Eastway Primary School
Mental Maths Policy
Updated February 2014

Aim

At Eastway, our aim is for all children to leave us numerate, achieving fluency in mathematical skills. To achieve this fluency, it is essential that children master mental mathematical skills and knowledge.

Mental Maths Curriculum

We follow the expectations set out in the 2014 National Curriculum. The skills and knowledge relating to mental maths have been mapped out by year group and term by the maths subject leader (see appendix 1). Class teachers may change which term the knowledge and skills are taught to meet the needs of their children and to fit in with other topics, but all content for their year group should be taught and learned by the end of the year.

Animal Awards

The skills and knowledge for each term has been grouped into an animal award. The aim of this is to motivate children and to help them and their parents understand their next step in mental maths. Each child should be allocated their own animal award that matches their mental maths targets. (See appendix 2 for animal award year group map and appendix 3 for an example)

Time allocation

Each class should have:

- A weekly lesson, teaching the children strategies for their mental maths skills and knowledge, using models and images where possible
- Daily practise in the mental and oral starter of maths lessons
- Daily 10min times table practice (from Y2 upwards)

Assessment

Children should be assessed regularly. It is important that children's learning of mental maths is deep and goes into their long term memory. For this reason, children must show that they are able to achieve their objective fluently three times, with a two week gap between each assessment before a skill is assessed as achieved. Children may be assessed on several skills from an animal award at a time, as some may be being practised as others are being learned.

When making an overall judgement about children's levels in maths, a child should not be awarded a level if they have not achieved this level in their mental maths. For year groups working to old curriculum levels, please see appendix 4 for best-fit conversions between animal awards and levels. For individual children where there are specific difficulties with mental maths, class teachers may negotiate assessing the child's overall maths level above their mental maths level with the maths subject leader.

Differentiation

Children should be thoroughly assessed to find gaps in their mental maths knowledge. Each child should then be given an individual animal award target that meets these needs. Children's lessons should planned to meet the needs of each child.
For children working below age-related expectations, they should be given an animal award target at the level of their current needs, but planning should accelerate their progress up to age related expectations as soon as possible.
Please see separate SEN, Gifted & Talented and inclusion policies for further advice.

Home-learning
Regular practise is key to improving mental mathematics skills. Practising at home as well as at school will accelerate learning of these skills and knowledge. For this reason, mental maths targets should be the focus of maths home-learning.
All children in KS1 and KS2 have been given a set of playing cards and a 1-12 die for home-learning. F1 and F2 children may be given this where appropriate. Each week the class teacher should give children an activity to do at home with this equipment, linking to their animal award target.
Children should practice for 10-20mins (depending on age), five times per week.
The maths subject leader will also put links to online games to some of the animal award targets on the school website.

Other policies
Please refer to the following policies for further detail

- Teaching and learning
- Inclusion
- SEN
- Gifted & Talented
- EAL

Appendix 1: Year group expectations, mapped out by term

Early learning goal

- Count up to 20 objects accurately
- Count up to 20 things that are not objects e.g. claps or steps
- Place any 3 numbers up to 20 in order of size
- Find one more than numbers to 19
- Find one less than numbers to 20

Y1

Autumn	Spring	Summer
Count up to 20, starting from 0, 1 or any given number Count backwards from 20, starting from 20 or any given number less than twenty, down to 0 Count in multiples of 2 up to 20 Say one more than a given a number (up to 20) Say one less than a given number (up to 20),	Count 100, forwards and backwards, starting from 0, 1 or any given number Count in multiples of 10 up to 100 Count in multiples of 2 up to 100 Say one more than a given a number (up to 100) Say one less than a given number (up to 100),	Count to 199, forwards and backward, starting from 0, 1 or any given number Count in multiples of 5 up to 195 Count in multiples of 10 up to 190 Count in multiples of 2 up to 198 Say one more than a given a number (up to 199) Say one less than a given number (up to 199),

Y2

Autumn	Spring	Summer
Count in steps of 2, forwards and back (on multiples) Add a 2 digit number and ones Subtract ones from a 2 digit-number Add three one digit numbers Know your 10 X tables off by heart Know your division facts for your 10 X tables off by heart	Count in steps of ten, forwards and back, from any starting number (not multiples) Add a 2-digit number and tens Subtract tens from a 2-digit number Know your 2 X tables off by heart Know your division facts for your 2 X tables off by heart Name odd and even numbers	Add any two numbers in your head quickly with an answer less than 20 Subtract any two numbers less than 20 quickly in your head Count in steps of 5, forward and back (on multiples) Know your 5 X tables off by heart Know your division facts for your 5 X tables off by heart

Y3

Autumn	Spring	Summer
Count in multiples of 100, forwards and back, including 0 Count in multiples of 50, forwards and back, including 0 Know your 3 X tables off by heart Know your division facts for your 3 X tables off by heart Say 10 more or less than a number to (up to 3 digit) Say 100 more or less than a number (up to 3 digit)	Count in multiples of 4, forwards and back, including 0 Know your 4 X tables off by heart Know your division facts for your 4 X tables off by heart Add and subtract ones with a three digit number Add and subtract tens with a three digit number Add and subtract hundreds and a three digit number	Count in multiples of 8, forwards and back, including 0 Count up and down in tenths Know your 8 X tables off by heart Know your division facts for your 8 X tables off by heart Add two 2 digit numbers, with an answer more than 100 Subtract two 2-digit numbers

Y4

Autumn	Spring	Summer
count in multiples of 6 count in multiples of 1000 Know your 6 X tables off by heart Know your division facts for your 6 X tables off by heart Know your 11 X tables off by heart Know your division facts for your 11 X tables off by heart Find 100 more or less than a given number (up to 5-digit numbers) Count backwards through zero to include negative numbers	count in multiples of 7 count in multiples of 9 Know your 7 X tables off by heart Know your division facts for your 7 X tables off by heart Know your 9 X tables off by heart Know your division facts for your 9 X tables off by heart Round any number (up to 4-digits) to the nearest 10	count in multiples of 25 Know your 12 X tables off by heart Know your division facts for your 12 X tables off by heart Know all of your times tables up to 12 X 12 off by heart Know all of your division facts for the times table up t 12 X 12, off by heart Round any number (up to 4-digits) to the nearest 100 Round any number (up to 4-digits) to the nearest 1000

Y5

Autumn	Spring	Summer
Identify multiples of a number count forwards and backwards with positive and negative whole numbers, including through zero count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000	Say factors of a number, including factor pairs Say the common factor of two numbers Learn prime numbers to 19 off by heart	add and subtract numbers mentally with increasingly large numbers (for example, 12 462 – 2300 = 10 162). round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000

Y6

Autumn	Spring	Summer
perform mental calculations, including with mixed operations and large numbers - 2 step mental maths	round any whole number to a required degree of accuracy	

Appendix 2: Animal award map by year group

	Spring	Summer	Autumn
EYFS			Chinchilla
Y1	Otter	Elephant	Snow leopard
Y2	Giraffe	Chimpanzee	Guinea Pig
Y3	Owl	Chameleon	Badger
Y4	Orang-utan	Narwhal	Red panda
Y5	Grey Seal	Gecko	Tasmanian Devil
Y6	Duck Billed Platypus		

Appendix 3: Example animal award

Otter Targets

	Date achieved	Date achieved	Date achieved
Count up to 20, starting from 0, 1 or any given number			
Count backwards from 20, starting from 20 or any given number less than twenty, down to 0			
Count in multiples of 2 up to 20			
Say one more than a given a number (up to 20)			
Say one less than a given number (up to 20),			

Otter Award Achieved!

Awarded to:

……

Date :……

Your next award is the Elephant

To earn that, you must:

- Count to 100, forwards and backwards, starting from 0, 1 or any given number
- Count in multiples of 10 up to 100
- Count in multiples of 2 up to 100
- Say one more than a given a number (up to 100)
- Say one less than a given number (up to 100),

Appendix 4: Best fit old NC levels against animal awards

NC 2014 age related expectation	Animal Award	NC 2000 level equivalent (best fit)
Y1	Otter	L1
	Elephant	L2
	Snow leopard	L2
Y2	Giraffe	L2
	Chimpanzee	L2/3
	Guinea Pig	L2/3
Y3	Owl	L3
	Chameleon	L3
	Badger	L3/4
Y4	Orang-utan	L4
	Narwhal	L4
	Red Panda	L4
Y5	Grey Seal	L4
	Gecko	L4
	Tasmanian Devil	L4
Y6	Puck Billed Platypus	L5