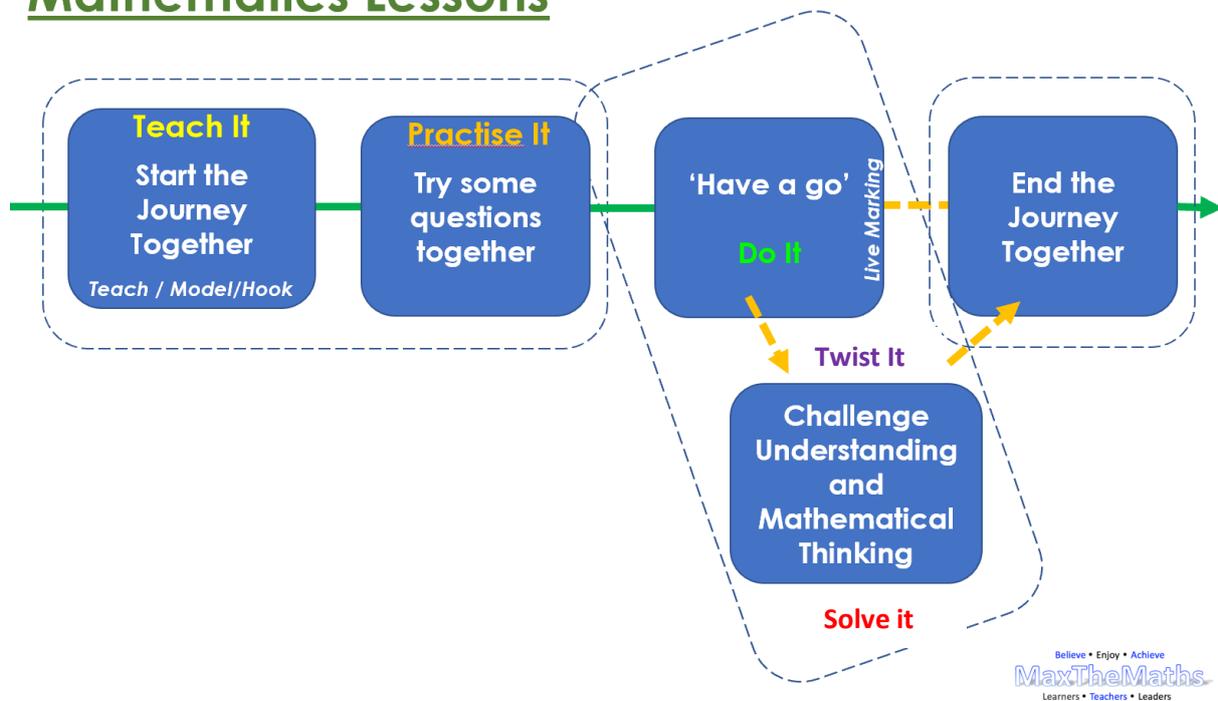
However, provision should never be forced. For example, Maths should not be done outside for the sake of doing "outdoor learning". Instead, meaningful



opportunities should be found to apply Maths both in the classroom and in the outside space.

### Lesson flow model

## Mathematics Lessons



The diagram above outlines the different elements of the lesson. Each aspect is deliberately included to achieve a specific purpose.

### Teach it

**PURPOSE** - model to the pupils how to be successful with the learning intention.

At this stage, it needs to be considered how you will demonstrate to the pupils how to do the mathematical skill you are working on. It will almost always be appropriate to use pictorial or concrete resources at this stage to help pupils understand the learning; however, only one representation or resource should be used (i.e. the one that is best to help the pupils understand).

It is important to drive home key messages at this stage that will help the pupils be successful. The key message could be



Learning	Key message
Recognise triangles	Triangles have three straight sides
Add fractions	We only add the numerators
Measuring with a ruler	Start from zero

The key message usually relates to a misconception. To test the pupils during the "Teach It" it is useful to try and trick them with a misconception (i.e. making the mistake deliberately and having the pupils correct you).

During the teach it, "Live Maths" should be created. This is where you record your modelling on flipchart paper so that the pupils can refer to it during the modelling. This flipchart paper should then be displayed on a Maths Washing Line for the duration of the Maths unit.

It is helpful to make use of stories, songs and rhymes to support the teach it

### Practise it

**PURPOSE - act as a bridge between the teach it and do it**

Before the pupils move on to independent application in the provision, they first need to practise the skill you have taught them. This would often be on whiteboards. During the practise it, you need to be assessing whether pupils are ready to move onto the do it. If they are not, they might need some additional explanation or adult intervention during the do it.

### Do it

**PURPOSE - challenge procedural fluency**

As the name suggests, the point of the "Do It" is for pupils to do the learning intention. It should not be over complicated but just be basic questions that follow on from what you have taught.

At the start of the Year, the Do It will often be done all together and with no formal recording.

Often, it will be good to make use of practical activities at the do it stage.

Attention should be paid to variation theory (what it is, what it is also).

Variation theory stresses making small, deliberate changes to how a question is presented in order to test procedural fluency.



This could look like this for two-digit number add one-digit number

i.  $15 + 4 =$

ii.  $12 + 7 =$

iii.  $13 + 8 =$

iv.  $9 + 14 =$

v.  $\underline{\quad} = 3 + 14$

Standard (What it is)

Non-standard (What it is not)

Often, it is easier to make up your own do it questions than to trawl the internet for them.

\*If pupils are not successful at the Do it stage, plans need to be put into place to think through what additional support can be put in.

Twist it

**PURPOSE - challenge pupils understanding by making them explain misconceptions**

The purpose of this stage of the lesson is to throw a misconception at pupils and get them to explain why it is wrong. This could be something like.



Melissa thinks this is a triangle because it has three sides. Is she correct?

$\frac{1}{4}$  is bigger than  $\frac{1}{2}$  because 4 is bigger than 2. What is the mistake?

In EYFS, this will be a whole group activity. For example, the teacher might be ordering numbers and put 3 and 4 the wrong way around or draw a 6 backwards. The teacher would then ask the pupils what mistake had been made and they would discuss this in partners.

### Apply it

Following direct teaching, provision should be available to independently apply their learning. This is the best opportunity for gathering of evidence related to Learning Journeys. Activities should be appealing, practical and motivating. As such, an over reliance on worksheets is to be avoided.

As well as the specific Maths CP, it is necessary to think about natural opportunities for Maths learning to be applied in the following areas

- Sand/water (outside)
- Role Play
- Creative
- Small world
- Story corner

### Differentiation

We do not differentiate by task instead looking to support & challenge through every step of our lesson design. This ensures that pupils do not get held behind by not being exposed to Age Appropriate Learning\*. In addition, it stops being held back by being labelled as "low ability". Instead we provide support for any pupil who needs it.

Support means

- Always using pictorial and/or concrete resources to scaffold the learning.
- Using the "Practise It" as an opportunity for AFL and supporting further where necessary.
- Using adult support (without removing independence).
- Same day or next day intervention to stop gaps appearing in the first place.

\*Some of our pupils will have recognised and specific SEND. These pupils will not be able to access the same learning as others at times (although assumptions should not be made that this is always true).

Where they need to access a different curriculum, their learning should be guided by their PLPs.



Like we do not label pupils as low ability, we also do not label pupils as high ability. This means we do not have pupils who don't follow our normal lessons sequence. This is because we provide deliberate challenge at every stage of the lesson.

**Key Learning Point**

**Do it**

1.  $0.51 + 0.3$
2.  $0.42 + 0.3$
3.  $0.2 + 0.42$
4.  $0.2 + 0.42$
5.  $0.5 + 1.23$

**Challenge Fluency**  
Accuracy, Efficiency, Flexibility

**Solve it**

Use the digits 0, 1, 2, 3, 4, 5 once to make a number that is:

- 1) The greatest possible answer
- 2) The lowest possible answer
- 3) 5.73 at least three different ways to make

**Challenge thinking**

**Twist it**

What mistake has Mary made?

$0.41 + 0.413 = 0.823$

**Challenge understanding**  
Conceptual

Opportunities for pupils to describe, explain, justify, convince, prove

If pupils are performing extremely well in a unit, consideration should be given as to whether they can be asked to solve a problem with their learning. Solving a problem could mean

- answering an empty box question
- answering a word problem (although attention needs to be given to literacy demand of this type of question)
- answering a probing question (show me, convince me, always/sometimes/never)

### AFL

Daily AFL will be happening all the time through questioning and observation of what pupils are doing independently.

Learning completed in exercise books should be ticked or green dotted. All feedback should be verbal apart from that in EYFS. Pupils should begin in EYFS to purple pen their learning when they have made a mistake.

It is more important to know what pupils can and cannot do in Maths than to be able to assess them on "Development Matter".



Evidence for each child should include

- Post it notes of what they are doing
- Short observations
- Pictures
- Transcripts of conversation.

Attention should be paid to the exemplification materials to inform effective assessment of pupils in Maths.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/360535/ELG11\\_Numbers.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/360535/ELG11_Numbers.pdf)

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/360537/ELG12\\_Shape\\_space\\_and\\_measures.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/360537/ELG12_Shape_space_and_measures.pdf)

## Environment

### Working Wall

Working walls for Maths should include the following

- "Maths road" with all the learning intentions for the unit on.
- Vocabulary for that unit on traffic light system (with pictures to support)
- Space for WAGOLLS (celebrations of good work) that should be changed every two weeks.

### Live Maths

On a Maths washing line, you should display the live Maths created for that unit of work. Each piece of live Maths should have the learning intention on it.

### Equipment Zones

To encourage pupil to use concrete resources when they need, an equipment zone should be in every class. This should contain

### EYFS

Numincon (EYFS)

Bead strings (EYFS)

### Exercise Books

Maths exercise books should contain for a unit



1. Unit Front Sheet (just the planning front sheet)
2. Work from the unit (including pictures where the learning is predominately practical).

