



MATH&MOVE

LESSON

USING MOVEMENT TO

add up to 60!



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This lesson focuses on pupils practicing double-digit addition by throwing dice to find out which 2 digits to add, after which they jump to the correct sum written on a hopscotch board.



At the end of this lesson, pupils should be able to:

- Recognise the connection between two addends and their sum
- Master the addition of multiples of 5 (from 5 – 30) to make a sum of 60
- Calculate which two addends (multiples of 5) can make up a given sum

TOPIC: Basic mathematical operation – addition

DURATION: 15 - 30 mins

LEVEL: Ages 8-9

PARTICIPANTS: groups of 4-6 pupils, but can be modified to include 8-10 pupils

LESSON PREPARATION

Required skills

For this lesson, pupils should already know how to:

- Add up multiples of 5, understanding that the sum always ends in a “0” or a “5”

Required materials and set up

1 2 dice, with each side containing multiples of 5 from 5 – 30 (5, 10, 15, 20, 25, 30)

- You can use regular dice and use glue and pieces of paper to paste the new numbers on the sides of dice.
- Alternatively, you can make your own paper dice and following this YouTube link ([How to make a paper Dice?](#))

Required materials and set up

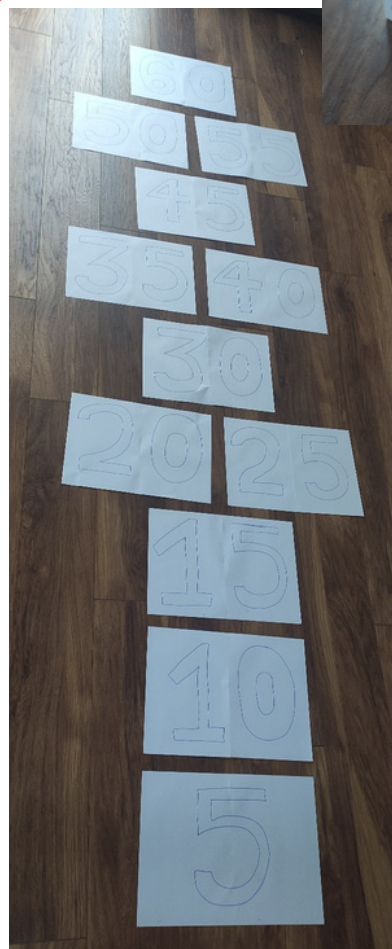
- 2 A hopscotch board with 12 spaces containing multiples of 5, starting from 5 until 60
 - Ensure that the spaces on the board are large enough for pupils to pass by each other as they jump or even occupy the same space on the board (a size of 60cm x 50/60 cm per space should suffice).
- 3 Chalk for drawing the hopscotch board on the pavement
 - Due to the size of the hopscotch board, we recommend conducting this lesson with pupils outside.

Since this activity requires movement of the wrists and lower body, instruct the entire class to rotate their wrists in a clockwise and counter-clockwise motion and do 10 jumping jacks to prepare for the hopscotch jumps.

LESSON INSTRUCTIONS

- 1
 - Once you've set up the area with the hopscotch board and 2 dice, discuss the numbers written on both learning aids with the pupils. Assist them in identifying that all numbers are multiples of 5, and that adding 2 of those numbers together will always result in an answer that ends in 0 or 5.
 - After this introduction to the lesson's concepts, divide the class into groups of 4-6 pupils and explain that the groups will take turns throwing the dice and making their way around the hopscotch board, until all members of a group are standing on a space on the board.

(1)



(1)
Hopscotch board

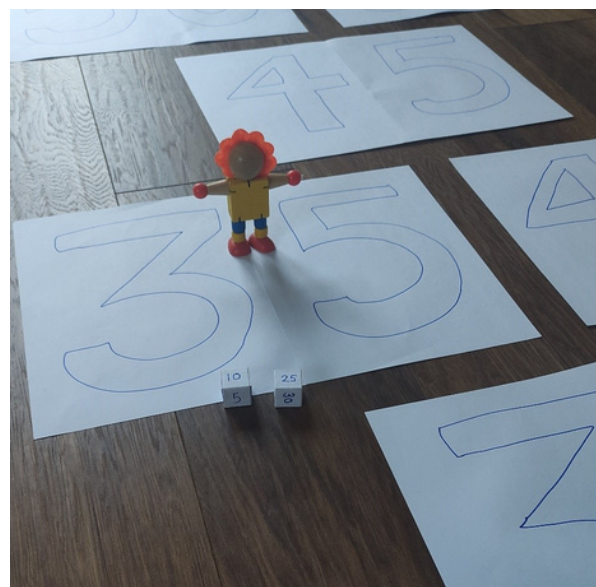
(2)



(2)
Dice

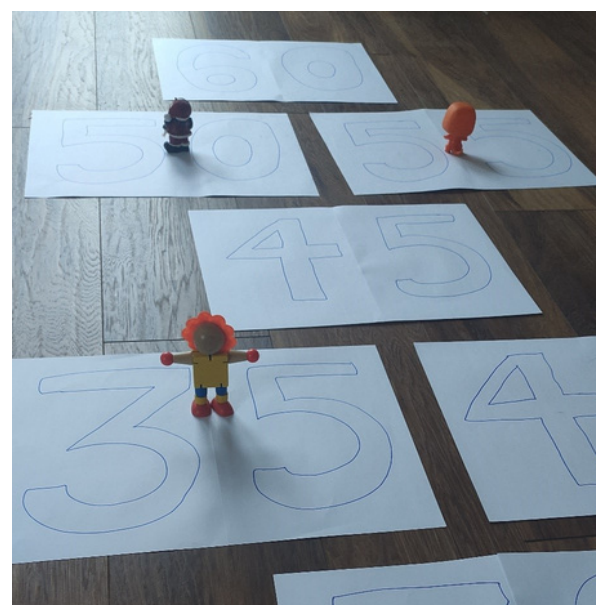
2

- Beginning with the first group, have one pupil throw the dice. When they land on the surface, instruct the pupil to add up the numbers they see (for example: $10 + 25$). Once they calculate the sum, ask them to jump to that number on the hopscotch board and remain there until the end of their group's turn.



3

- Have the rest of the group members take turns adding up the numbers from their dice, and then jumping to that sum on the hopscotch board.
- The group's turn ends once all members are standing on a space on the hopscotch board.



CONCLUSION



With all players on the board, have the group make an overview about whose sum is the highest – the winner(s) will be the pupil(s) that reached or are closest to the sum of 60.

TO GO FURTHER



You can challenge the pupils' double-digit addition skills even more:

- While all pupils are standing on a space on the board, ask them to add up the sums of their sums as a group!
- A bonus round can be played by each group in which each player goes back to the beginning of the board and throws an object to land on one of the board spaces. To get to that sum, they can now jump only on numbers which add up to that sum. For example: if their object lands on '40' they can jump on the number '20' twice ($20+20$), or the numbers '10' and '30' ($10+30$), or even '5', '15' and '20' ($5+15+20$).

RECOMMENDATIONS FOR INCLUSION

How to adapt this lesson to younger pupils

This activity can be adapted to pupils aged 6-7 years by using the numbers on regular dice as your 2 addends for addition problems. This adaptation would target the practice of basic level addition, with the lowest sum amounting to 2 ($1 + 1$) and the highest sum amounting to 12 ($6 + 6$). You can use the same hopscotch template in this sheet, changing only the numbers on the spaces to add 1 – 12.

Accommodations for pupils with specific learning disorders

- Encourage the pupils to add up the numbers from the dice out loud and then read out the numbers on the spaces as they skip over them on the hopscotch board. This articulation of steps is helpful for pupils with SLD to avoid relying on memorisation.
- Do not emphasise competition, but rather collaboration of tasks: the pupil(s) who rolled the highest sum of 60 is/are not given any preferential treatment, and instead their sum is used alongside the others' to work out the sum of all the sums together.

BIBLIOGRAPHY

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