THIRD SPACE LEARNING

Summer Maths Activities

20 fun maths activities for the summer holidays

Year 5 to 6

Note to children

Hooray! It's the summer holidays!

You've worked so hard this year, and learned so many new things in Year 5 you deserve a big pat on the back. You also deserve to be able to start Year 6 knowing what you know now – and not forgetting everything over the summer!

So in between your summer adventures and relaxing, are you up for an extra challenge?

Your task is to complete 10 of the activities in this special Summer Maths Activities pack. As well as being lots of fun, the activities will help make sure all of the amazing maths that you have learned in Year 5 sticks in your brain, ready for your new learning adventures in Year 6.

Simply tick off the activities you have attempted and bring this pack back with you when school starts again!

Have fun!

Note to parents and carers

The summer holidays are finally here! Your child has worked hard all year learning all the maths we expect Year 5 students to know, and now they deserve some rest and relaxation. BUT… this pack is here to make sure they also don't forget all that they've learned and have some fun maths activities to keep them going over the summer!
There is lots of evidence that doing just a little bit of maths practice over the summer holidays will make it much, much easier for them to start the next school year.

The activities are not intended to be too much like 'work'. They should provide just a bit of a mathematical focus every now and then, and most will fit into your day-to-day plans and life during the summer holidays. We're setting a target for your child to complete 10 activities over the summer holidays, which is only a couple of activities a week. If children are struggling with their maths, just knowing that they can tick off a handful of activities over the holidays will really boost their confidence and success when they move into Year 6 next term.

Other children may want to do more and really push themselves. Do what's right for your child. When they've done each activity, please date and sign it so the child knows it's important. Thank you for your support, and we hope you and your child have fun with the activities!

THIRD SPACE
LEARNING

1 **Who Creates the Most Washing?**

Your challenge:
Can you find out who creates the most washing in your house?

What to do:

1 This one involves helping out with the washing for a week. (Sorry!) Families generate a LOT of washing, right? But who in your house generates the most washing?

2 Before you begin, predict who you think will create the most washing over the next week.

3 I think that the following person will make the most washing:

....

4 Over the next week, use Resource Sheet 1 to record your results. In the table, record how many items of washing each person in your house makes in the table.

5 Next create a chart of your choice showing your results.

6 The person who created the most washing was

....

Completion date: ....

Adult initials: ....

2 Playing Games With Maths

Your challenge:

- Can you find the maths in your favourite board or card game such as Go Fish, UNO or Monopoly?

You will need

- Your favourite board or card game to play
- People to play it with

How to play:

1 While you are playing it, think about all the maths skills you are using!

2 Search hard – most games do involve some maths somewhere, but if your favourite game doesn't, then try your second favourite game!

The game I played was ....

The maths I spotted in it was ....

Completion date: ....

Adult initials: ....

THIRD SPACE
LEARNING

3 **Maths Snap**

Your challenge:
- Can you find equal cards?

You will need

- Resource Sheet 2 cut up (or you can create your own cards)
- At least one other person

How to play:

1 Shuffle the cards from the Resource Sheet 2 and deal them between the players.

2 Play just like you would do in 'normal' snap – take turns to turn over one of your cards and place it in the middle.

3 If the two cards are equivalent, the first person to call 'snap' and place their hands on the pile of cards wins the cards. Remember, equivalent means they are worth the same, for example:
$\frac{1}{4}$ and $\frac{2}{8}$ or $\frac{1}{8}$ x 64 and 8

4 The first player to get all of the cards wins! Try to play the game at least twice.

The first time I played, I played against ....

and the person who won was ....

The second time I played, I played against ....

and the person who won was ....

Completion date: ....

Adult initials: ....

4 Money Problems

Your challenge:

- Maths problems are everywhere! Can you write at least seven word problems that involve money?

You will need

- A sheet of lined paper

How to play:

1 You could base your money problems on ways you have used money during the holidays, or you could totally make them up.

2 Try to write problems that involve different operations – could you create problems that involve more than one operation?

Completion date: ………………

Adult initials: ………………………

THIRD SPACE
LEARNING

5 **Angles, Angles, Everywhere**

Your challenge:

- Angles are all around you. Find and measure 15 angles in your home, garden, friend's home, or around town.

You will need

- A sheet of paper or a digital document
- Protractor

How to play:

1 Search for 15 real world objects that represent acute angles, obtuse angles, and right angles around your home, friend's home, garden, or around town.

2 For every angle found, measure it and determine if the angle is acute, obtuse, or a right angle.

3 Record the 15 objects, the measurement of the angle, and the classification of the angle.

Completion date: ………………

Adult initials: ………………………

THIRD SPACE
LEARNING

6   Card Game Maths

Your challenge:
- How well do you know your multiplication facts? You will be multiplying the numbers represented by the playing cards.

You will need

- Deck of cards (Ace = 1, Jack = 11, Queen - 12, King = 13)
- A friend or family member to play against
- A piece of paper to keep score
- 2 or more players

How to play:

1   Deal the entire deck between you and your partner.

2   On the count of three, both players throw down a card and quickly multiply the number on their card by the number on their partner's card.

3   Whoever gets the answer first wins the round.

4   1 point goes to the winner of each round.

5   The first player that gets 10 points first wins.

I played against ....

Who got 10 points first? ....

Completion date: ....

Adult initials: ....

THIRD SPACE
LEARNING

7 **Maths Paper Scissors**

Your challenge:
- Can you win the maths version of 'Rock, Paper, Scissors?'

How to play:

1 Players stand facing each other. Players make two fists, and say simultaneously 'maths, paper, scissors' while moving their fists up and down (like when you play "Rock, Paper, Scissors'). On scissors each player puts out between 1 and 10 fingers.

2 Players race to multiply the number of fingers they put out by the number of fingers their partner put out and call out the answer. The player who calls the correct answer first, wins a point.

3 Play for the time period (for example 2 minutes).

4 Once the game is played a couple of times, begin to think about the possible answers based on the number of fingers.

I played with ....

How many rounds did you play? ....

Completion date: ....

Adult initials: ....

THIRD SPACE
LEARNING

8   **Guess the Maths Game**

Your challenge:
- Do you know your maths vocabulary and maths facts?

You will need

- Small slips of paper
- Pen or pencil
- Bowl
- 2 or more players

How to play:

1   Each player takes 5 slips of paper and writes a maths word or maths fact on each slip. Scrunch up each slip when you're finished and place it in the bowl.

2   Once all the slips of paper are in the bowl, mix the bowl so all the slips of paper are mixed up.

3   One player takes a slip of paper from the bowl and describes what is on the paper for the other players to guess without actually saying the word or fact.
The player can act out or describe the word or fact. Once the other players guess correctly, the player takes another slip. The player has 1 minute to get the group to correctly guess as many words/facts as they can.

4   A player is awarded one point per word/fact the group correctly guess in 1 minute.

5   Once the minute is up, the next player will go.

6   You can play as many rounds as you want and can play in teams if you prefer.

I played with ....

Who won? ....

Completion date: ....

Adult initials: ....

THIRD SPACE
LEARNING

9 **Let's Go Exploring for Triangles**

Your challenge:

- Triangles are everywhere! Can you find 10 triangles in your town, garden, home, friend's home?

You will need

- A camera
- Slide show software

How to play:

1 Go exploring for triangles.

2 Find 10 triangles in the world around you.

3 When you find a triangular shaped object, take a picture of it.

4 Once you have all 10 pictures, put them in a slide show presentation.

5 Put one picture per slide. Explain what type of triangle you think it is by classifying the triangle (scalene, isosceles, scalene).

Completion date: ....

Adult initials: ....

THIRD SPACE
LEARNING

10 **Frisbee Maths**

Your challenge:

- How confident are you adding 5-digit numbers? Can you find the sum of two numbers using mental maths?

How to play:

1 Take the frisbee and write 5-digit numbers around the edge of the frisbee with the pen.

2 Go outside, one player throws the frisbee to the other player. The player catching the frisbee has to catch it with two hands.

3 The two numbers that the player's hands are touching are the two numbers the player has to add together.

4 That player then has to throw the frisbee back to the other player where the second player now has to add the two numbers together.

5 You can do this with addition, subtraction, multiplication or division.

I played with ....

Who got the most sums correct? ....

Completion date: ....

Adult initials: ....

THIRD SPACE
LEARNING

11 How many ways?

Your challenge:
- How many calculations can you write?

How to play:

1 Throw the dice 5 times to generate a 5-digit number - write down that number.

2 Players then have 3 minutes to make as many different calculations where the target number is the answer.

3 1 point is given for each correct calculation.

4 If a 5, 3, 2, 1 and 6 were thrown, this would give a target number of 53,216.

5 The players could create an addition example such as 41,568 + 11,648 = 53,216, or a subtraction calculation such as 54,536 - 1,320 = 53,216.

I played with ....

Who won? ....

Completion date: ....

Adult initials: ....

12 Prime Number Game

Your challenge:

- How well do you know your prime numbers?

You will need

- 2 or more players
- Deck of cards (Ace = 1, Jack = 11, Queen - 12, King = 13)
- List of prime numbers (optional)

How to play:

1 Shuffle the card and deal 11 cards to each player, which they hold in their hand. The top card of the remainder of the deck of cards is turned over and is the "starting number".

2 The non-dealer (or person to the left of the dealer) plays a card from their hand that adds to the starting card to equal a prime number.

3 The next player then tries to add to that total to equal a larger prime number.

4 When a player can no longer add a card that sums up to a prime the round is over, and the last person to make prime gets a point.

5 The first person to get 5 points is the winner.

I played with ....

Who got 5 points first? ....

List of prime numbers: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 83, 89, 97, 101, 103, 107, 109, 113, 127, 131, 137, 149, 151, 157, 163, 167, 173, ...

Completion date: ....

Adult initials: ....

13 Roll the Place Value

Your challenge:

- Can you write 5-digit numbers in expanded form?

You will need

- 1 dice
- Paper and pencil
- 1 or more players

How to play:

1 Player rolls the dice 5 times. The first roll represents the ten thousands place, the second roll represents the thousands place, the third roll represents the hundreds place and the fourth roll represents the tens place and the final roll represents the ones place.

2 Write down the number in standard form.

3 Take the number and then write it in expanded form.

I played with ....

Completion date: ....

Adult initials: ....

THIRD SPACE
LEARNING

14 **Outdoor Magic Square**

Your challenge:
- Can you work out the magic square?

How to play:

1   Using the outdoor chalk, draw a 3 by 3 square.

2   Fill in the squares with the given numbers using Resource Sheet 3.

3   Fill in the remainder of the blank spaces with numbers so that the sum of each row and column is the same value.

4   Whoever completes the most magic squares wins.

I played with ....

How many magic squares did you solve? ....

Who won? ....

Completion date: ....

Adult initials: ....

THIRD SPACE
LEARNING

15 What's My Number?

Your challenge:

- Do you know enough maths terms to guess the right number?

You will need

- 2 or more players

How to play:

1 Player 1 thinks of a 4-digit or 5-digit number.

2 Player 2 has to guess the number by asking questions such as, "Is the number even or odd? Is the number greater than or less than 10,000? Is the number a multiple of 5?"

3 Player 1 has to answer the questions. Once player 2 guesses the number, switch places.

I played with ……

How many numbers did you guess? …………………………………………………………………………

Completion date: ………………….

Adult initials: ……………………….

16 Multiplication Bingo

Your challenge:

- Can you use your multiplication facts to win at Bingo?

You will need

- 3 or more players
- Paper/ pencil for each player

How to play:

1 Decide which person is going to be the leader.

2 Select a times table to focus on. Each player writes five numbers from that times table (for example, the 4 times tables, you might write down 8, 20, 28, 36, and 44).

3 The leader of the game then calls out various calculations from the selected times table (for example, 6 x 4, 2 x 4, 11 x 4, etc…)

4 If a calculation is called and a player has the answer to it on their paper, they cross out the number.

5 The winner is the person to cross out all their numbers and shout 'bingo'.

I played with ....

How many times did you get Bingo? ....

Completion date: ....

Adult initials: ....

17 Compare the Fraction

Your challenge:
- Can you find the greatest or smallest the fraction?

How to play:

You will need

- 2 or more players
- Paper and pencil
- Deck of cards (Ace = 1, Jack = 12, Queen = 14, King = 15)

1 Shuffle the cards and put the deck face down.

2 Decide if you are aiming to make the greatest or smallest fraction.

3 Players take it in turns to flip over two cards each. Once you have flipped over a card, decide if this will be the numerator or denominator of your fraction.

4 Compare the fractions. The person with the greatest or smallest fraction (depending on what you agreed in step 2) gets a point.

5 The first player to 5 points wins.

I played with ....

Who won? ....

Completion date: ....

Adult initials: ....

18 Multiplication War

Your challenge:

- How quick are you with your multiplication facts?

How to play:

1 Deal the cards between the two players.

2 At the same time, both players turn over one of their cards from their pile and place it in the middle

3 The point of the game is to multiply both numbers together and be the first to call out the answer.

4 The first player to call out the correct answer gets to keep the cards.

5 The winner of the game is the player who has collected the most cards.

I played with ....

Who won the first game? ....

> ## You will need
>
> - 2 players
> - A deck of cards (Ace = 1, Jack = 11, Queen = 12, and King = 13)

> Completion date: ....
>
> Adult initials: ....

19   Outdoor Chalk Number Line

Your challenge:
- Can you jump the fraction number line?

How to play:

1   Find a place outside to draw a number line using the outdoor chalk and draw a number line.

2   Give each player 5 cards. On each card, write a calculation involving a whole number multiplied by a unit fraction
(for example, $3 \times \frac{1}{4}$)

3   Once all the players write their calculations, the leader takes the cards and shuffles them.

4   One player at a time picks a card. The player has to jump to the correct answer on the number line or the approximate location of the answer on the number line.

5   The player stays in their location until they select another card, then they will return to 0 and start again.

6   A point is awarded for every correct answer.

7   The player that gets to 10 points first wins.

You will need

- 2 or more players
- Outdoor chalk
- Number line with fractions
- Cards and pens

I played with ....

Which unit fraction did you use in the first round? ....

Who won? ....

Completion date: ....

Adult initials: ....

THIRD SPACE
LEARNING

20 Water Balloon Maths

Your challenge:
- How many calculations can you solve before the water balloon breaks?

You will need

- Water balloons
- Water
- 2 or more players

How to play:

1 Fill a balloon with water.

2 Arrange players in groups of 2 or 3 about 2m away from each other.

3 Take turns throwing the balloon to the other player while saying a calculation. (For example, you might say 7 x 12 = ? or $\frac{1}{2}$ of 128 = ?).

4 When the other player catches the balloon, they must say the answer.

5 Each time a player answers correctly, the player must take a step backwards.

6 The goal is to answer as many calculations correctly before the water balloon breaks.

7 If it's a warm day, do 5 rounds!

I played with ....

Who won the first round? ....

Completion date: ....

Adult initials: ....

Resource Sheet 1: Who Creates the Most Washing?

A Use the table below to help you record your data.

Family member's name	Mon	Tues	Wed	Thur	Fri	Sat	Sun	Total

B Use the space below to make an appropriate chart to show your results.

Resource Sheet 1: Who Creates the Most Washing?

C Write down four things you can tell from the data.

....

....

....

....

....

....

....

....

Resource Sheet 2: Maths Snap

$2 \times \dfrac{1}{2}$	1	$\dfrac{1}{3} \times 9$	3	4×3
12	$\dfrac{1}{8}$	$\dfrac{2}{16}$	5×5	25
4×6	24	$\dfrac{1}{3}$	$\dfrac{5}{15}$	1×0
0	$\dfrac{1}{5} \times 25$	5	1×10	10

Resource Sheet 2: Maths Snap

| $\dfrac{1}{6} \times 36$ | 6 | 7 x 12 | 94 | 10 x 10 |

| 100 | $\dfrac{1}{8} \times 64$ | 8 | 92 x 0 | 0 |

Resource Sheet 3: Magic Squares

		8
9		1
	7	

	9	
3		
8		6

		6
3		7
		2

		4
		3
6		8

	7	
9		1
4		

		2
1		
8	3	

THIRD SPACE
LEARNING

0-9 Digit Cards

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

THIRD SPACE
LEARNING

0-9 Digit Cards

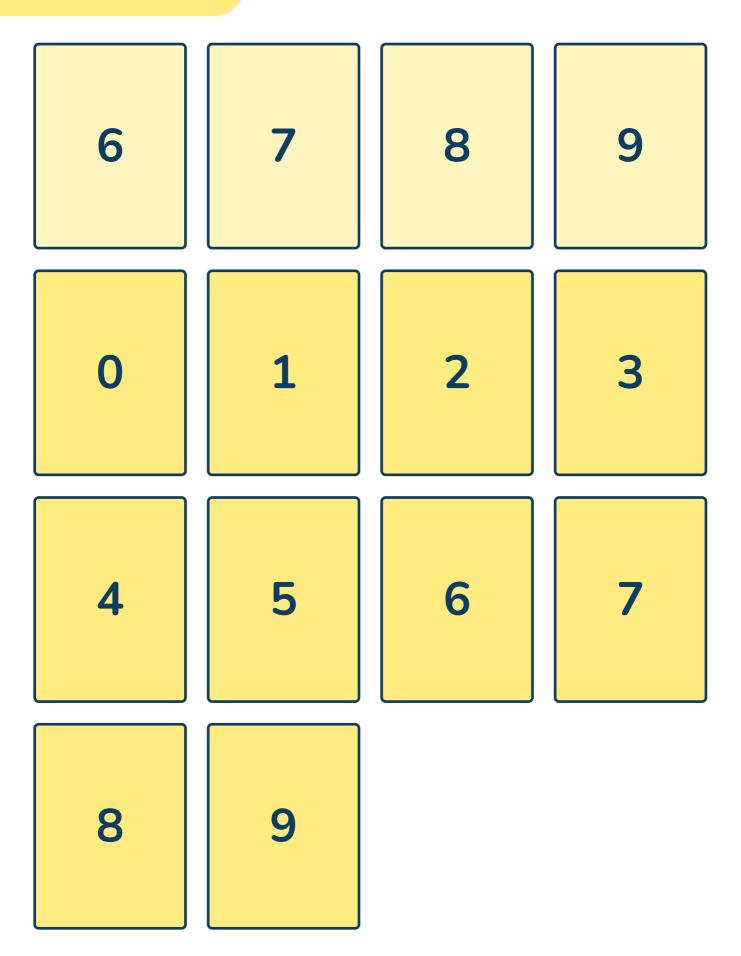|			
6	7	8	9
0	1	2	3
4	5	6	7
8	9		

Do you have a group of pupils who need a boost in maths this term?

Each pupil could receive a personalised lesson every week from our specialist 1-to-1 maths tutors.

- ✓ Raise attainment
- ✓ Plug any gaps or misconceptions
- ✓ Boost confidence

Speak to us

💻 thirdspacelearning.com

📞 0203 771 0095

✉️ hello@thirdspacelearning.com

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