https://everychildcounts.edgehill.ac.uk
ecc@edgehill.ac.uk
01257 517 190

To: Headteachers of schools booked to take part in Numbers Count

SCHOOL PREPARATION FOR NUMBERS COUNT TRAINING

Welcome to Numbers Count! Here is some information about the intervention and how to prepare for it before your Numbers Count teacher and Link Teacher come to Day 1 of the training course. Please give them a copy of this document.

Numbers Count is an Every Child Counts programme developed by Edge Hill University. Your local Every Child Counts (ECC) Provider or the school/organisation that has arranged to host the training will tell you about the dates and venue of the course. If you need any more information, please do not hesitate to contact them or the ECC Team at Edge Hill University.

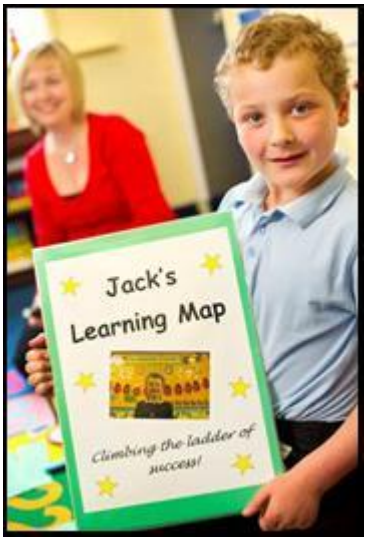
I do hope that your staff and pupils enjoy and benefit from Numbers Count.

Yours sincerely,

Louise Matthews, Head of Every Child Counts Mathematics

ABOUT NUMBERS COUNT

Numbers Count is a highly effective intervention for children in Key Stages 1 to 3 who find mathematics very difficult. A specially trained teacher helps them to get back on track and to keep up with their peers.



It has two versions:

Numbers Count 1 for children in Years 1 to 3

Numbers Count 2 for children in Years 4 to 9

Your training course will be for ONE of these versions, as arranged with your ECC provider or host. If you are unsure which one it will be, please check with them.

The Numbers Count teacher teaches children for half an hour 3 to 5 times a week for 3 – 4 months. Lessons are delivered individually while the teacher is in training and individually or in twos or threes thereafter. The teacher uses a detailed diagnostic assessment to plan a programme tailored to each child's needs. Rigorous, active lessons focus on number and calculation, helping children to develop the skills and positive attitudes that will ensure good progress in class mathematics lessons. The teacher liaises with parents and shares their specialist knowledge with colleagues informally and through structured CPD, helping to raise standards for all children.

What impact does it have?

Over 50,000 children in Years 1 to 11 have been supported by Numbers Count in 2,500 schools.

- They made an **average Number Age gain of 16.5** months in only 4 months – over 4 times the expected progress - and **kept pace with their peers** afterwards.
- Class teachers said that **95% of children were more confident and interested** in learning mathematics after Numbers Count.

"Where programmes such as ECC and Numbers Count were used effectively, pupils overcame their misconceptions and the school used information about its pupil's misconceptions to adapt teaching for subsequent cohorts"

Mathematics: Made to Measure, Ofsted, 2012

"Many head teachers took an interest in the training and reported that it was the best they had ever seen."

Independent Evaluation of ECC, DfE 2011

What training and support will we get?

Your Numbers Count teacher will attend **7 days of training** spread over three terms, and will begin to support children straight after Day 1. The training will include:

- how to deliver Numbers Count
- assessing and planning for children's numeracy needs
- study of the mathematics curriculum
- support parents and colleagues across the school
- detailed guidance in handbooks

Your Link Teacher will attend the first morning with your Numbers Count teacher. The morning will include:

- an overview of Numbers Count
- managing and evaluating the intervention

Your school will also receive a **one-year ECC support package** including:

- online guidance and downloadable resources
- access to the ECC online data system, providing analyses of children's progress to help schools to evaluate and demonstrate the impact of Numbers Count
- telephone and e-mail support
- two support visits to the school from the ECC trainer
- opportunities for Every Child Counts accreditation

THINGS TO DO BEFORE THE TRAINING BEGINS

Appoint a Numbers Count Teacher

You will need to appoint a Numbers Count teacher who:

- has Qualified Teacher Status and has passed any relevant statutory induction period
- has the equivalent of at least two years of recent, successful teaching experience at a relevant age phase

Appendix A contains a sample person specification and job description.

Some schools choose to deploy an existing member of staff, who may be a class teacher and/or a member of the senior management team, to combine part-time Numbers Count teaching with part-time continuation of their previous role.

Other schools choose to recruit a new member of staff. You might recruit a new Numbers Count teacher who will receive full training in his/her first year, or you might recruit a teacher who has already been trained and accredited elsewhere.

If there are ECC schools local to you, then wherever possible, a newly recruited or potential Numbers Count teacher should visit one and observe a Numbers Count lesson in the term before

s/he begins to teach Numbers Count. This will help him/her to understand the nature of their new role and to hit the ground running when s/he starts.

Identify a Link Teacher to attend half a day of training and support the Numbers Count teacher

The Link Teacher should be an experienced member of the senior leadership team and will:

- help to promote and manage Numbers Count within the school
- support the Numbers Count teacher
- carry out exit assessments of the children's progress
- attend the first morning of training with the Numbers Count teacher

Set up a teaching area and obtain resources

The school can identify and begin to prepare a Numbers Count teaching area. It should:

- be well lit and ventilated and at a comfortable temperature
- have appropriate furniture with a suitable chair for the teacher
- have appropriate resources to enable the creation of a number-rich environment
- have suitable storage to enable easy access to and use of the resources
- enable children to move around during the lesson
- enable active and sometimes noisy Numbers Count lessons to be conducted without disturbing or being disturbed by the work of the school

The Numbers Count teacher will need a range of resources for their teaching and their professional development. These are shown in *Appendix B*.

Identify a deployment model for the Numbers Count teacher

The minimum requirement for a Numbers Count teacher to become accredited is that s/he teaches 6 children 1-to1 while being trained; each child should receive at least 3 and preferably 5 lessons a week, with a total of at least 40 lessons. S/he can maintain accreditation by teaching at least 3 children per year, teaching them individually or teaching 2 or 3 children together.

A Numbers Count teacher normally works on a 0.5 or 0.6 timetable, but schools also adopt many other models. The following examples illustrate two possible approaches.

SCHOOL A has a new teacher in training who has a 0.5 timetable and gives Numbers Count support to 14 children in his/her first year.

- While being trained, s/he teaches 4 children 1-1 for 5 mornings a week in each of the autumn and spring terms.
- When s/he has been accredited, s/he teaches 6 children in flexible group sizes for 5 mornings a week in the summer term.

SCHOOL B has a new teacher in training who has a 0.3 timetable and gives Numbers Count support to 8 children in his/her first year.

- S/he teaches 4 children 1-1 for 3 mornings a week in the first half of the year, and another 4 children in the second half.
- S/he is accredited at the end of the year and will be able to teach children in flexible group sizes in the next year.

THINGS TO DO AFTER THE FIRST DAY OF TRANING

Training on Day 1 will include guidance on these steps. You may wish to prepare them beforehand.

Choose the children to take part in Numbers Count

A school can use its tracking records at or before the start of the year to draw up a long list of the children who have the lowest attainment and are therefore potential candidates for the Numbers Count places. The number of children who can be supported in a year will vary according to circumstances:

- a new teacher in training can typically teach 4 children individually in each on the first two terms and 6 children in flexible group sizes in the third term, i.e. 14 children in the year
- an accredited teacher might teach at least 18 children in flexible group sizes during a year
- teachers who work more or less than five half days a week throughout the year can teach more or fewer children than the above examples.

All selections should be guided and approved by the senior management team. The ECC Trainer can give further guidance if requested.

Numbers Count (Years 1 to 3) and Numbers Count 2 (Years 4 to 9) are designed for children who have the greatest difficulties in mathematics. They work best for the very lowest attaining children, unlike some initiatives that have been targeted at children who are just below national norms.

All children can gain from Numbers Count, irrespective of special educational need, gender, ethnic background, or home language. There is only one known exception:

- children who have been identified as having severe and complex developmental disorders may not benefit from Numbers Count.

In general, the children who have the greatest needs should receive Numbers Count at the start of the year, because:

- they will take part in Numbers Count in the longest (autumn) term
- they will then have two terms of follow-up support with their present class teacher in liaison with the Numbers Count teacher
- it is easier to extend their Numbers Count programmes into the spring term if they need more time.

Prepare a timetable

The school should identify four 30-minute slots in each half day when the Numbers Count teacher will consistently be able to teach children:

- the time slots can vary each day to take account of the school's timetable and the Numbers Count teacher's availability
- it may be helpful to build in a least a 5-minute break between lessons, enabling the Numbers Count teacher to set up for the next one
- you may wish to consider identifying a set time in the day when the Numbers Count teacher willbe able to liaise with colleagues and parents

- PPA time will be allocated on a pro-rata basis. Effective ways of timetabling might include building in time between Numbers Count lessons and/or ensuring that the Numbers Count teacher can take PPA at the same time as the children's class teacher (s) in order to provide for liaison in terms of planning, reporting, etc.

Allocate children to each lesson:

- to minimise disruption to the children's regular teaching, ensure that no child is timetabled for a Numbers Count lesson at the same time every day or in consecutive weeks.

The sample timetable below uses a two-week morning schedule that can be repeated fortnightly. Schools may want to explore a range of alternative timetables, including afternoon slots, according to teacher availability.

SAMPLE TIMETABLE					
	Lesson 1	**Lesson 2**	**Lesson 3**	**Lesson 4**	**Liaison**
	9.00-9.30	9.35-10.05	10.10-10.40	11.00-11.30	11.30-12.00
Week 1					
Monday	Child A	Child B	Child C	Child D	Liaison
Tuesday	Child D	Child A	Child B	Child C	Liaison
Wednesday	Child C	Child D	Child A	Child B	Liaison
Thursday	Child B	Child C	Child D	Child A	Liaison
Friday	Child A	Child B	Child C	Child D	Liaison
Week 2					
Monday	Child D	Child A	Child B	Child C	Liaison
Tuesday	Child C	Child D	Child A	Child B	Liaison
Wednesday	Child B	Child C	Child D	Child A	Liaison
Thursday	Child A	Child B	Child C	Child D	Liaison
Friday	Child D	Child A	Child B	Child C	Liaison

Appendix A

PERSON SPECIFICATION	
CRITERIA	**ESSENTIAL COMPETENCIES**
Experience	1. Recent experience of teaching mathematics successfully with at last 2 years in an appropriate age phase
Qualifications and Knowledge	1. Qualified Teacher Status and passed any statutory induction period 2. Good knowledge of the mathematics curriculum 3. Excellent understanding of curriculum and pedagogical issues relating to mathematics, including the latest inspection and research findings 4. Knowledge of effective strategies to include, and meet the needs of, all pupils within mathematics teaching, in particular pupils learning EAL and pupils with SEN
Skills and Abilities	1. Excellent classroom practitioner 2. Demonstrable ability to be adaptable and solve problems 3. Show a willingness to learn, acquire and apply new knowledge and skills 4. Good interpersonal skills 5. Good communication skills, both written and oral 6. Good influencing/negotiating skills 7. Confident use of information and communication technology (ICT)
Commitment	1. To practise equal opportunities in employment and service provision 2. To maintain engagement in professional development linked to the competencies necessary for this post, including regularly making and sharing video recordings of lessons 3. To maintain consistently high standards and expectations in all aspects of the post
Personal	1. Willingness to share expertise, skills and knowledge and ability to encourage others to follow suit 2. Ability to work independently and as part of a team 3. Sensitivity to the needs of others 4. Openness and willingness to address and discus relevant issues
Context	1. The school(s) are located in xxxxxxxxxx. Training events will be located in xxxxxxxxxx. It will be necessary to move from the school to the training centre and to visit other teachers on a regular basis so either the use of a car or public transport will be necessary.

Job Description for a Number Counts teacher

1. Work with school senior management in the use of school tracking and assessment procedures to identify children in need of Numbers Count support.

2. Implement the required assessment procedure for the children selected for Numbers Count.

3. Plan for and teach Numbers Count lessons in keeping with the Standards for Numbers Count teachers.

4. Maintain close and regular links with the class teachers of children receiving Numbers Count support to ensure that progress in maintained and independence prompted in whole class lessons.

5. Plan for children's exit from Numbers Count and support class teachers and senior management in monitoring the ongoing progress of children who have completed a programme.

6. Maintain careful records on each child as a basis for instruction.

7. Communicate with parents/carers, school managers, teachers and teaching assistants: providing documentation and explanations, feedback on lessons and sharing and planning and assessment processes.

8. As part of the school's overall approach to data management, ensure that required data for national monitoring of Numbers Count is compiled and submitted.

9. Attend and make maximum use of the Numbers Count training and professional development, ensuring completion of the professional portfolio and intersessional tasks.

10. Keep abreast with developments in mathematics teaching; share acquired skills with staff in school and elsewhere.

11. Work with colleagues in school to support effective practice in the teaching of mathematics.

12. Welcome other staff to observe Numbers Count lessons.

13. Receive and respond to guidance and support visits from an ECC Trainer.

14. Receive visits from and make visits to other Numbers Count teachers

15. Make regular video recordings of Numbers Count lessons, having first obtained the written consent of parents/carers, and use them to asses children's learning.

Appendix B: Numbers Count Resources

Essential Teacher Resources	Details	Notes
Unrestricted internet access for data entry and retrieval	Any restrictions on access to non-standard sites / ports and to features such as pop-ups will need to be lifted.	
An appropriate standardised test of numeracy or mathematics. We recommend the Sandwell Early Numeracy Test. Age-related GL Assessment Progress in Maths tests are also suitable.	Sandwell Inclusion Support Service: 0845 352 7552	http://www.gl-assessment.co.uk ECC Schools get a 5% discount when using the code GL671
A small digital camcorder (or video camera) with tripod	We recommend that all ECC schools in an authority use the same model, for ease of technical support and training.	Camcorders of appropriate quality are available for around £200.
Thompson I. (ed) Teaching and Learning Early Number, 2nd ed. (2008)	Open University Press ISBN 978 0335 234 110	Available from online bookshops for £15 -20.
Haylock D & Cockburn A. Understanding Mathematics for Young Children, 4th ed. (2013)	Stage publications 2013 ISBN 978 1446 248669	Available from online bookshops for £24.99
Essential Teaching Materials		
Hundred square (display and individual use)		
Blank hundred square (display and individual use)		
Number grid carpet (if you have space in your teaching area)		
Numberline 1-100 (display and individual use)		
Selection of numberlines and tracks, including 0-20 numberline and colour-coded numberline		
Selection of number track games		
Counting stick		
Linking cubes		
Base 10 equipment (e.g. Dienes)		
Structured number and tile base boards (small pack) (e.g Numicon)		
Variety of coloured counters – e.g. 2-sided (different colours) transparent		
Beadstrings 1-10, 1-20, 1-100		
Beadbar 1-100		
Calculator		
A variety of dice – giant, small, dots, numbers, polyhedral		
Digit cards, 1-100 cards or blank playing cards		
Place value chart HTU		
Place value arrow cards & rectangular cards		
Target boards		
Coins		
Dominoes		
Magnetic numerals and operations		

Small whiteboard easel that can double as magnet board
Washing line numbers, pictures and pegs
Coathanger and pegs
Straws and bundling sticks
Objects for sorting (e.g. people, fruit, transport, animals) & sorting rings
A4 whiteboards for individual use and suitable pens
Flipchart paper and pens
Coloured pencils, felt pens and wax crayons
Range of paint, glitter, and glue, coloured card and paper and scissors

Desirable Teaching Materials
Laptop computer or desktop computer with display
Helical number lines: 0-30 and 0-136 small (individual use) 0-136: large (demonstration and individual use) e.g. Numdrum)
Arithmetic rack (bead counting frame)
Coloured number rods (e.g. Cuisenaire)
Programmable toy
Bus with Velcro passengers (no longer on sale bit its worth making one)
Pan balance
Glitter numbers and operations
Foam stamp numbers and operations
Number cutters
Number fans 0-9
Blank fans
Fruit box and toy fruits for counting
Threading equipment
Peg boards and pegs
Small sand tray and sand
Play dough
Felt and other material
Puppets
Story books with mathematics themes