Welcome!!

While you are waiting……..

Have a look through your pack -

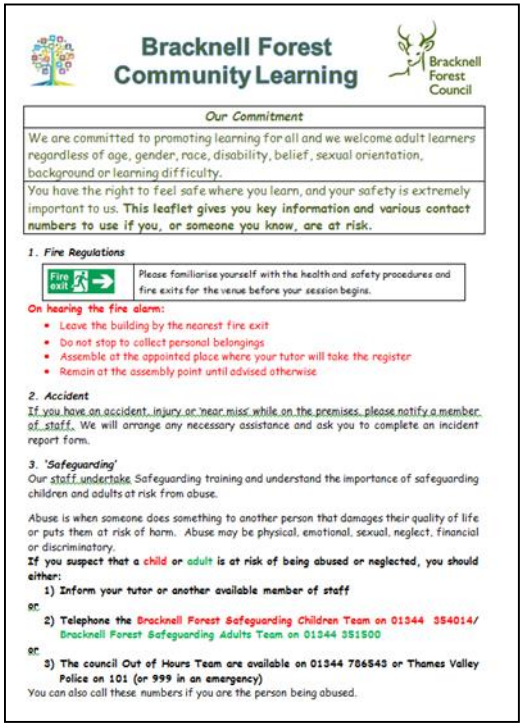
- Read the 'Race to 100' game instructions
- Read the instructions on the spinner template
- Have a look through the 100 square ideas booklet and choose something your child might like to try.

Bracknell Forest Community Learning Team

Bringing learning to life

Heather Williams

Heather-L.Williams@bracknell-forest.gov.uk



Bracknell Forest Community Learning

Bracknell Forest Council

Our Commitment
We are committed to promoting learning for all and we welcome adult learners regardless of age, gender, race, disability, belief, sexual orientation, background or learning difficulty.
You have the right to feel safe where you learn, and your safety is extremely important to us. **This leaflet gives you key information and various contact numbers to use if you, or someone you know, are at risk.**

1. Fire Regulations

Fire exit	Please familiarise yourself with the health and safety procedures and fire exits for the venue before your session begins.

On hearing the fire alarm:

- Leave the building by the nearest fire exit
- Do not stop to collect personal belongings
- Assemble at the appointed place where your tutor will take the register
- Remain at the assembly point until advised otherwise

2. Accident

If you have an accident, injury or 'near miss' while on the premises, please notify a member of staff. We will arrange any necessary assistance and ask you to complete an incident report form.

3. 'Safeguarding'

Our staff undertake Safeguarding training and understand the importance of safeguarding children and adults at risk from abuse.

Abuse is when someone does something to another person that damages their quality of life or puts them at risk of harm. Abuse may be physical, emotional, sexual, neglect, financial or discriminatory.

If you suspect that a child or adult is at risk of being abused or neglected, you should either:

1) Inform your tutor or another available member of staff

or

2) Telephone the Bracknell Forest Safeguarding Children Team on 01344 354014/ Bracknell Forest Safeguarding Adults Team on 01344 351500

or

3) The council Out of Hours Team are available on 01344 786543 or Thames Valley Police on 101 (or 999 in an emergency)

You can also call these numbers if you are the person being abused.

Make your own maths game – calculation in Key Stage 1

The Plan:

1. PARENT PREP:
   - Using the 100 square – a brilliant maths tool for Year 1 children
   - Making maths fun – playing games and practising key skills at the same time
   - How to add and subtract using the 100 square

2. CHILDREN ARRIVE: work with your child to make and play a fun game that builds understanding and confidence with addition & subtraction

3. Opportunity to try out other activities with your child.

…..and……

to build lots of other skills as we work together (following school values)

"You didn't give up, even though it was hard for you……"

"That's brilliant! – thank-you for listening so well"

"I liked the way you waited until it was your turn……"

The purpose of this session is to provide information and experiences that will help you to support your child's learning. However……
One size **doesn't** fit all!!

Each parent has different knowledge, skills & experiences – if any of the topics covered are familiar to you, please feel free to chip in and share – we can learn a lot from each other!

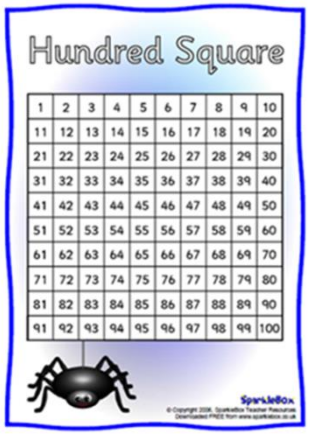
Questions & Suggestions? – *please use the post-its provided to jot down:*

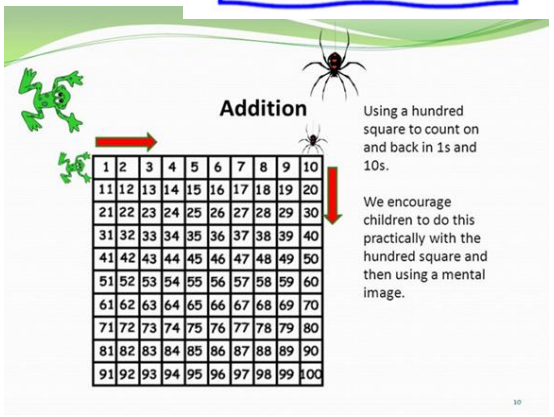
- questions/things you want to know more about
- notes on things you would like to try out with your child
- any ideas or 'top tips' you can think of

Calculation in Key Stage 1

Just like the rational counting we practised last year with our Magic Pebbles, it is essential that children have lots of **PRACTICAL EXPERIENCE** using objects (such as magic pebbles) & equipment (such as 100 squares)

These tools will help children to **UNDERSTAND** rather than just memorise calculation processes.





Number – number and place value

Statutory requirements

Pupils should be taught to:

count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number

count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens

given a number, identify one more and one less

identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least

read and write numbers from 1 to 20 in numerals and words.

Number – addition and subtraction

Statutory requirements

Pupils should be taught to:

- read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs
- represent and use number bonds and related subtraction facts within 20
- add and subtract one-digit and two-digit numbers to 20, including zero
- solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9.

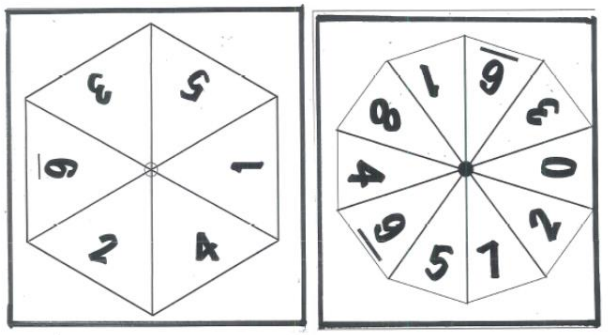
Year 1 -

some of the counting and calculation statements your child will be working on this year

Your resource pack……

Spinners x 2

1. Ask your child to cut out both spinners along the BOLD square outlines
2. Use a pen or pencil to make a small hole in the middle of each spinner
3. Ask your child to put the split pin through one end of the paperclip and then through the hole in the spinner. Secure with tape on the back, and make sure it is loose enough to allow the paperclip to spin. *Now you are ready to play your game!*



The '100 Square Race' game.

The aim of the game is to get to 100 (or to 1 if you are going backwards) before your opponent.

What you need:

1. Two or more players. Coloured counters.
2. A 100 square
3. A spinner 1-6 or 0-9 (or dice)

Rules

1. Choose a coloured counter for each player.
2. Decide whether you want to go forwards (put your counters on '1') or backwards (put your counters on '100')
3. Spin the spinner, the highest scorer goes first.
4. Spin again and move your counter forwards/backwards along the 100 square by this amount
5. The next player takes their turn.
6. Only one counter can be on a number square. If your counter lands on another player's counter, your counter takes that square and your opponent's counter goes back to the start!
7. Your counter can jump on a square with a counter to get past it.
8. Make it trickier……
   Spin a 1-6 (0-9) spinner **twice** & add scores together to work out how many to move.

100 square

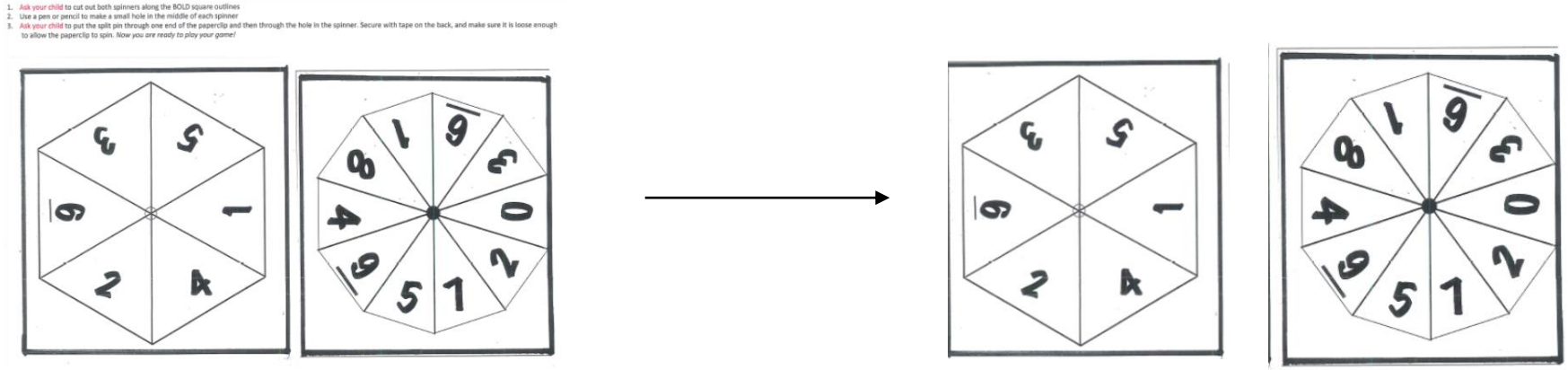
game instructions & ideas

100 IDEAS FOR USING A HUNDRED SQUARE

- *These ideas are in no particular order and can be adapted to any age range or ability.*
- *The objectives are for children to learn to recognise numbers, understand numbers and find different ways of working with numbers to improve their understanding.*
- *These ideas are only starting points and can be adapted and developed with imagination.*
- *These activities can also be completed with a 200 square etc.*
- *As an extra challenge or for a bit of fun, make up your own challenges. Can you think of 10 more to make 110 activities?*

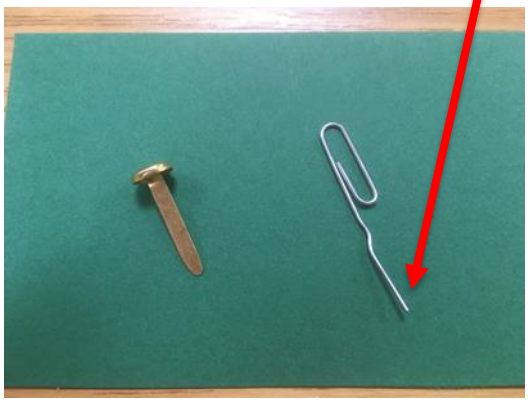
1. Cut up a hundred square and make it into a number line.
2. Colour all the even numbers and establish a rule for recognising even numbers.
3. Find the multiples of 3.
4. Play a game in two's. Each picks a number between 10 and 20. Add together the digits of that number and move that many spaces. The winner is the first person who is closest to 100.
5. Find the square roots of the numbers to the nearest whole number.
6. Pick 10 numbers and treble them.
7. Make a Lucas Sequence, e.g. 1.3.4.7.11.18
8. Find all the cubic numbers.
9. Investigate all the numbers and find the numbers where the digits add up to 9.
10. Pick a number between 1 and 9 and keep adding 10 until you get to the end of the number square.
11. Find all the numbers whose digits add up to 11.
12. Make your own 100 square.
13. Choose 10 numbers from the square and subtract them from 100.
14. Find two consecutive numbers which add up to a square number, e.g. 12 and 13 = 25.
15. Pick numbers and reverse the digits and add them together, is the answer different from adding the digits without reversing.
16. Find all the numbers containing the digit 1.

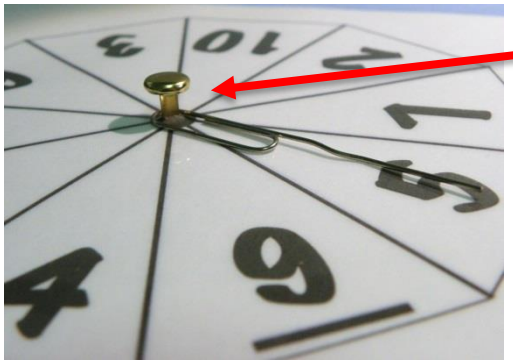
Spinner instructions– work with your child to…



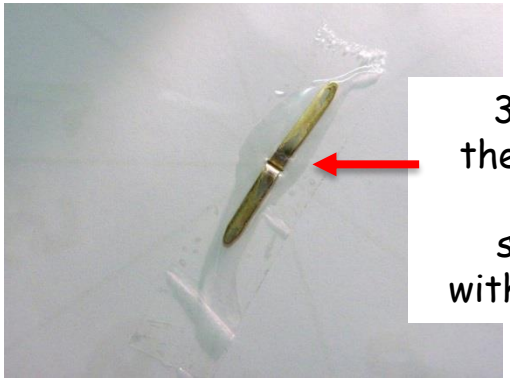
Help your child to cut out the 2 spinners LEAVING A SQUARE BORDER

1. open one end of the paperclip to make a 'pointer'

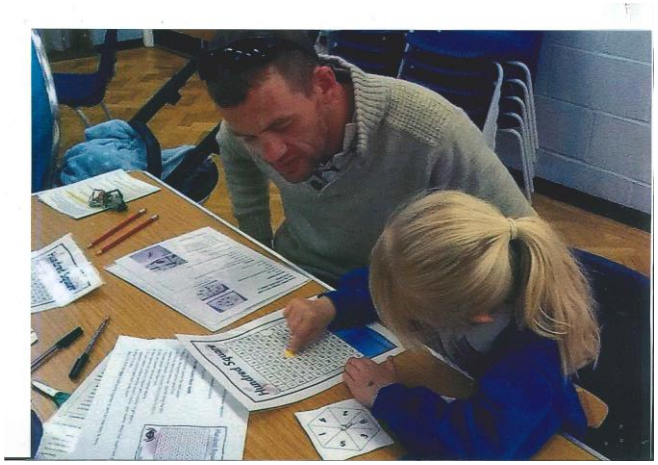




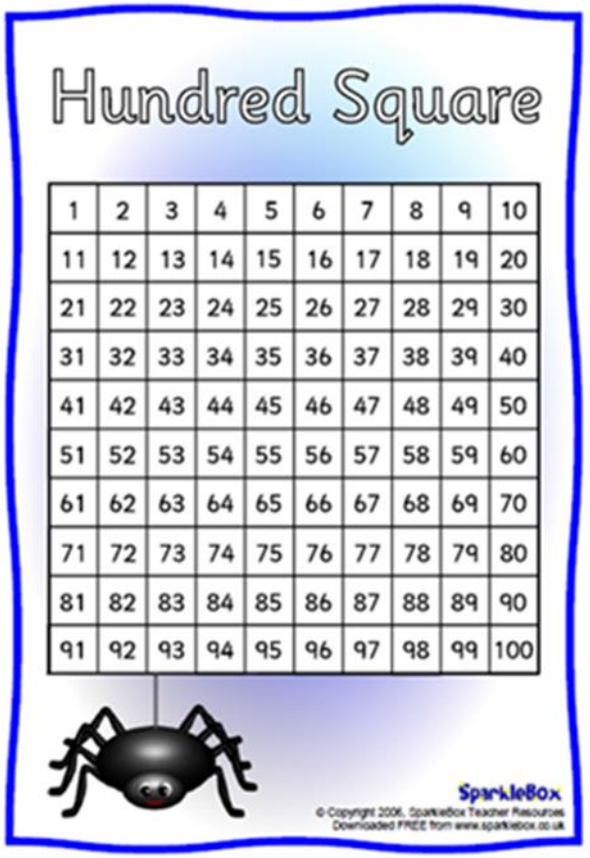
2. Thread the other end of the paperclip onto the split pin, then post the 'legs' of the split pin through the hole you made



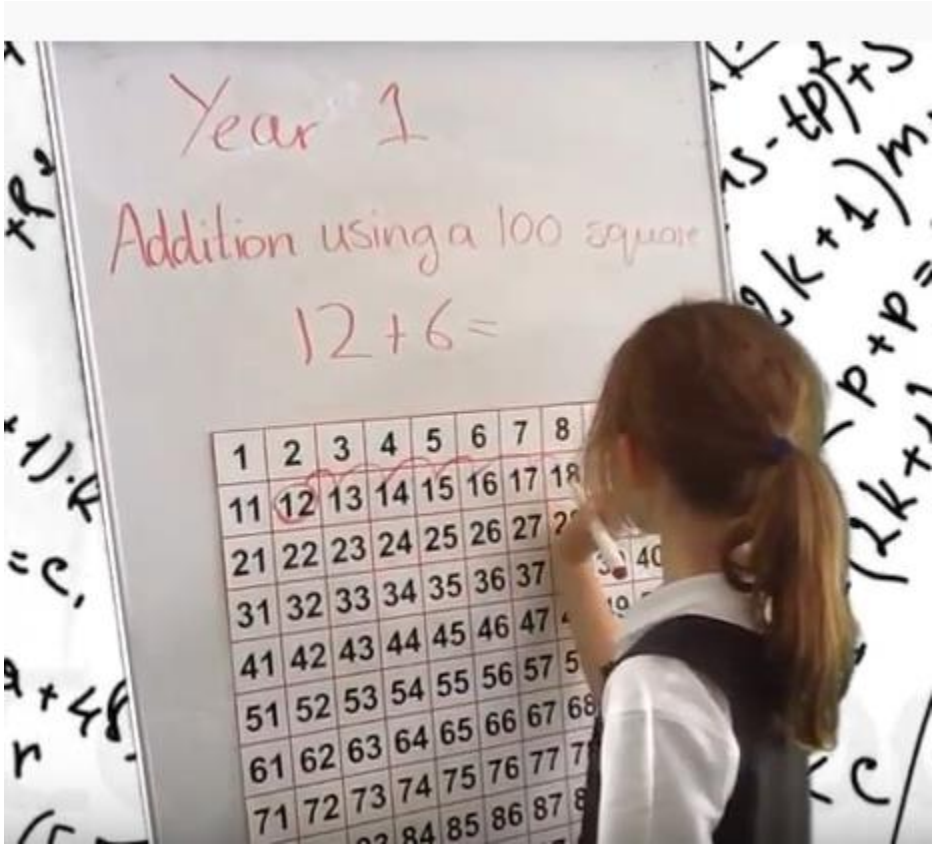
3. split the 'legs' and secure with tape

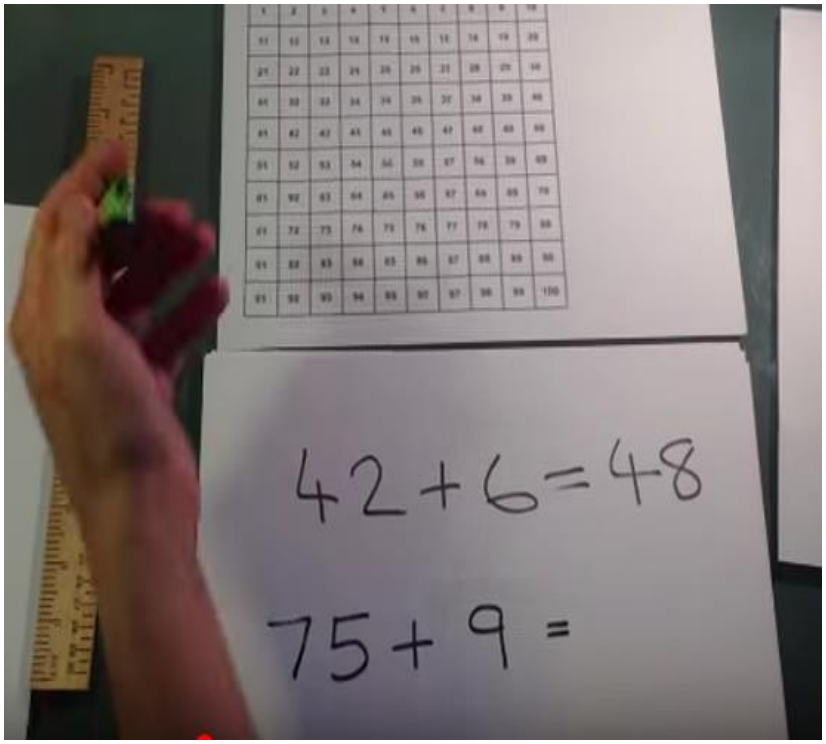


- The 100 square helps children to become familiar with higher numbers
- It helps children to learn number order up to 100
- It provides a useful tool for lots of different calculations (see booklet) but today we will focus on addition & subtraction



Counting on (and back) using the 100 square





https://www.youtube.com/watch?v=irwvOWKIbwI

https://www.youtube.com/watch?v=W_cxp6Z-elY

https://www.youtube.com/watch?v=JO1kgtyZ3Zk

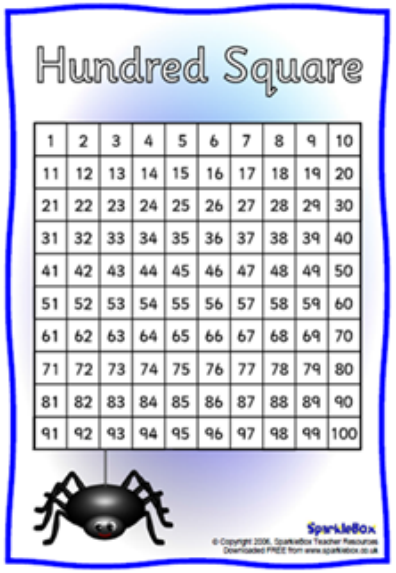
The race to 100 game gives children the chance to practise counting on and back in a fun way

The '100 Square Race' game.

The aim of the game is to get to 100 (or to 1 if you are going backwards) before your opponent.

What you need:

1. Two or more players. Coloured counters.
2. A 100 square
3. A spinner 1-6 or 0-9 (or dice)



Rules

1. Choose a coloured counter for each player.
2. Decide whether you want to go forwards (put your counters on '1') or backwards (put your counters on '100')
3. Spin the spinner, the highest scorer goes first.
4. Spin again and move your counter forwards/backwards along the 100 square by this amount
5. The next player takes their turn.
6. Only one counter can be on a number square. If your counter lands on another player's counter, your counter takes that square and your opponent's counter goes back to the start!
7. Your counter can jump on a square with a counter to get past it.
8. Make it trickier…….
   Spin a 1-6 (0-9) spinner **twice** & add scores together to work out how many to move.

*Adapt the game to suit your child's ability

Alternative game? – please ask

FIRST TO 100 v1

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 WINNER

Move on to the next blue square.

Move back to the last red square.

Stuck in the mud – roll an even number to continue

You're in luck – have another turn

Roll, Climb, Slide

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
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120

How to play:

Choose a 'climb' picture (e.g. ladder, rope, wall, stairs, tree)

Choose a 'slide' picture (e.g. snake, candy cane, slide, rainbow, lightening)

Draw about 6 of each onto your 1-120 board – how long do you want your 'snake' or 'ladder' to be?

Get a counter for each player and a die/spinner – choose who goes first (start on number 1)

Move along the board, sliding and climbing as you go – first to 120 is the winner.

Other activities……

1. Make your own addition and subtraction sums ***using numbers that your child is confident with***

Make some addition sums using your 100 square.

Choose a starting number, then spin the spinner & count on in ones.

e.g. start on 11, spin a 6

Ask your child about the numbers…"Which number did you start on?" ……"Which number are you on now?"

Summarise the process verbally….."So 11 count on six makes 17"

- Stick with numbers to 20 unless your child is really confident with higher numbers
- Use real objects to represent the sum and allow your child to check their answer
- Encourage them to draw or write the sums they make

2. Make double digit numbers using straws – use bundles of 10 to show place value

e.g. 34

3 tens and 4 'ones'

Place value

We count using a 'decimal' column system

[remember "hundreds, tens, units"?]

We use the same 10 digits but their value varies depending on which column they are in.

"place value" describes the value of any digit in a number – for example in 48, the 4 is worth 40 [4 tens]

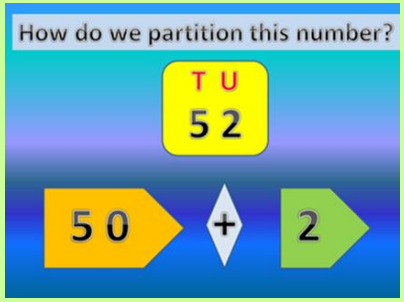
Children need to build their understanding of place value in order to be able to work with larger numbers [beyond 9]

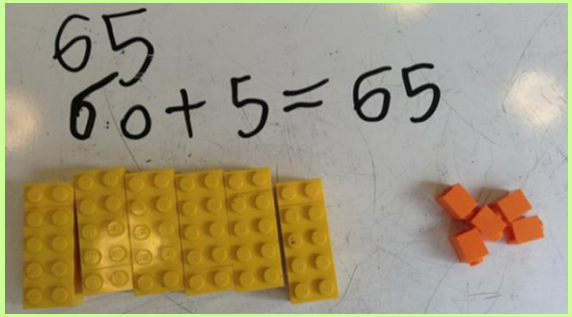
Throughout Key Stage 1, children learn about the place value system (*where the value of a digit in a number depends upon its position*)

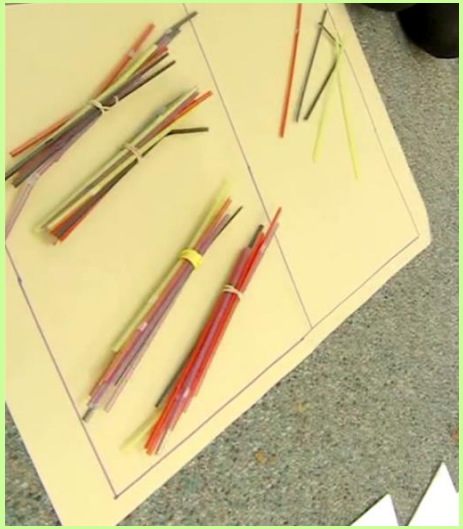
- They learn to read, say, write and order larger numbers

- They explore what numbers are made up of i.e. 45 is made up of four tens (40) and five ones (units), helping them to understand the **value** of each digit in larger numbers

- They learn how to **partition** (split up) larger numbers up into smaller pieces (e.g. tens and ones)





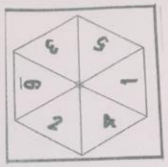


Exploring double digit numbers as you play....

- Your child may not be familiar with larger numbers (the EYFS curriculum focussed on accuracy/ fluency with numbers up to 10)
- Use the game as an opportunity for them to become more familiar with reading and recognising larger numbers
  (in Year 1 the curriculum focuses on numbers to 100)
- Use real objects to represent larger numbers (using groups of 10 will help to speed this up and also practise counting in tens)

6 mins Playing the game – step 1

- Work with your child to assemble the 2 spinners.
- Ask your child to cut on the bold black lines
- Attach an opened paper clip loosely in the centre of each spinner using split pins
- Secure at the back using masking tape



*use the 1-6 spinner for simple, quick turn-taking
*use the 0-9 spinner for variety (0=miss a turn)
*use both spinners together to practise mental + and - skills

6 mins Playing the game – step 2

Read the 'race to 100' game instructions with your child, so that they know how to play

Play the game, starting on number 1 – get your child to show how good they are at 'counting on'. First to 100 wins

6 mins Playing the game – step 3

Next, play the game starting on number 100 – get your child to show how good they are at 'counting back'. First to get back to number 1 wins

You're having fun, and getting beaten ....probably ;-)

- Watch carefully to see how far they can count and which numbers they recognise
- Check for accurate counting on/back
- Play again if you still have their attention (best of 3?)

Family Learning Evaluation

Bracknell Forest Council

Session Attended: 'Make your own Maths game' - Calculation in KS1
Tutor: Heather Williams

We hope you have enjoyed today's session - In order for us to monitor the quality of our courses, we would be grateful if you could spend a couple of minutes completing the sections below:

Your name: ..... **Date:** .....

1. Glad you came?

Did you find today's session informative and useful? **Yes/No**

Did you enjoy your time in school today? **Yes/No**

Did you learn something new? Please rate increase in knowledge/skills:

+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+10

Best bit? .....

Any challenges? .....

Is there anything we did not cover in the session that you think could have been included?

.....

2. **Want to do more/something else?** We run a variety of short courses - **please circle** any of interest (many are FREE)

Courses to support my child's learning: Maths, Literacy, other.....

Back to work courses: working with children / be your own boss / retail / hospitality / customer service / food safety / health & safety / first aid

Soft Skills: Managing change / confidence building / team building / effective communication

English / maths for adults - informal 'café style' sessions *(brush up on skills/gain a qualification)*

IT skills: Word / Excel / Outlook / Power Point / IT for jobseekers

Something else? .....

Phone number/email address.....

Thank you for your time

Time for the tiddly peeps……

1. Children arrive – ask them to sit with you to listen to the instructions for the game

2. Heather will explain how to play ☺

3. Have fun playing the game a couple of times to get used to counting on (and back)
   - help them out if they are not sure about reading the bigger numbers or how to jump along on the square
   - adapt to suit your child – "Race to 20"

1. Use your 100 square to explore some of the other ideas mentioned earlier – making your own addition and subtraction sums, place value using straws
   *describing…..*drawing…….*writing…….

Don't struggle on if concentration is wearing thin – ask me to find you another game to try ☺

6 mins

Playing the game – step 1

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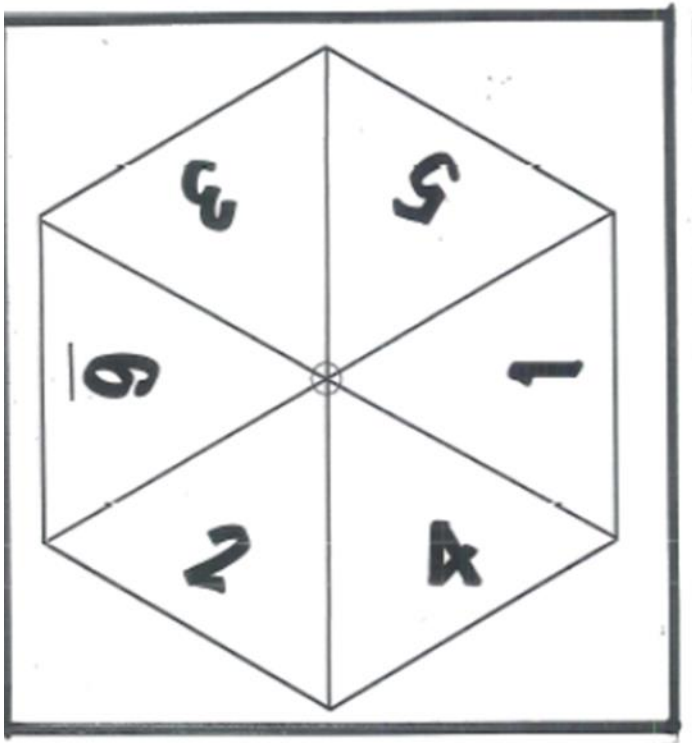

*use the 1-6 spinner for simple, quick turn-taking
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6 mins

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7. Your counter can jump on a square with a counter to get past it.
8. Make it trickier…….
   Spin a 1-6 (0-9) spinner **twice** & add scores together to work out how many to move.

Play the game, starting on number 1 – get your child to show how good they are at 'counting on'. First to 100 wins

6 mins

Playing the game – step 3

Next, play the game starting on number 100 – get your child to show how good they are at 'counting back'. First to get back to number 1 wins

You're having fun, and getting beaten ……. …….probably ;-)

- Watch carefully to see how far they can count and which numbers they recognise
- Check for accurate counting on/back
- Play again if you still have their attention (best of 3?)

6 mins

Using your 100 square - 4

Make some addition sums using your 100 square.

Choose a starting number, then spin the spinner & count on in ones.

e.g. start on 11, spin a 6

Ask your child about the numbers…. "Which number did you start on?" ……"Which number are you on now?"

Summarise the process verbally.…. "So 11 count on six makes 17"

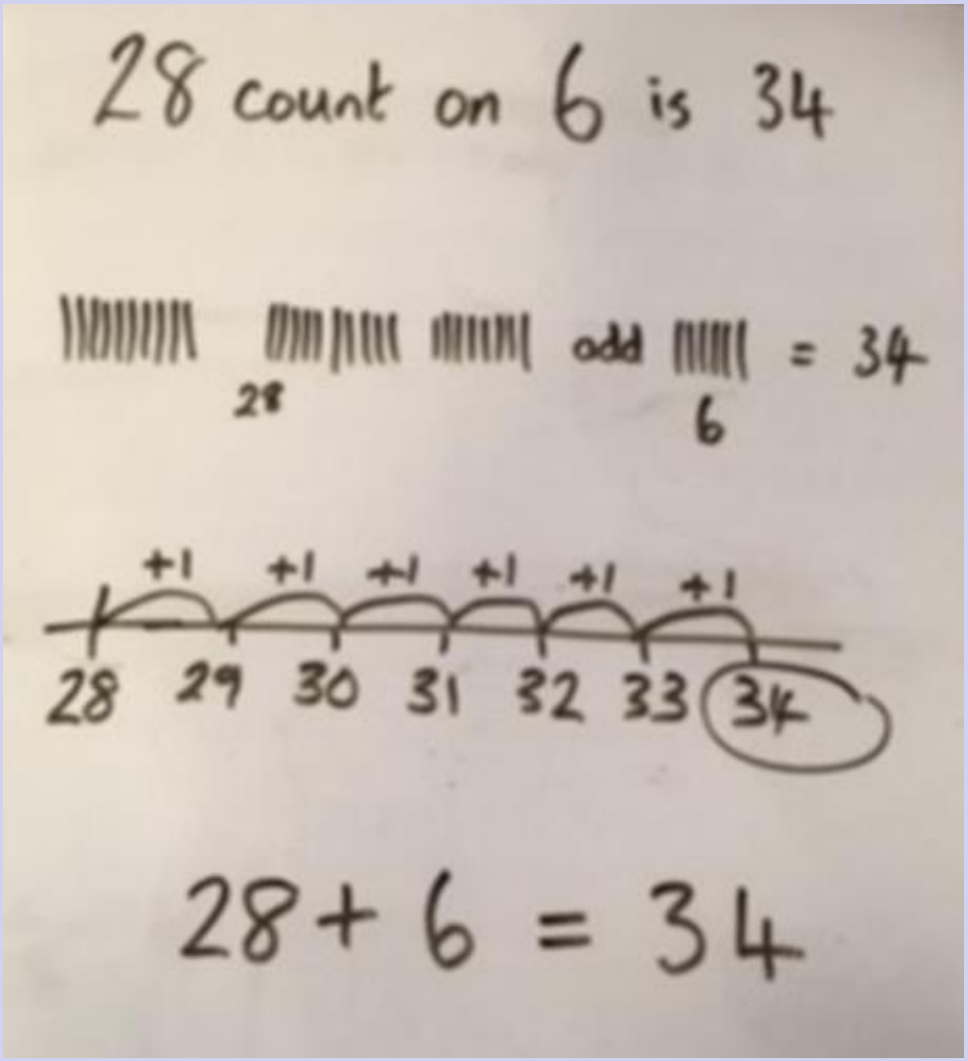
- Stick with numbers to 20 unless your child is really confident with higher numbers
- Use real objects to represent the sum and allow your child to check their answer
- Encourage them to draw or write the sums they make

“How could we use straws to represent what we did?”

28 count on 6 makes 34

28 count back 9 makes 19

"How could we draw or write what we did?"



6 mins

Using your 100 square - 5

- Repeat the addition idea, but this time counting back

E.g. start on 11 and count back 6 times….

Ask your child about the numbers….

"Which number did you start on?"

"Which number are you on now?"

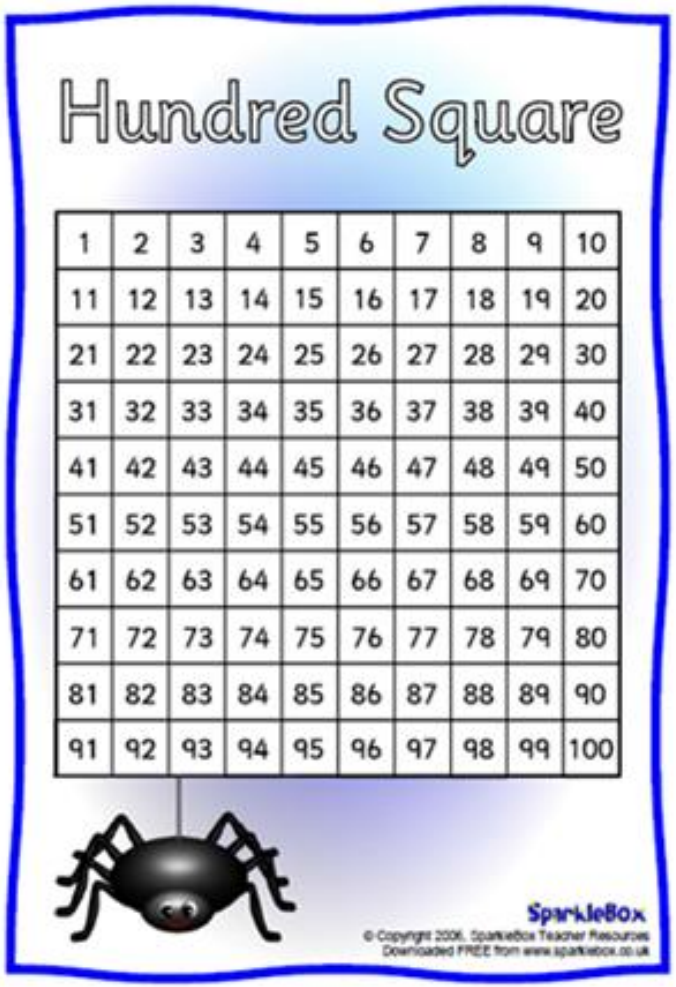
Summarise the process verbally……

"So 11 count back six makes 5"

How can we draw or write this?

6 mins

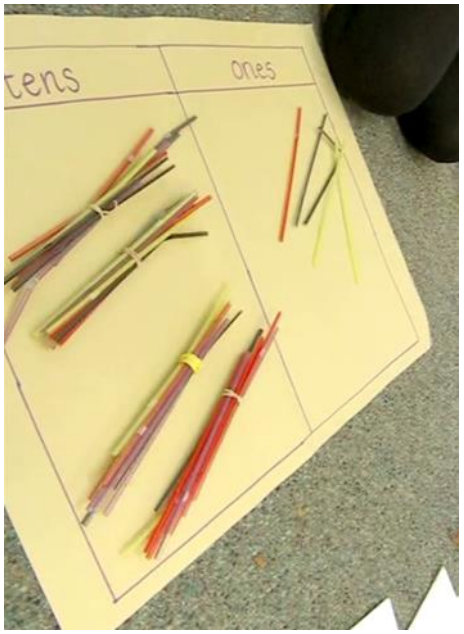
Using your 100 square - 6



If you notice that your child is confident about reading double digit numbers, you can talk about the value of each digit in the number.

For example:

45 is made up of 4 'tens' and 5 'ones'



Suggestions for later……

Things you can look at in more detail when you get home……

More curriculum information?

https://primarysite-prod.s3.amazonaws.com/uploads/d66d612d6ee34712bc6f6572b0787afb/6edc/Parents_Complete_Guide.pdf

https://www.schoolguide.co.uk/blog/the-new-primary-national-curriculum-a-parents-guide

Here are some great online resources to try ……

1. Information about reading writing & saying big numbers
http://www.englishlessonsbrighton.co.uk/saying-large-numbers-english/

2. Comparing numbers – scroll down homepage until you see
http://www.crickweb.co.uk/ks2numeracy-calculation.html

3. General calculation practice
http://www.bbc.co.uk/education/subjects/zjxhfg8
http://www.softschools.com/math/games/
http://www.coolmath-games.com/numbermonster/index.html

4. Word Problems/problem solving (stretch and challenge)
https://uk.ixl.com/math/year-1/addition-word-problems-sums-up-to-10
https://uk.ixl.com/math/year-1/subtraction-word-problems-numbers-up-to-10
https://urbrainy.com/maths/year-1-age-5-6/challenges-year-1

Odd and even

An even number is a number that can be divided into two equal groups.

An odd number is a number that cannot be divided into two equal groups.

How to explain it to small people:

Get your child to take (small) sets of objects and pair them up – any sets that have 'one left over' are odd. Sets where they all 'have a friend' are even

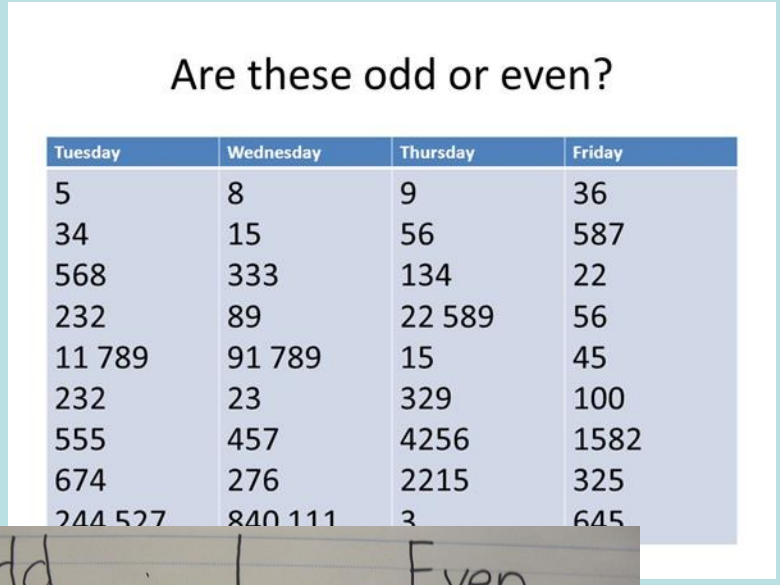
Even numbers end in 2, 4, 6, 8 and 0 regardless of how many digits they have (we know the number 5,917,624 is even because it ends in a 4!).

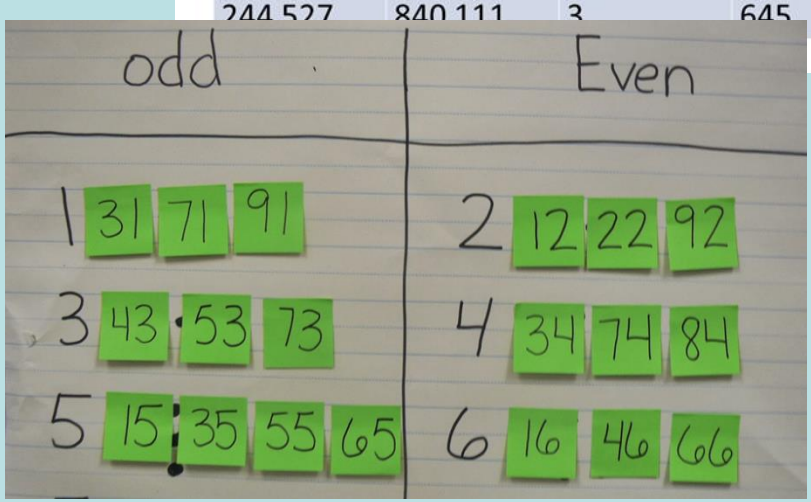
Odd numbers end in 1, 3, 5, 7, 9

.....and using your hundred square....

- Spot patterns
- Use to devise and test rules e.g. all numbers ending in 1 are odd

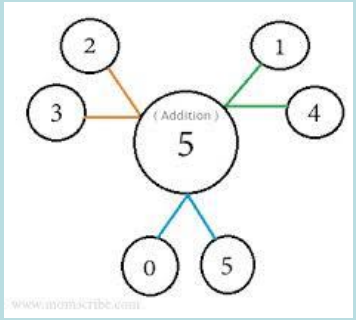
- Apply those rules to larger numbers – as big as you like!!

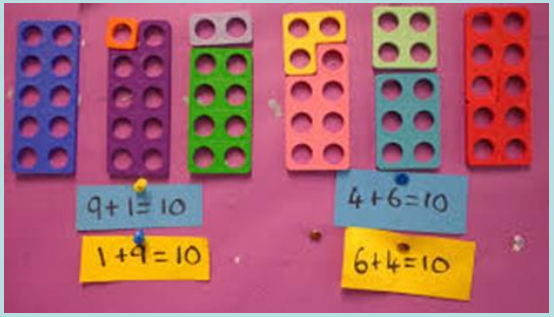


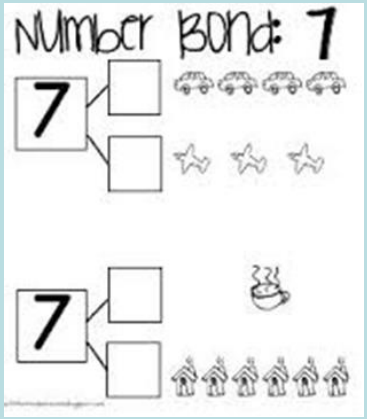


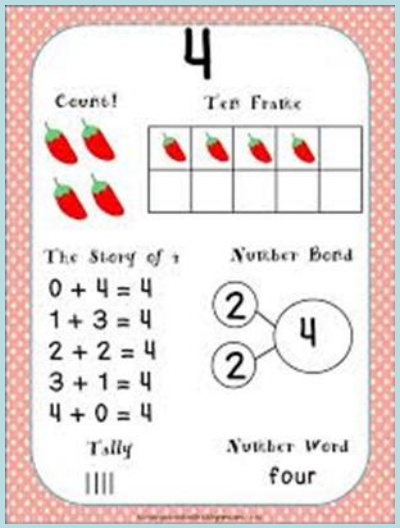
Using Number Bonds

(all those small addition/subtraction facts children need to know 'by heart')



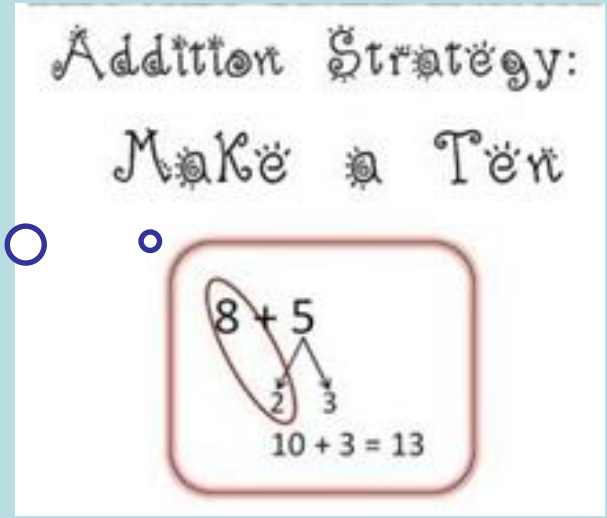






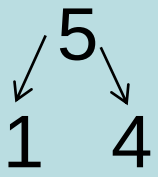
Helps build mental addition and subtraction skills

bridging through ten, twenty etc.



Example with hundred square:

- 59 count on 5
- Use knowledge of number bonds to split 5



- 59 add 1 = 60
- 60 add 4 = 64

Challenge: can they do this in their heads?

Counting in tens……

Name: _____

Adding on a Hundred Chart

Shade each hundred chart to show how you would add the numbers.
Record your strategy on an open number line.

53 + 28 = _____

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