Level 3 Maths Games & Practical Activities

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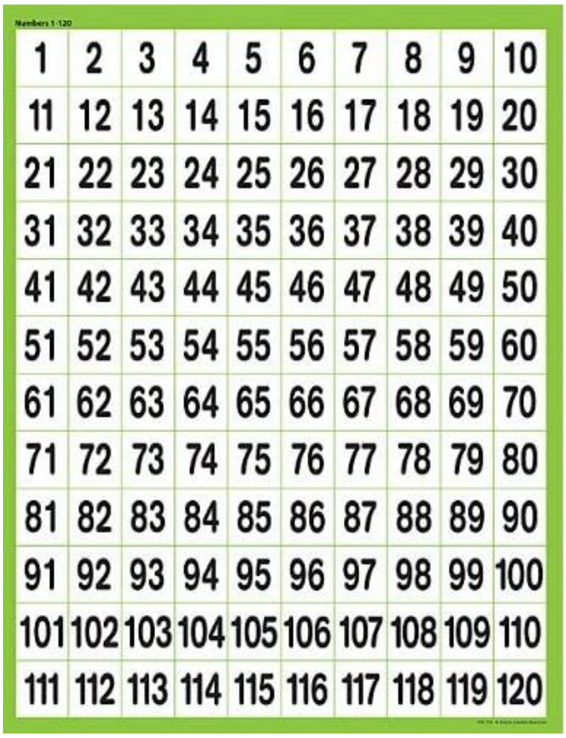
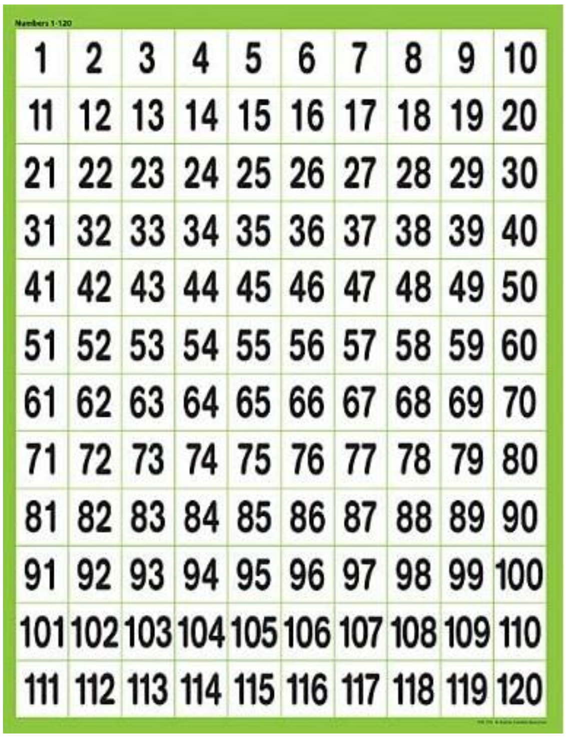
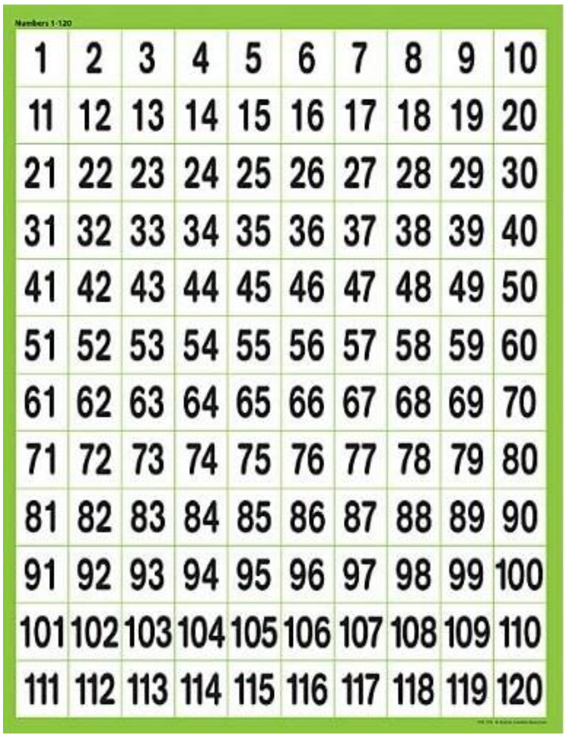
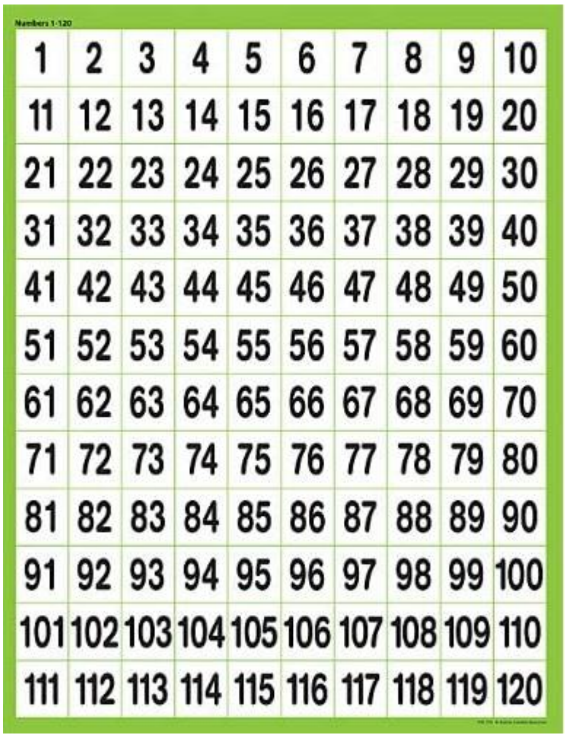
Counting

Resources needed: Number Chart 1 – 120 large; Number Chart 1 – 120 small; strips of paper; Bingo Board 4 x 4; counters







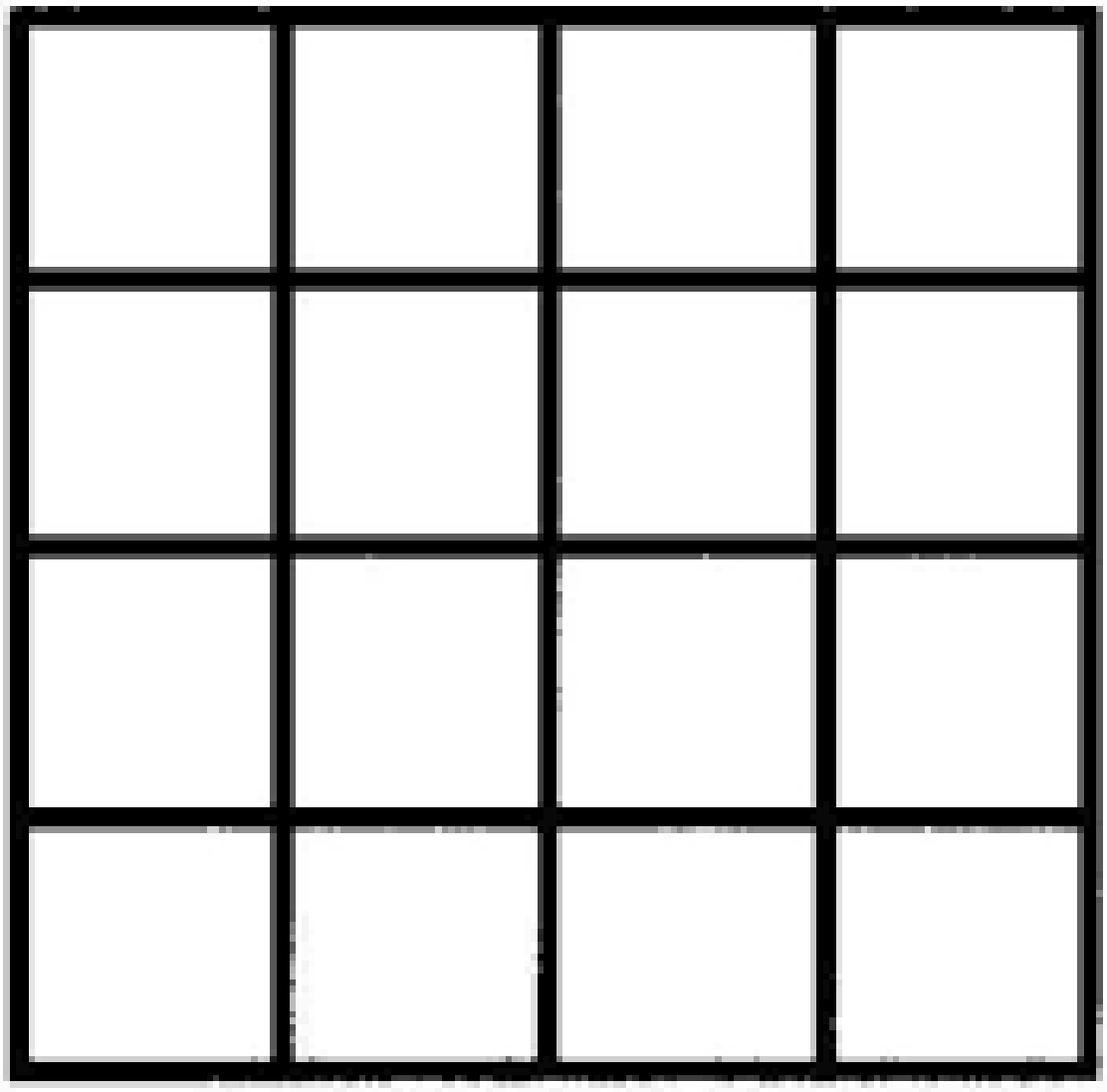


Number Chart 1 – 120 Large

Numbers 1-120

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

Bingo Board 4 x 4



What will the students learn?

Using the number chart to 60 for:

- Counting by 3s, 6s and 9s
- Counting by 4s to 48
- Counting by odd numbers
- Counting from various starting points

Using the number chart to 120 for:

- Counting by ones, twos, fives and tens
- Counting backwards from 120
- Counting by 50s and 100s to 1000

Activity 1: Number Chart Cover-up for 10s and 5s

Resources needed: 1 to 120 Number Chart, strips of paper.

Using a number chart 1 to 120, cut strips of paper to cover columns. A single strip is used to cover the 10s. Another strip is used to cover the 5s.

Ask the student to count by 5s, (without seeing the numbers).

Activity 2: Number Chart Cover-up for 2s.

Resources needed: 1 to 120 Number Chart, strips of paper.

Using a number chart 1 to 120, use strips of paper to cover the 2s columns, (2,4,6,8,10)

Ask the student to count by 2s, (without seeing the numbers).

Activity 3: Odd and even numbers

Resource needed: Number Chart 1 to 120 small

Ask students to colour in the even numbers in one colour the odd numbers another colour.
They can learn this rhyme:

Even numbers, even numbers
End in these, end in these
2 4 6 8 zero, 2 4 6 8 zero
End in these, end in these.
Odd number, odd numbers
End in these, end in these
1 3 5, 7 9, end in these, end in these.

Activity 4: Number Chart Cover-up for odd numbers

Resources needed: 1 to 120 Number Chart, strips of paper.

Using a number chart 1 to 120, use strips of paper to cover the odd numbers columns, (1,3,5,7,9)

Ask the student to count by odd numbers, (without seeing the numbers).

Activity 5: Two *Before/After* Bingo

Resources needed: number cards 60 to 120. Bingo boards 4x4, counters

Give students a copy of the empty Bingo Board (paper copy) Page 3. Ask them to fill the board with random numbers between 60 and 120.

The teacher uses the number cards to randomly call out numbers from 60 to 120". If a student has a number that is 2 numbers **before** the number called, they place a counter on that number, e.g. You call 24. If the child has 22 on their board, they put a counter on it, because 22 is 2 less than 24. The first student to complete a horizontal, vertical or diagonal row calls out BINGO. Play again, but this time they put counter on the number that's 2 numbers **after**.

Activity 6: Five Before/ After) Bingo

This is the same as Activity 5, but instead of 2 before/after, the students cover their numbers if they have a number that is 5 before/after.

You can then play the game with 10 before/after.

Activity 7: Counting by 5s and 10s on the number chart

Resource: Number chart 1 to 120 – small (See Page 1)

Give the student a copy of the small number chart 1 to 120.
Ask them to colour in the numbers that show counting by 5s. (yellow)
Now take another colour and colour in the numbers that show counting by 10s. (blue over the yellow)
Get them to practice counting by 5s and 10s to 120

Activity 8: Counting by 2s and 4s on the number chart

Resource: Number chart 1 to 120 -small

Give the student a copy of the small number chart 1 to 120.
Ask them to colour in the numbers that show counting by 2s. (yellow)
Now take another colour and colour in the numbers that show counting by 4s. (blue over the yellow). Ask, "What is the pattern?"

Using the number chart, get them to practice counting by 2s and 4s.

Activity 9: Counting by 3s, 6s and 9s on the number charts

Resource: Number chart 1 to 120 -small

Give the student a copy of the small number chart 1 to 120.
Ask them to colour in the numbers that show counting by 3s, (yellow).
Now they take another colour and colour in the numbers that show counting by 6s, (blue over the yellow).
Now they take another colour and colour in the numbers that show counting by 9s.
Using the number chart, get them to practice counting by 3s, 6s and 9s.

Note: Show the students that they can count by 9s by adding 10 and taking away 1, e.g. start with 9, add 10 makes 19, take away 1 is 18; add 10 makes 28, take away 1 is 27 and so on.

Place Value Part A

Resources needed: 200 straws or sticks, rubber bands, small bags (cloth or plastic), dice, number cards 0 – 9, block pictures, expanders

Expanders

	Hundreds		Tens		Ones

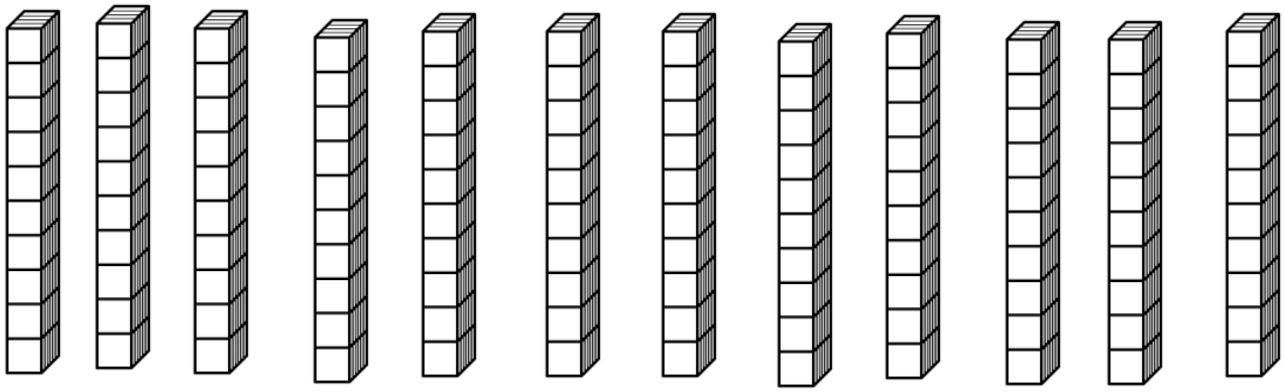
	Hundreds		Tens		Ones

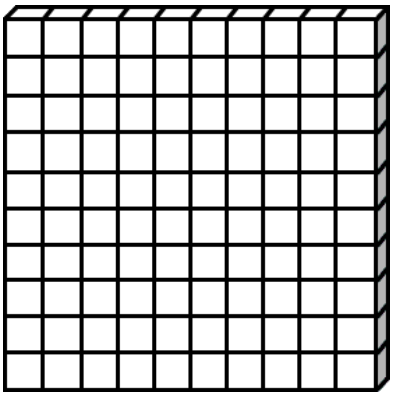
	Hundreds		Tens		Ones

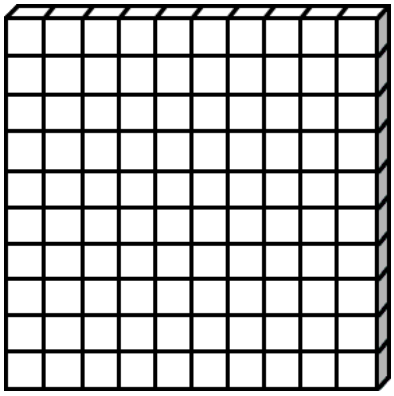
	Hundreds		Tens		Ones

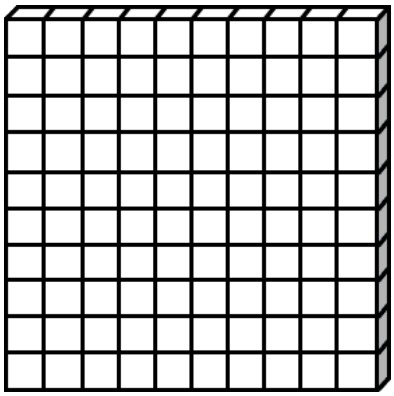
	Hundreds		Tens		Ones

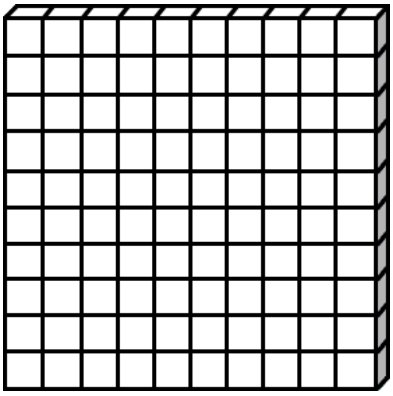
Block Pictures

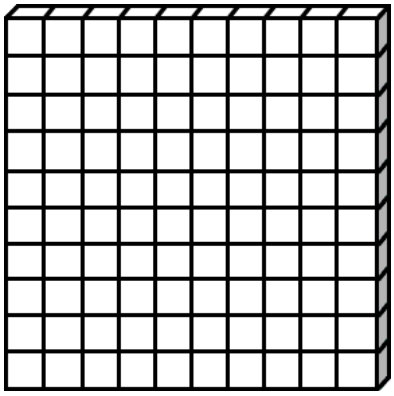


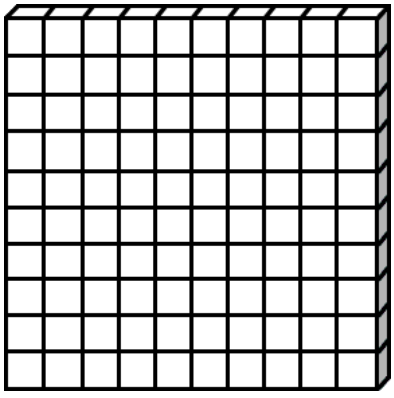


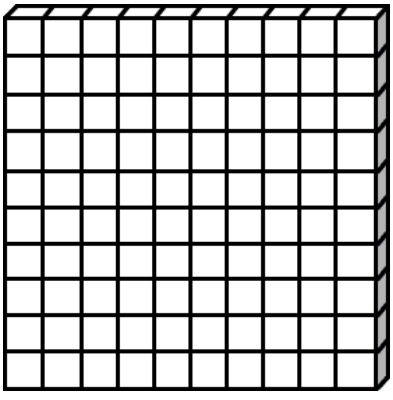


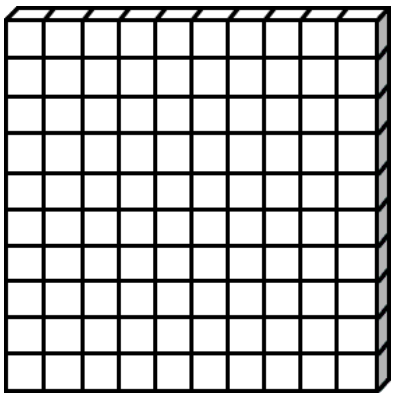


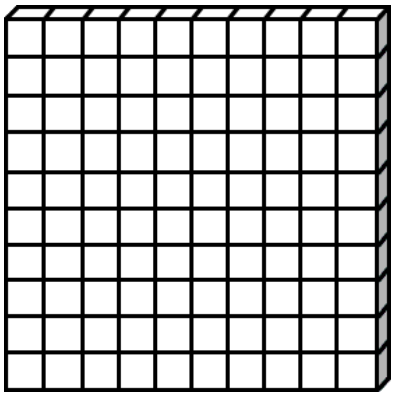












What will the students learn?

- Reading 3-digit numbers up to 999
- Expanding 3-digit numbers up to 999
- Writing 3-digit numbers up to 999
- Ordering 3-digit numbers up to 999

Activity 1: Bundles of 10

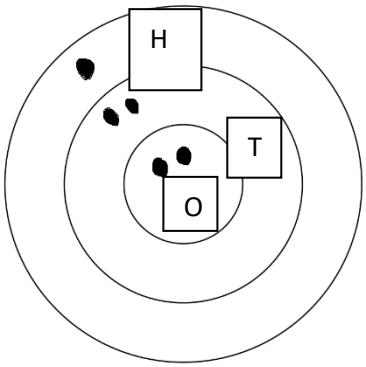
Resources needed: straws or sticks, rubber bands

Ask the students to count out straws in groups of ten. Each group of ten is bundled together with a rubber band. Keep some straws or sticks not bundled.

Ask them to make different numbers using the straws/sticks, e.g. 42, 56

Activity 2: Number Target

Resources: Place value target board, counters to throw



Make a large target like the one in the picture. Use a large sheet of paper.
Give each player 5 counters. From a specified distance, they throw all 5 counters onto the target, one at a time.
How to score: e.g. if a player throws 1 counter into the **H**undreds section, 2 counters into the **T**ens and 2 counters into the **O**nes section, then the total will be 122. Give a point to the player with the highest score. At the end of the game see who has the most points.

Activity 3: Make the Largest Number (for 3 or more players)

Resources Needed: 3 sets of number cards 0 to 9

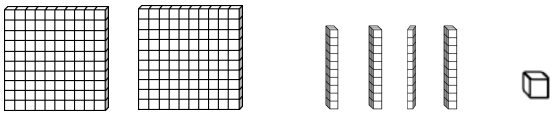
Number cards are placed on the table face down. Each student picks up 3 cards. The aim is to make the largest number using three of the cards. The student with the highest number wins the first game. Repeat several times. The winner is the team with the most 'highest' numbers.

Repeat this activity, but this time the winner is the team with the most 'lowest numbers'.

Activity 5: Using block-pictures to make 3-digit numbers

Resources needed: cut-out block-picture of tens, hundreds and ones (See Page 8); a selection of about 20 number cards 100 to 999, (or numbers written on small pieces of paper).

Students select a number and make it with the block-pictures.
e.g. 241



Note: dried lentils/peas or stones can be used instead of ones, which are time-consuming to cut out.

Activity 7: Expanders

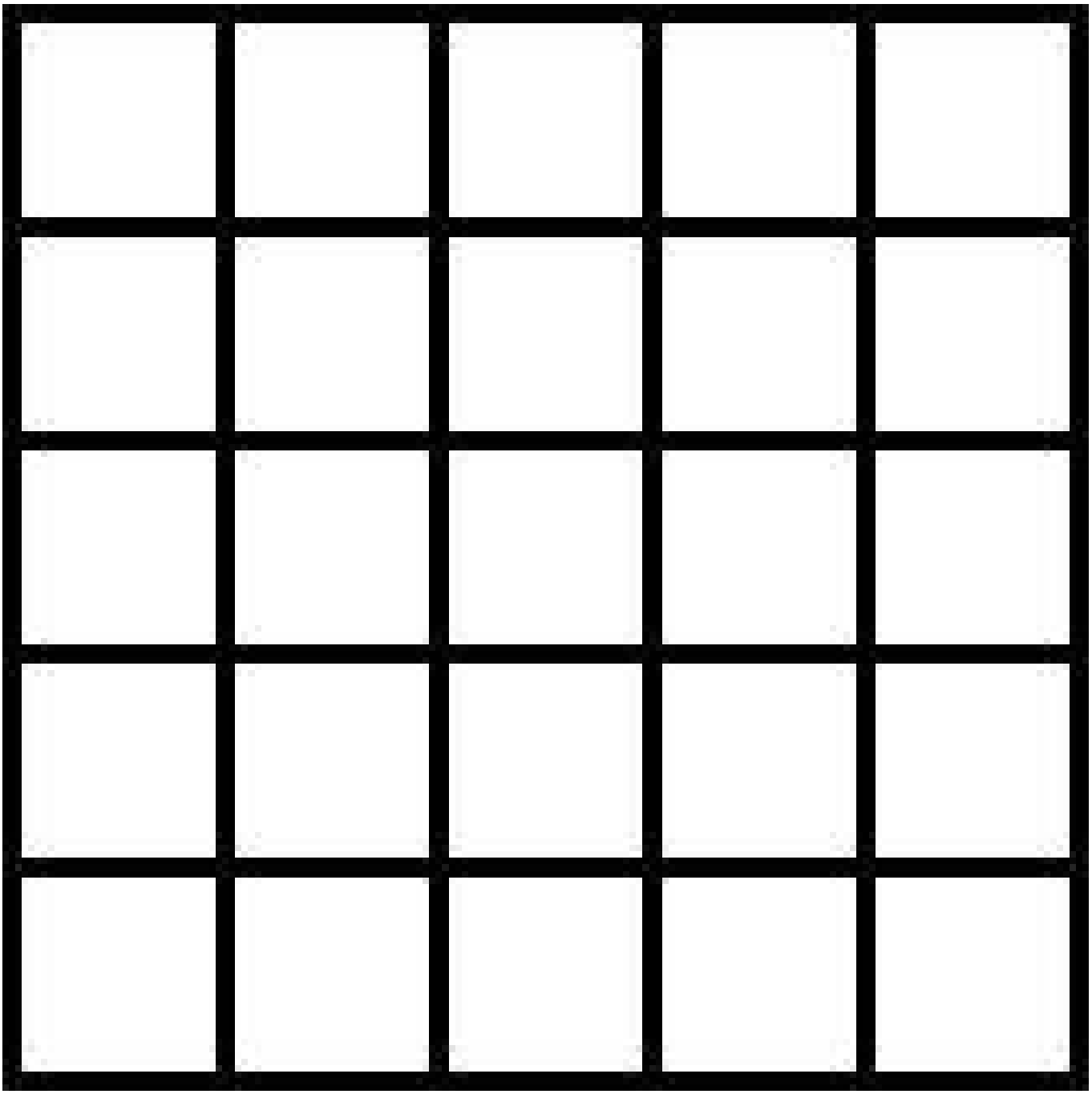
Resources needed: Several copies of 'Expanders', Page 7

Students cut out the expanders and write in their own numbers for hundreds, tens and ones. They then fold and expand.

Addition and Subtraction

Resources needed: Pack of tens frame dots with 1 to 10 dots; straws or sticks that can be bundles into tens; rubber bands; counters; Bingo Board 5 x 5; Large Number line 1 – 20; Number Chart 1 – 120; Block Pictures; yoghurt container for lucky dip

Bingo Board 5 x 5

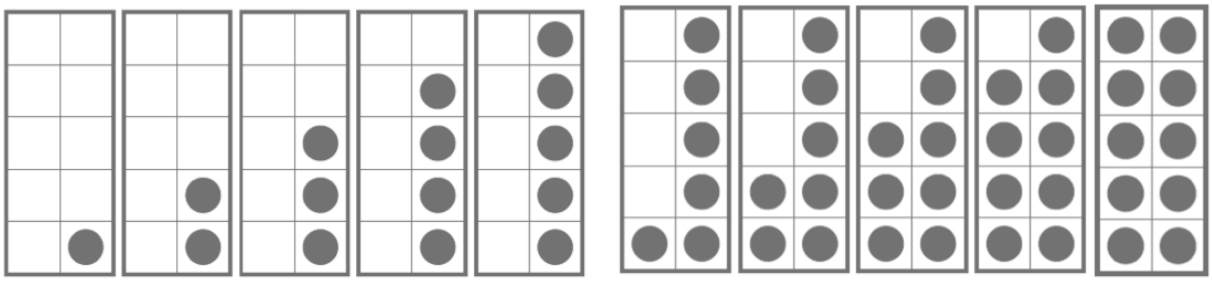


What will the students learn?

- Number facts of 10
- Increasing or decreasing a number by 10
- Adding 9
- Adding and subtracting using the number chart to 100
- Increasing or decreasing a number by 100
- Adding two 2-digit numbers together

Activity 1: Number facts of ten

Resource: Pack of tens frame cards with 1-10 dots.



Ask the students 'How many more dots to make 10? How do you know?'
They can record all ten number facts as addition sums, starting from 1 + 9 = 10 through to 10 + 0 = 10

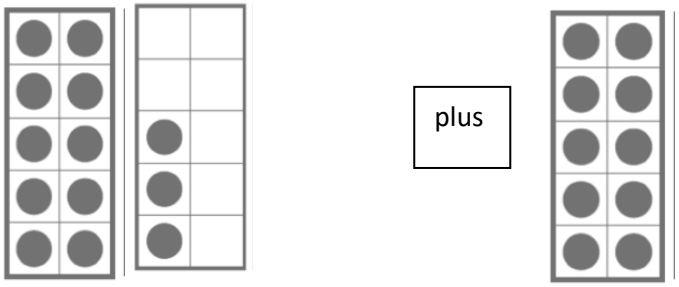
Activity 2: Quick as a flash

Resource: Pack of tens frame dots with 1 to 10 dots

Hold up a tens frame, e.g. "3", and quick as a flash the students have to say the number needed to get up to 10. (answer is "7"). Continue with other tens frames.

Activity 3: Adding 10

Resource: Pack of tens frame cards with 1 to 10 dots; extra cards with 10 dots.
Example: Show a number, e.g. 13 with tens frames and asks students to add ten. How many now?



Activity 4: Adding 10 on the number chart

Resource: Number chart 1 to 120, page 2

Give students practice in adding 10 using the number chart, e.g. 24 + 10 = 34
Then see if they can do similar addition sums in their head, without the number chart.

Activity 5: Adding 9

Once the students can add 10, they can easily add 9 by adding ten and taking away 1.

Activity 6: Taking away 10

Give students practice in *taking away ten*, using the same methods as *adding ten*, (tens frames and number chart, and in their head).

Activity 7: Some Went Away!

Resources: Counters, screen, e.g. a piece of paper or cardboard.

Select a number of counters between 10 and 15. Place them on the table. Tell the students the number of counters, then cover the counters.

Take 3 counters away. Ask the students how many counters are still undercover.

Activity 8: Keep adding 2

Resources: Number cards 10 to 90

Randomly show student a number card (10 to 20). Ask student how many are there, when 2 are added. Then add another 2. How many now? Continue a few more times asking students to keep adding 2 and giving their answer. Then select another number card and do the same.

Activity 10: Race Back to number 1

Resources: Number line 1 to 20
Number cards 1, 2, 3 (3 sets). "Lucky dip" container

Two players start at 20 on the number line. They take turns to pull out a number card (1,2 or 3), from the "Lucky dip" container, (eyes closed). They move backwards the number of places shown on the card. Before the student

moves, ask them to predict which number they will land on and explain how they know. The aim is to be the first player to reach 0.

Activity 11: Addition with 2 dice (for 2 or more players)

Resources: dice, pen and paper

Each player takes turns to roll 2 dice.
They add the total of the 2 dice, e.g. they may roll 2 on one die and 3 on the other,
The winner of each round gets a tick in the box.
At the end of 5 rounds, add up the number of ticks and see who has the most.
The one with the most ticks is the winner.

2 + 3 = 5	✓

Activity 12: Subtraction with 2 dice

Each player takes turns to roll 2 dice.
They take the lowest number from the highest.
The winner of each round gets a tick in the box.
At the end of 5 rounds, add up the number of ticks and see who has the most.
The one with the most ticks is the winner.

6 – 3 = 3	✓

Activity 13: Addition and subtraction using the number chart

Resource: *Number chart 1 to 120*

Students can use the number chart like a number line. They count on and go forward. Give them examples such as:
25 + 7
58 + 11
99 – 6
42 – 12

Activity 14: Addition using bundles of sticks or straws

Resource: sticks/straws in bundles of 10 plus some singles, rubber bands

Start with easy examples such as:
35 + 42
Students put 3 bundles of tens together with 4 bundles of tens.
They put 5 singles together with 2 singles. What is the number? They can write it as a sum: 35 + 42 = 77

Then try more difficult examples such as:
48 + 36
They put 4 bundles of 10 and 3 bundles of 10 together.
They put 8 singles and 6 singles together.
They will have to make a new bundle of 10 using the singles, with 4 left over.
What is the number?

Activity 15: Basic Subtraction using bundles of sticks or straws

Resource: sticks/straws in bundles of 10 plus some singles, rubber bands

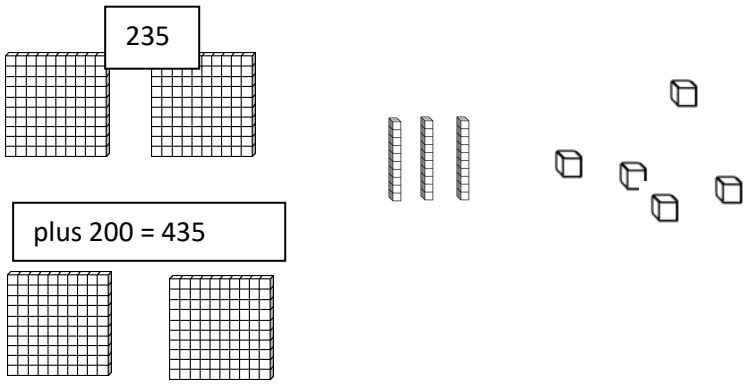
At this stage, only use easy examples, where the number of ones to be taken away is smaller than the ones in the other number. Example:
98 – 54
They make 98, (9 tens and 8 ones)
They take 5 bundles from the 9 bundles.
They take 4 singles from the 8 singles. What is the answer?

Activity 16: Addition and subtraction using block-pictures

Resource: cut-out block-pictures hundreds, tens and ones

Use block-pictures for adding or subtracting tens and hundreds, e.g.

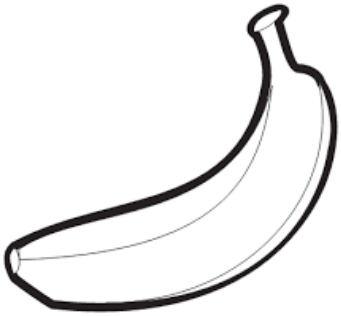
235 + 200
Other examples:
423 + 10
532 – 100
428 - 10

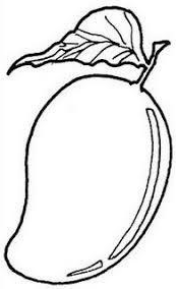


Multiplication and Division

Resources needed: counters and plates and/or pencils and paper; pictures of fruit

Pictures of Fruit: Prepare about 10 cut-out drawings of each type of fruit.





What will the students learn?

- Making sets
- Sharing objects
- Writing equations

Activity 1: 15 Teddies at 5 Tables

Resources: counters and plates and/or pencils and paper

The students imagine that the 15 counters are teddies and the 5 plates are tables at a café. (Students may draw a picture to aid their imagination.) Say that the 15 teddies sat down at 5 tables at the café. Ask how many teddies would be at each table if there were the SAME number at each table.

Activity 3: Sets of fruits on plates

Resource: pictures of fruit, paper plates

Cut out the pictures of fruit. Put them into groups on the plates, e.g. 3 plates with 2 bananas on each plate. Ask the students to write the equation and work out the answer. (3 sets of 2 = 6)
Repeat with different numbers of fruits in the sets.

Activity 4: Can You Share? (for 2 or more players)

Resource: counters

A student takes a handful of counters. The student puts them on the table. If they can share them evenly into groups, they win a point. The next player has a turn. Repeat several times.
The player with the most points wins the game.

Place Value Part B

Resources needed: number cards 0 – 9; about 20 random number cards between 200 and 900; block pictures

What will the students learn?

- Reading 3-digit numbers up to 999
- Writing 3-digit numbers up to 999
- Ordering 3-digit numbers up to 999

Activity 1: Ordering 3-digit numbers

Resources: Number cards 0 to 9

The student can make a set of number cards 0-9.
They have to make **three** 3-digit numbers from their cards. Now ask them to put the three numbers in order from smallest to largest. Repeat. Ask them to order their numbers from largest to smallest.

Activity 2: In the Middle (for 3 players)

Resources: number cards 200 to 900

Prepare about 20 number cards between 200 and 900 and set them down in random order on the table, (face down). Each player selects a card. The players now have to work together to put the three number cards in order from smallest to largest. The player who puts in the middle number is the winner. Repeat several times with groups of 3 students so that all get a turn.

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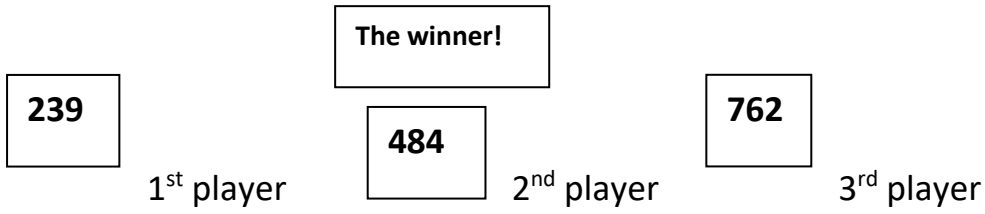


Play the game again, but this time the players have to order the number from largest to smallest

Activity 3: Make the Lowest Number (for 2 players)

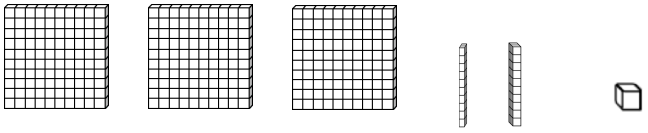
Resources: sets of number cards 1 to 9, container

Place the cards in a lucky dip bucket.
Each player selects three cards and makes the lowest possible number from the three cards. e.g. one student might select 3, 5 and 1 to make 153. The other student might select 4, 6 and 1 to make 146. The student with the **lowest** number wins a point. Repeat 5 times and see who has the most points at the end.

Activity 4: Writing 3-digit numbers

Resources needed: cut-out block-pictures of hundreds, tens and ones blocks

Make a 3-digit number using block-pictures as shown. The students have to write the number.



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Activity 5: Adding hundreds, tens and ones

Resources needed: cut-out block-pictures of hundreds, tens and ones

Continue on from the last activity. This time, the student has to make a 3-digit number with the block pictures, e.g. 367, and then add another hundred:
367 + 100 = 467
Other examples, (all to be made with the block-pictures):
327 + 10 =
482 + 5 =

Activity 6: Subtracting hundreds, tens and ones

Resources needed: cut-out block-pictures of hundreds, tens and ones
Ask the student to make a 3-digit number with the block pictures, e.g. 367, and ask them to take away a hundred: 367 - 100 = 267
Other examples, (all to be made with the block-pictures):
327 - 10 =
482 - 1 =