Helping our children to achieve

Maths: Information for Parents

November 2023

Our aims for this information evening are:

- To outline some of the key skill and concepts your child needs to know
- To share some of the activities that we do in school
- To provide ideas on how you can support your child at home

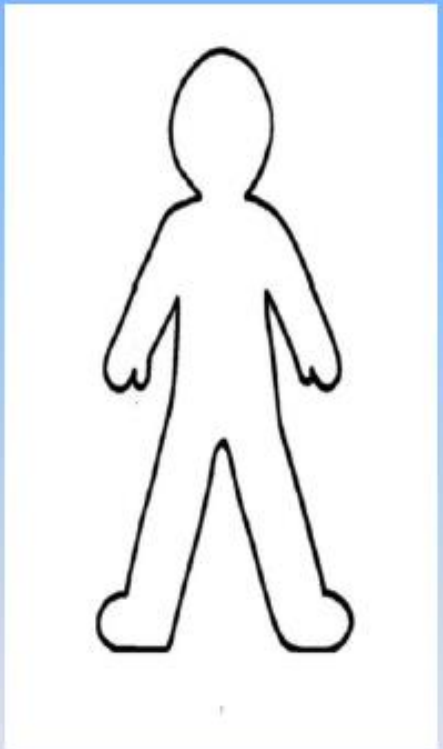
Developments and changes

Expectations that children will cover the maths objectives for their year. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice. before moving on.

- Using a practical, visual , abstract approach at all ages for all children
- Fluency
- Depth
- Mastery

P
V
A

What are the characteristics of a child who is good at maths?



A child who:

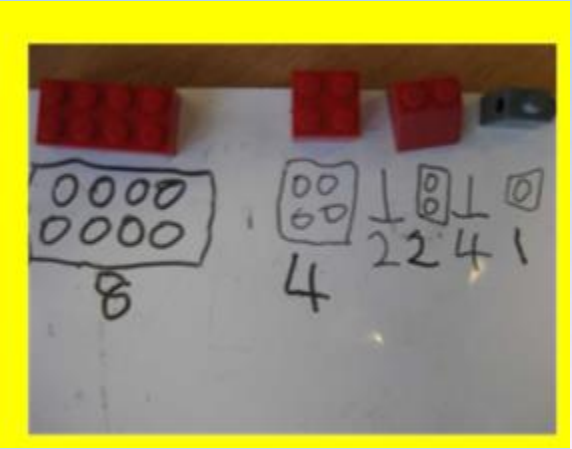
- takes risks
- asks questions and explores alternative solutions without fear of being wrong
- enjoys exploring and applying mathematical concepts to understand and solve problems
- explains their thinking and presenting their solutions to others in a variety of ways
- reasons logically and creatively through discussion of mathematical ideas and concepts
- becomes a fluent, flexible thinker able to see and make connections

Practical Visual Abstract

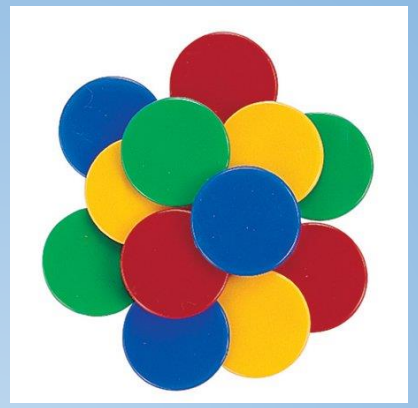
Practical Experiences

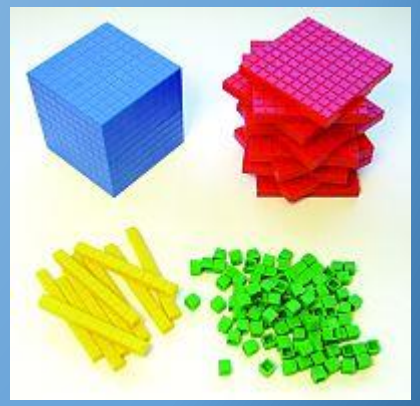
Concrete representation

- This is a 'hands on' component using real objects and it is the foundation for conceptual understanding



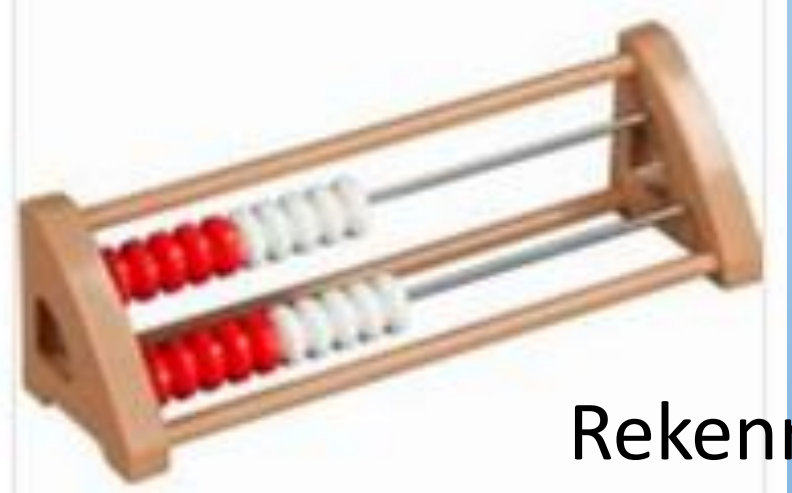
Practical resources





White Rose Education

Mastering number (NCETM)



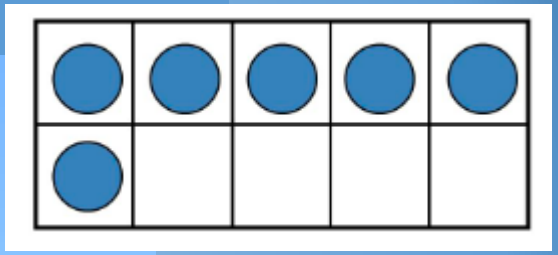
Rekenrek

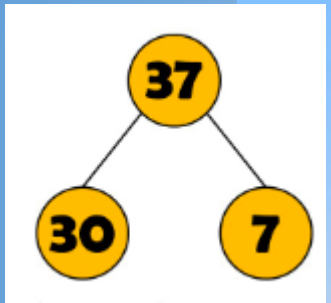
[Rekenrek | Free Virtual Manipulatives | Toy Theater]

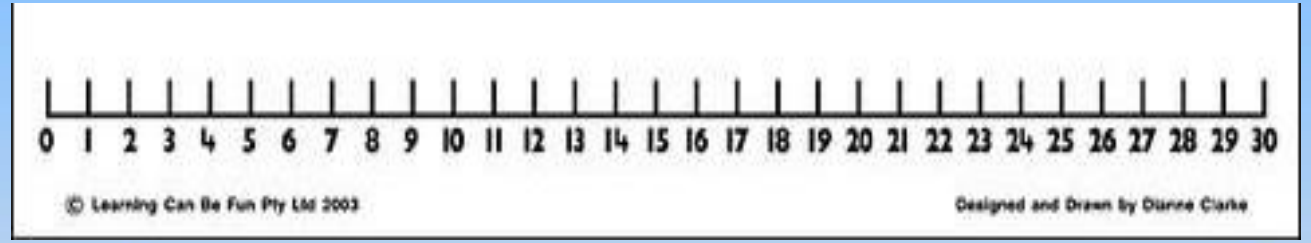
Visual Experiences

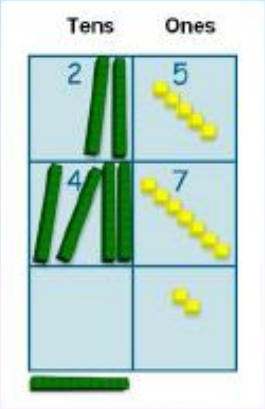
Visual **representation**

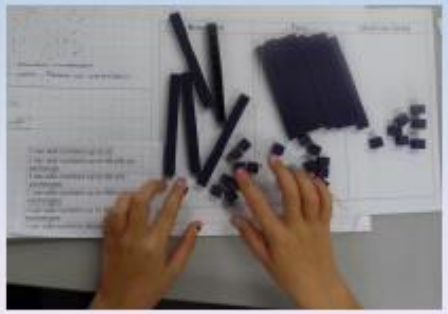
Using representations, such as a diagram or picture of the problem.

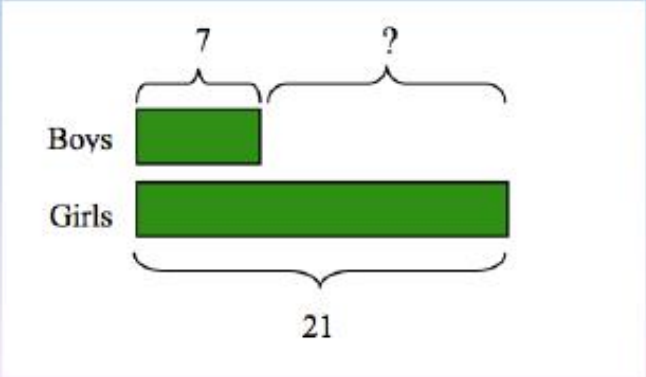










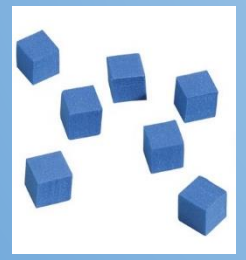


Practical to Abstract

Problem – Mrs Martin had 15 grapes. She was given 7 more. How many does she have now?

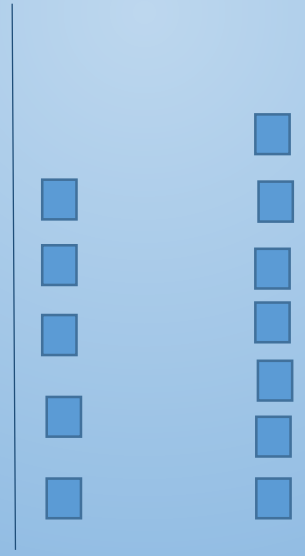
P

(Practical)



V

(Visual)



A

(Abstract)

15 + 7 = 22

How do they solve calculations?

+ - x ÷

+	-
Number bonds	inverse number bonds
Adding real objects	Taking away real objects
Bar modelling	Crossing off
Number lines	Number lines
Tens and ones	Bar modelling
Exchanging	Tens and ones
Formal method	Exchanging
	Formal method

x	÷
Number square	Halving
Double	Sharing practically into groups/ sets
Sets of/ groups of real resources	Sharing abstract resources
Numicon pieces	Arrays – practical/ visual
Arrays – practical/ visual	Number lines – repeated subtraction
Number lines – repeated addition	Inverse times tables
Chanting times tables	

add
make
total
plus
addition
more
sum
altogether

difference between
subtract
leave
minus
less
take away

balance
same as
equals

multiplication
times
multiply
groups of
multiple of
multiplied by
lots of
repeated additon

divided by
share
divided into
divide
equal groups of
share equally

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Mastery

- Not about bigger numbers

- Can they apply it in lots of different situations?
- Retaining it over time - repetition

- Money
- Weighing
- Measuring
- Real life situations

Developing maths

- Prompting thinking & questioning
- Providing opportunities to manipulate, experience and see (use of resources)
- Develop thinking through investigation
- Reasoning and making connections
- Engaging in talk
- Enabling learning through drawing attention to
- Encouraging children to make links and generalise

Maths is about spotting patterns, making links and understanding how pieces of knowledge fit together. NOT purely memorising facts and procedures by rote.

Solving Problems

- Word Problems
- Same but different
- Odd one out
- True or false?
- Prove it/ convince me
- Make a rule

Word Problems

- Mrs Martin was having a party. She had invited 12 people. She wanted to buy enough sandwiches for everyone to have 4 each.
- How many sandwiches does she need to make?

Word Problems

- Mrs Martin was having a party. She had invited 12 people. She wanted to buy enough sandwiches for everyone to have 4 each.

- The shop sold sandwiches either singly or in packs of 5.

8p

35p

- Which is the better deal?

Buying a Balloon

Lola bought a balloon at the circus. She gave the clown six coins to pay for it.

What could Lola have paid for the balloon?

Which of your answers seems a reasonable amount to pay for a balloon?

Same but different

What’s the same and what’s different about the three sets of calculations?

10 – 9 =	20 – 19 =
10 – 8 =	20 – 18 =
10 – 7 =	20 – 17 =
10 – 6 =	20 – 16 =
10 – 5 =	20 – 15 =

True or False?

$$7 + 8 = 15 - 6$$

5 copper coins can be worth more than 1 silver coin.

Odd one out

55 92 86

Amalya thinks that 86 is the odd one out.

What reason might she give?

Always, sometimes, never

You can make £1 using an odd number of coins.

Convince me!

Prove it.

- If I add 10 to a number the second digit stays the same

- All the numbers in the 5 times table end with a zero.

- Anna has 3 silver coins in her hand. Larry says, “I have more than you because I have a £1 coin.” Is he correct? Explain why.

Convince me…

14, 6, 20

Elena says, ‘ I will use an addition sign for this calculation.
Aaron says ‘I will use a subtraction sign for this calculation.
Who is right?

Make a rule.

- What rule can you make for the 5 times table?

Homework

- Year 1 – Half termly tasks in their homework book

  Weekly Tapestry post summarising the maths that week, giving practical activity ideas and links to websites
- Year 2 – 3 weekly homework – sets different levels of challenge/ practical activities and links to websites
- Reception – Weekly Tapestry posts with general learning from the week. It will include maths when key learning.

- Homework doesn’t need to be a sheet!

Place value at home…

You could use…

- Coins
- Pasta
- Buttons
- A bead necklace
- Packs of raisins
- Straws

Anything you can group into 10s and ones!

You could do…

- Making numbers
- Adding 10s then 1s
- Subtracting 10s then 1s
- Adding groups of 10

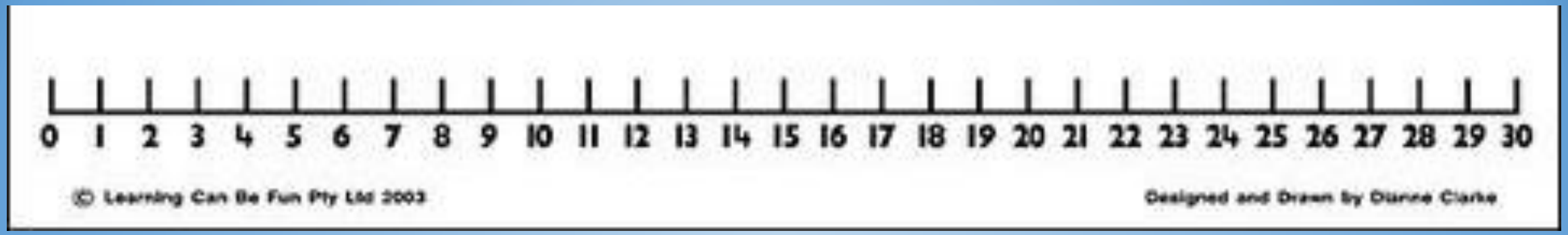
Then draw a picture of the equipment

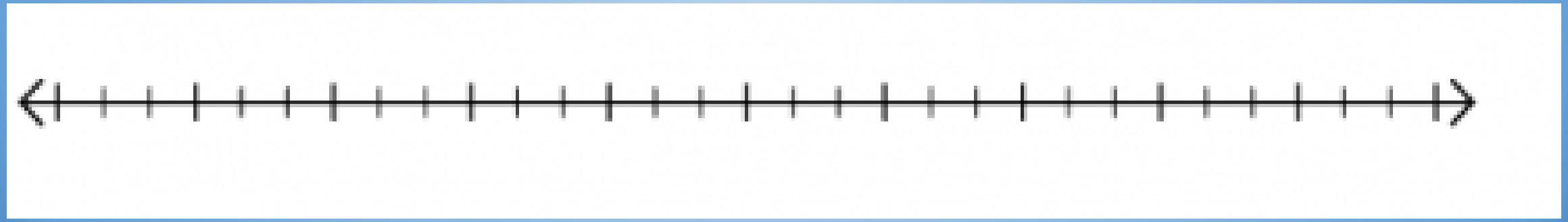
Mastery requires fluency.

What activities can you do with a number square?

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Number lines for reasoning and calculations.





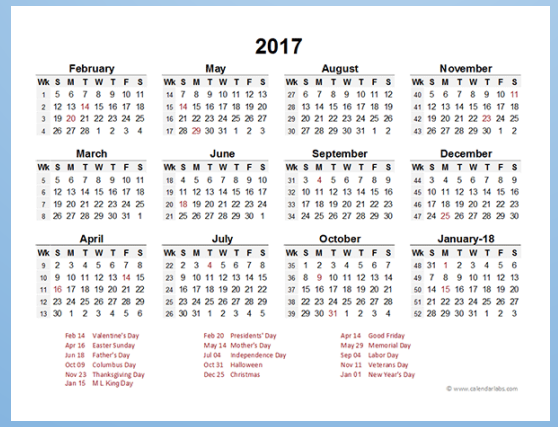
Addition, subtraction, multiplication, more than, less than, division, partitioning, drawing, in words

12

Helping at home

- **Cook – measuring and weighing**
- **Look at numbers in the environment e.g. telephone keys, number plates, door numbers, book pages, sleeps until Christmas!**
- **Money**
- **Comparing heights**
- **Birthdays, Months of the year, Days of the week**

PYREX
PYREX
1 PINT
3/4 PINT
1/2 PINT
1/4 PINT
1/2 LITRE
1/4 LITRE


2017
February
May
August
November
March
June
September
December
April
July
October
January-18
Feb 14 Valentine's Day
Apr 16 Easter Sunday
Jun 18 Father's Day
Oct 09 Columbus Day
Nov 23 Thanksgiving Day
Jan 15 M.L. King Day
Feb 20 Presidents' Day
May 14 Mother's Day
Jul 04 Independence Day
Oct 31 Halloween
Dec 25 Christmas
Apr 14 Good Friday
May 29 Memorial Day
Sep 04 Labor Day
Nov 11 Veterans Day
Jan 01 New Year's Day
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Play games!

- Snakes and ladders – make their own
- Shut the box
- Top Trumps
- Hexago Continuo
- Dominoes
- Cards
- Darts

Calendar Activities

- Mark off days
- What day is it today? Yesterday was…. Tomorrow will be….
- How many days until the weekend?
- Who has a birthday this week? How many days until Jack's birthday?
- How many school days left this month?
- What fraction of the month is either a Monday or Tuesday?

Include rhymes/songs about days of the week, months of the year, seasons, weather….

https://www.youtube.com/watch?v=3tx0rvuXIRg

Good websites…

Hit the button

https://www.coolmath4kids.com/

https://www.topmarks.co.uk/

NRICH - Mathematics Resources for Teachers, Parents and Students to Enrich Learning (maths.org)

Finally

Don't tell them you are hopeless at maths

- You may remember maths as being hard, but you were probably not hopeless, and even if you were, that implies to your child, “I was hopeless at maths, and I'm a successful adult, therefore maths is not important”

Do get excited about maths and your child will get excited too!