

Warm ups

PLACE VALUE

How many different ways can you make the number **15**?

(It is up to the students to decide how they will display this. They can use numerals, unifix, MAB, counters, drawing, equations...)

The number can be changed each time you use it as a Warm-up.

PLACE VALUE

Write down all you know about the number **24**.

(It is up to the students to decide how they will display this. They can use numerals, unifix, MAB, counters, drawing, equations, words, number sentence, number story...)

The number can be changed each time you use it as a Warm-up.

PLACE VALUE

I bought the numbers 6, 3 and 9 to put on my letterbox.
What might my house number be?
What is the largest number my house number could be?
What is the smallest number my house number could be?

(Try this task with different numbers)



PLACE VALUE

Play **The Price is Right**.

Have two students come out the front and tell them they are to guess the number written on the board behind them.
The only assistance the students are given is the number range eg: 0 to 100.
And classmates calling out higher or lower after each student's response.



PLACE VALUE

Guess My Number

Teacher thinks of a number between 0 and 20.

Make up 4 clues about that number that will assist the students to guess the number.

Eg: 12

I am a 2 digit number.

I am an even number.

I am also called a dozen.

I am double 6.



PLACE VALUE

My Number

Using a deck of cards students are asked to draw a card and name it. Eg: 3 (four)

Students keep that card and draw a second card. Eg: 5

This card is placed with their first card to make a two-digit number.

Eg: 34

Students keep the two cards and draw a third card. Eg: 4

This card is placed with their first two cards to make a three-digit number. Eg: 354

The teacher may then call out “**Make the biggest number you can or Make the lowest number you can.**”



PLACE VALUE

Largest/Smallest

Teacher has a large die.

Students rule up a table with two columns and place the headings units and tens.

Tens	Units

Students are told they need to make the **LARGEST** number.

The teacher rolls the dice and asks students to place the number rolled into one of the columns.

Teacher rolls the next number and it is placed in the second column.

After a few turns try 3 columns.



PLACE VALUE

Making Numbers

Using a deck of cards students are asked to draw 3 cards.

They are to write all the 3 digit numbers their cards can make.

Eg: 3 6 and 2 can make

362

326

236

263.....



Teacher asks: who has made the largest number?
who has made the smallest number?

PLACE VALUE

Mandy from Mars

Mandy the Martian has landed on Earth. She is trying to learn the numbers from 0 to 100. She gets confused when writing the numbers 12 and 21. How can you help her?



12 21

PLACE VALUE

Make It Higher

Using the digits in the number 563, what numbers can you create that are higher than this number?

What numbers are smaller than this number?

563

Change the number you start with from 3 digits to 4 or 5 digit.

PLACE VALUE

Three-move Wipe-out

Students will require a calculator or at least one between two.

Teacher writes an initial number on the board eg; 326

Students are asked to enter the same number into their calculator.

3 Steps

Students are asked to WIPE OUT the 2 so that there is a 0 where the 2 was.

Depending on the students ability you may need to provide clues such as: "If I am getting rid of the number 2 will I be adding or taking away?" "If I am taking away, which button does the taking away or subtraction?"

Ask the students what number they now have. 306

Keep going with the game until you get WIPE OUT- all the numbers are gone.

You can also play the game in reverse to make a number.



PLACE VALUE

The Car Park

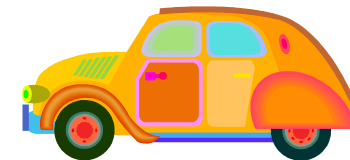
Visit school car park. Each student to list ten number plates.

Students look at lists to find number with largest 3-digit number.

Q: Who thinks they have the largest 3-digit number?

Q: Who thinks they might have a larger number?

Q: How do you know?



PLACE VALUE

Library Books

Display a range of non-fiction library books that have whole numbers as their reference number.

Q: How do you think non-fiction books are organised in the library?

Q: How does this help you find the book you want?

Q: How does it help the librarian put the books back on the shelf?

Select students to hold up each book.

Q: Which book would be on the shelf first?

Q: Next book?

Q: How do you know?



PLACE VALUE

Throw the Dice

Roll dice 3 times and record numbers e.g. 2, 3, 6.

Q: What 3-digit number can we make from these numbers that has 3 ones? Record responses.

Q: What other value could the 3 have in a 3-digit number?

Discuss examples. Continue until all possible numbers are listed on the board. Ask question e.g.

Q: What is the value of the 6 in this number?



PLACE VALUE

What's in a Digit?

Record three 3-digit numbers where eight occupies a diff place value, e.g. 867, 238 and 281

Q: What is common about each of these numbers?

Share responses.

Q: What do you notice about the position (or value) of the 8 in each number? Record ways of writing the value of the 8, e.g. 80, 8tens, Ask students to produce own 3-digit examples.

867, 238 and 281

Try the task again using 4 digit numbers.

PLACE VALUE

Hand Out the Digits

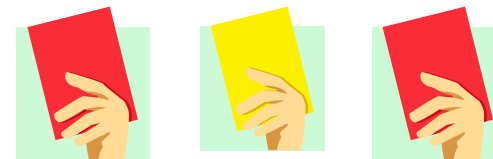
Write digits 0 to 9 on flash cards.

Give cards out to ten students and ask them to walk around in a circle, keeping their digit card hidden.

Call out a group size, e.g. 'Form groups of three!'

Students group in threes and have to make the largest (or smallest) number they can with the collective digits.

Repeat, calling for groups of 4 and 5; later extend activity by providing two '0' flash cards.



PLACE VALUE

The Clothes Line

Use a string/rope to represent a clothes line.

The teacher pegs a zero (0) at the start of the clothes line and a hundred (100) at the other end of the clothes line.

A student is then given a peg and number card (50) to place on the clothes line.

Discuss the placement.

How can we check this is where it should go?

More cards are given out to students who are asked to place them on the clothes line. (25, 10, 5, 75, 90...)

This activity can be repeated with different starting points,

0–2000 line (400–600)

39–172 line (65–95)

and with fractions



PLACE VALUE

Ten more

Begin the session with a 100's chart and mark the number 10.

Students are asked what number will I get if I add 'Ten More'?

Add 'Ten More'

Discuss.

Now ask what happens if we start at 4 and add 'Ten More'?

What number do we get?

Add 'Ten More'

Add 'Ten More'

Discuss

Start at a new starting point- 26

Add 'Ten More'

Add 'Ten More'

Discuss

Now look at larger numbers



PLACE VALUE

Place Value Bingo

Revise H, T and U and the importance placing numbers in their correct place to match their value.

Each student receives an empty Bingo card and are asked to write in 3 digit numbers in each square.

Teacher selects a place card from a tray H, T or U.

The teacher selects a number from a tray 0-9.

9 tens is 90

324	421	796	333
124	578	992	122
542	998	505	392

Students can cross off any square on their card with the matching place value.

Continue playing the game until a student gets BINGO!

PLACE VALUE

In Betweenies

Put 2 post-it notes on either side of the room with numbers on them eg: 12 and 32

Give out random post-it notes to students and ask them to write a number on it that comes between the two numbers.

Students are then asked to stand in their correct place between 12 and 32.

Extension

After all the whole numbers are gone keep going.

Ask a student to stand between 12 and 13 and ask what number could go here?



PLACE VALUE

Mind reader

Give students 3 clues about a number.

Example 3 digit

Odd

Middle digit is seven

1st and 3rd digit is the same

All 3 digits add up to 18.

(Can make easier- 2 digit)

(Can make more interesting- hide one digit inside another...

3 can hide in 8, 1 can hide in 4)



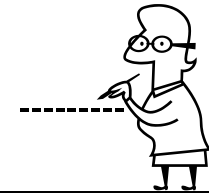
PLACE VALUE

Human Number Line

Give a number (0 to 100/1000) each to 10 students. Students are asked to line up smallest to largest?

Next students are asked to find a partner so when their numbers are added together they get an odd/even number.

This activity can also be used with fractions and decimals.



PLACE VALUE

SNAP

Two players sit side-by-side and divide the cards evenly between themselves. At the same time, each player turns over one card. One player is assigned to turn over the number in the tens place; the other player turns over the number in the ones place. The player who calls out the correct number first gets to keep both cards. For example:

Player one is assigned to turn over the tens place card turns over a 5.

Player two is assigned to turn over the ones place card turns over a 7.

The first player to call out the number (57) gets to keep both cards.

Play continues until one player has collected all of the cards. In the event of a tie (both players call out the number at the same time), players leave their cards in a "tie pile." This pile builds until one player gives a correct answer before the other. That player will take the two cards just turned over *plus* all of the cards in the tie pile.

VARIATION: Play with three cards and build numbers into the hundreds



PLACE VALUE

Millionaire Place Value

This is a place value game which can be played with a whole class. In pairs pupils draw 4 joined boxes in a horizontal line. Squared paper will help. The teacher has a standard pack of playing cards with the picture cards removed. The teacher shuffles them, turns the top card and calls out the number. The pupils must choose a box to write this number in. The teacher also does this in secret. The cards are turned and called until all four boxes are filled.

Pupils and teacher then display / say their number. Pupils who get a higher number than the teacher gets 5 points. Equal to the teacher gets 3 points. Lower than the teacher 1 point. The teacher gets 10 points if he / she beats all the pupils!

Note - a ten playing card is called as a zero.



PLACE VALUE

Pick It Out

Th	H	T	O

*In a container have the numbers 0 to 9.
Set the task- Make the largest even number possible.
Pull out a number. Ask a child where it might go. Ask for a reason for its placement. Eg: 2 Maybe it should go in the ones column.
Children must be able to read their final number.*

Best possible answer-

PLACE VALUE

In betweenies/ Human Timeline

Place two numbers up, a distance apart.

5

22

*Give students a piece of paper and ask them to write a number that comes between these two. Once a number is recorded have the child place themselves between the two numbers. Repeat this task until all numbers are taken and then ask for another number- this may lead to fractions
Discuss student's placement in line.*

Extension Use time, days of the week, months, birthdays

PLACE VALUE

Order, Order

Have children break up into groups of 4, 5 and 6
Students in their group are given cards with a variety of numbers.
Students are asked to order themselves from smallest to largest as quickly as possible and yell out done!
Sample numbers 123 321 231 213 132 312

Extension: Use decimals, fractions...

PLACE VALUE

5 Bigger/5 Smaller

Students are given a number and asked to give 5 numbers bigger and 5 numbers smaller.

Eg: Bigger
 ↑
 12
 ↓
 Smaller

PLACE VALUE

Cut up Words

Given a mix of number words students need to make numbers and record the numeral. Make as many numbers as you can. Students make the number and must be able to read their numbers.

Set a task- 2 digit number, 4 digit number...

four

and

seventy

twelve

fifteen

hundred

PLACE VALUE

Biggest Smith

Students are given a page out of 'the white pages' under SMITH. The students are set the task to find the Smith with the largest number. Students are to record the number and read it back.



PLACE VALUE

Place Value Chain Game/BINGO

I have the number 9

Who has 5 more than me?

I have 14

Who has half my number?

I have 7.

Who has 3 times my number...

See **think cards** (on server).

PLACE VALUE

Add 1 More

Begin the session by telling the students that 'when adding 1 things **can** change'.

Create 2 teams.

6 days add 1 more = 1 week

99c add 1 more = \$1

12 years add 1 more = a teenager

59 seconds add 1 more = 1 hour...

+ 1

PLACE VALUE

.....is the answer, so what could be the question?

Eg: **12** is the answer.

Students are asked to ask a question to get 12.

How many hours in $\frac{1}{2}$ a day?

How many eggs in a dozen?...

PLACE VALUE

Calculator or Not.

Two students are selected. One is able to use a calculator and one cannot.

A question is asked and the two must respond. The child with the calculator **MUST** punch it in and complete the process before giving their answer. The child without the calculator can just call out the answer.



PLACE VALUE

Just Gridding

Begin with the units/ones column.

Roll a die and everyone places the number rolled in the column.

Students are now able to select where they place the next numbers rolled. They are told the objective is to finish with the largest number possible.

		O
	T	
H		

PLACE VALUE

Extended Notation

Use 'Just Gridding' to begin. Whole Class Focus -on the right-hand side show the extended notation. Then allow the children to try their own.

		O	
	T	4	4
H	5	2	50 + 2
3	2	1	300+ 20 + 1
			300 + 70 + 7
			377

