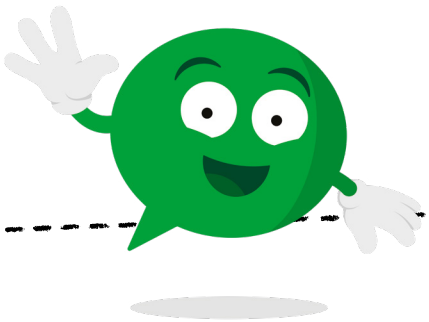
KS2/P4-P7 teacher instructions

Buddy's key challenge



What is Buddy's Key Challenge?

Buddy's Key Challenge is a game where pupils solve maths related puzzles to find pieces of a key. It can be played together as a whole class.

Each correct answer will reveal the location of one piece of key that's hidden in the classroom. There are ten pieces that make up the key, like a jigsaw.

Once all the pieces have been found, the key can be used to unlock a magical door for Buddy to come through to visit the school.

The challenge could be timed and played across the year group or school, with times up on a leader board. The winners would be the class that puts the key together and finds Buddy in the fastest time.

How to raise money

Pupils can be sponsored by family and friends to take part in Buddy's Key Challenge. Families can raise money via JustGiving or by using printed sponsor forms and paying via your school's chosen donation method. If you need support in setting up your school's JustGiving or ParentPay page, please follow the instructions on the Number Day resources page, or you can email us at **numberday@nspcc.org.uk**

What you need:

- A printout of the key, cut into ten pieces – one piece for each question
- Pupil questions and answers for the teacher to read
- A pupil handout for each table, or as required
- Pencils and paper (for workings)
- A JustGiving page for the school or a printed sponsor form for each pupil/family, so parents can pay in money using ParentPay or the school's chosen donation option.
- A timer (optional)
- A printout of Buddy

How to play:

1. Print out the image of the key and cut it into ten pieces.
2. Hide a piece of the key in the following locations. These locations are important as they are answers to the questions.
    - Under a bin
    - The teacher's desk
    - By the window nearest the door
    - By the whiteboard
    - Under the desk of the third child in the register
    - To the right of the door
    - Under the desk of the first child in the register
    - Teacher to choose where to hide
    - Teacher to choose where to hide
    - Teacher to choose where to hide
3. Put Buddy in your chosen location in the school, such as the playground, the library, or just somewhere out of sight of the pupils.
4. Print out the pupil handout and distribute.
5. Read the introductory story to set the scene.
6. Start the timer (if using).
7. Pupils must work together to solve the puzzles and questions.
8. For each question, give the children some time to come up with an answer. Ask the pupils to raise their hands if they think they have the correct answer, and choose one of them to share with the class. If they get it right, ask them to collect the jigsaw piece from the hidden location.
9. Once all ten pieces are found and the key assembled, the class has succeeded and can welcome Buddy to the school!
10. Stop the timer (if using) and record how long it took the class to complete Buddy's Key Challenge.

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Story

Buddy lives in a magical forest where he has been visiting schools through a special door in an enchanted tree. He really wants to visit **<insert name of your school>** but the door is locked and there's a problem with the key: when Buddy sent the key to you, it got broken into ten pieces!

Can you help Buddy by answering the questions to solve the clues and find the pieces of the key around your classroom? Once the key is put together, you'll be able to open the magical door for Buddy and find him in your school. You need to try to meet Buddy before the other classes. Good luck!

Questions and answers

Please note: it is important that the clues are hidden in their specific locations as the locations relate to the answers.

1. Codebreaking question on the pupil handout. (Answer: under the bin)
2. Complete the word search on the pupil handout. Ask pupils to find the list of words (they are horizontal and vertical) and colour them in. Then, starting at the top left and going across each line write the first 27 letters that have not been used – this will spell out the location of the next part of the key. (Answer: by the window nearest to the door)

M	A	T	H	S	B	Y	T	H	E	W	I	N
D	D	O	W	U	N	E	A	P	R	E	S	T
T	D	O	T	M	U	L	T	I	P	L	Y	H
E	D	O	O	S	O	R	I	Q	S	E	V	N
C	W	D	S	N	F	F	M	M	P	Q	Z	I
A	Y	D	I	V	I	D	E	H	C	U	N	N
L	L	P	O	G	V	D	S	Q	U	A	R	E
C	L	M	O	R	E	T	T	T	N	R	Q	F
U	W	K	R	Y	I	V	A	X	O	T	E	N
L	A	N	B	O	C	U	B	E	P	E	V	B
A	R	M	Z	R	P	J	L	D	A	R	E	A
T	R	I	A	N	G	L	E	Z	M	M	B	P
E	G	C	H	J	D	E	S	Q	Y	O	L	L

3. Read the following question:

   Harry, Tilly and Anika were buying ice creams at the beach. Harry's cost £2.55, Tilly's cost £1.90 and Anika's was £2.05. Harry paid £7, how much change did he get? Key piece location is the teacher's choice to hide, or it can be given once the question is answered. (Answer: 50p)
4. Codebreaking question on the pupil handout. (Answer: above the whiteboard)
5. Read the following question:

   There are 6 children in a classroom, and their names are Ishan, Shira, Penny, Sam, Bhavika and Joe. Put their names in alphabetical order. Which position is Joe? Look under the desk of the pupil that is in that position in your class register for your next piece of the key. (Answer: third position)
6. Answer the money puzzle on the pupil handout. Ask pupils to count the money and decide what the most expensive item they can buy from the shopping list is. This item will lead to the next piece of the key. (Answer: the teacher's desk)
7. Read the following question:

   A dice has the numbers 1, 2, 3, 4, 5 and 6 on the sides. Opposite numbers always add up to 7. Can you pair these numbers up so that each pair equals 7? Key piece location is the teacher's choice to hide, or it can be given once the question is answered. (Answers: 1-6, 2-5 and 3-4)
8. Codebreaking question on the pupil handout. (Answer: to the right of the door)
9. Read the following question:

   There are 6 people in a race. Marco was behind at the start and was in 5th place on the first bend. By the second bend Marco had overtaken one more person. By the 3rd bend Marco had been overtaken by Peter. Then Marco started to pick up speed, overtaking someone else on the 4th bend. Then, in the final stretch, Marco ran past 3 more people. Where did Marco finish? Look under the chair of the pupil in that place in the register. (Answer: 1st)
10. Read the following question:

    Finally, you need to try your hand at wizardry and create a potion to turn your teacher into a frog. The potion needs 24 legs. You have the following animals available to make this potion: spiders (8 legs), lizards (4 legs) and bats (2 legs). How would you make your potion? (Answer examples: 3 x Spiders or 2 x spider and 2 x lizards)

Buddy's key challenge

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KS2/P4-P7 (7-11-year-olds)

Buddy's key challenge

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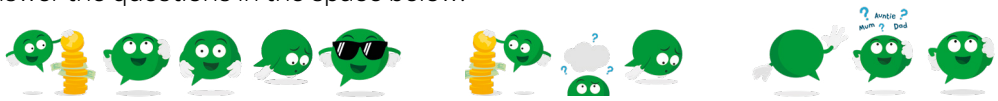
Pupil handout

Answer the questions in the space below:

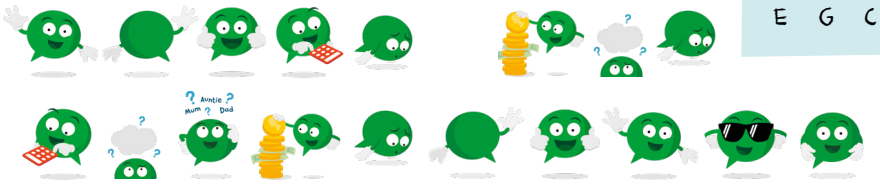
1. 

2. Find the following words (they are only horizontal and vertical) and colour them in, then starting in the top left and going across each line write the first 27 letters that have not been used – that will spell out the location of the next part of the key:

Maths	Add	Triangle	Odd
Calculate	More	Orb	
Divide	Five	Times tables	
Area	Square	Ten	
Multiply	Pi	Quarter	
Nine	Sums	Cube	

M	A	T	H	S	B	Y	T	H	E	W	I	N
D	D	O	W	U	N	E	A	P	R	E	S	T
T	D	O	T	M	U	L	T	I	P	L	Y	H
E	D	O	O	S	O	R	I	Q	S	E	V	N
C	W	D	S	N	F	F	M	M	P	Q	Z	I
A	Y	D	I	V	I	D	E	H	C	U	N	N
L	L	P	O	G	V	D	S	Q	U	A	R	E
C	L	M	O	R	E	T	T	T	N	R	Q	F
U	W	K	R	Y	I	V	A	X	O	T	E	N
L	A	N	B	O	C	U	B	E	P	E	V	B
A	R	M	Z	R	P	J	L	D	A	R	E	A
T	R	I	A	N	G	L	E	Z	M	M	B	P
E	G	C	H	J	D	E	S	Q	Y	O	L	L

3.

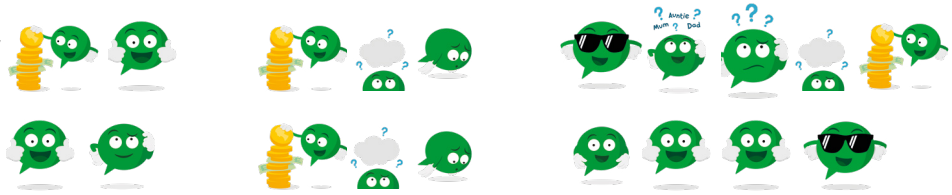
4. 

5.

6. Count the money and work out the most expensive item you could buy from the shopping list below. This item will lead you to the location of another piece of the key.

Computer - £250
Teacher's desk - £50
Set of paints - £25
Art book - £12
Collection of books - £35

7.

8. 

9.

10.

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KS2/P4-P7 (7-11-year-olds)

Code Breaker

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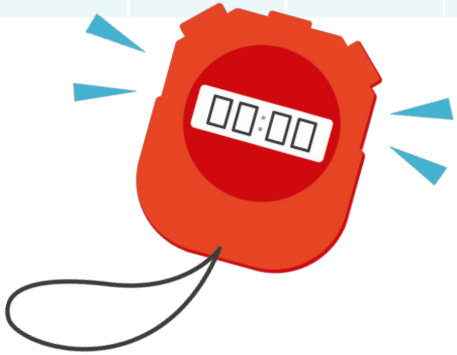
A	B	C	D	E	F	G	H	I	J	K	L	M

N	O	P	Q	R	S	T	U	V	W	X	Y	Z



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