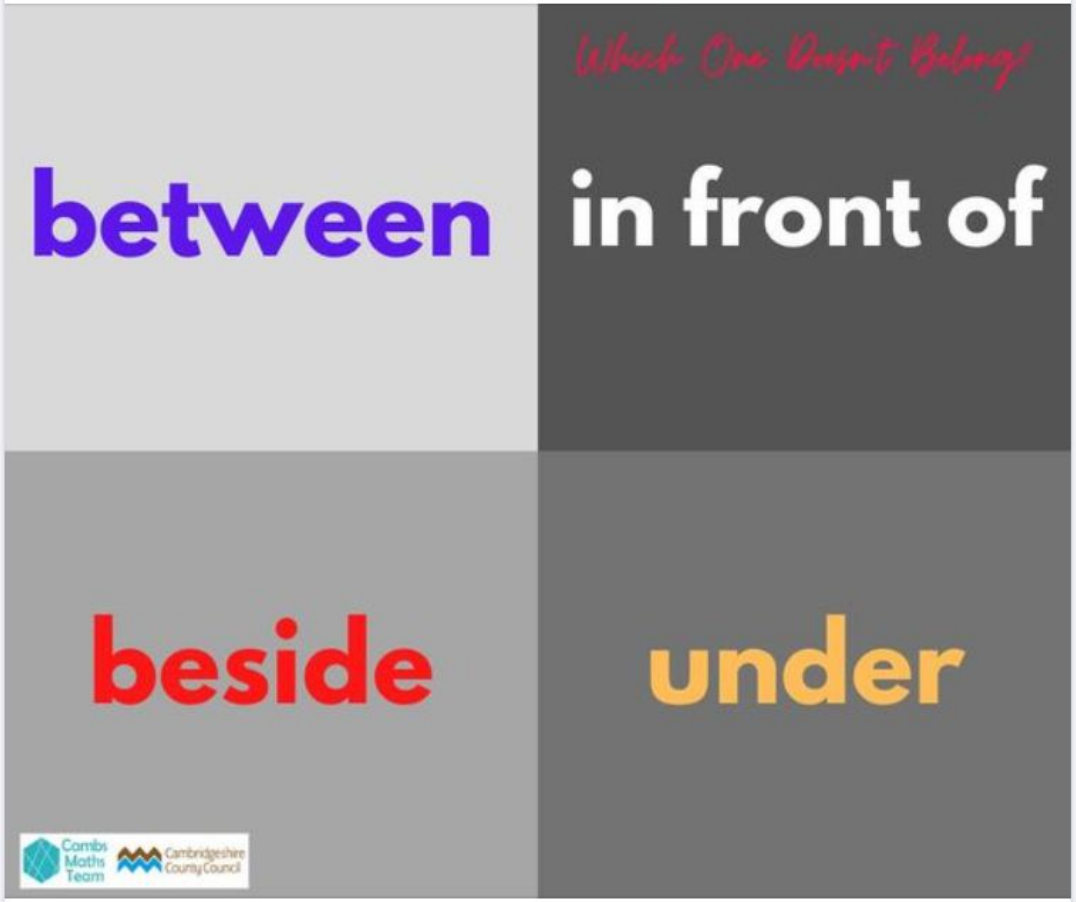
Monday 10th January 2022

Which One Doesn't Belong?

Monday - Which One Doesn't Belong?



Happy New Year!

This week's Which One Doesn't Belong? features words we might use to describe the position of one object in relation to another or others.

Think about how children might demonstrate the meaning of each word to identify which one is the most different.

Tuesday 11th January 2022

Maths Eyes

Tuesday - Maths Eyes

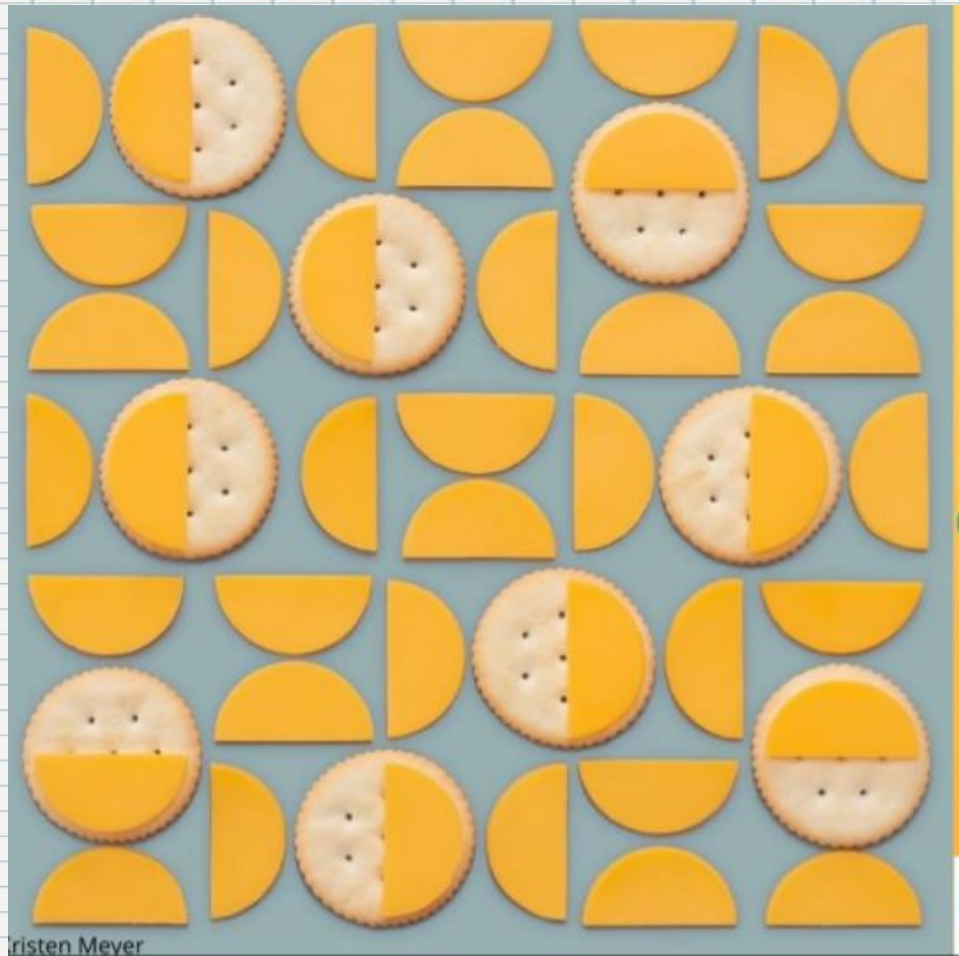
Maths Eyes

Cambs Maths Team

- Maths Eyes activities are designed to help make connections and 'see' where maths is in the world around us.
- Images and real-life experiences seen through 'Maths Eyes' promote engagement, enthusiasm and creativity, as well as building confidence, in maths.
- Using mathematical language to describe what can be seen, and speculate about what cannot, broadens reasoning skills and logical thinking.
- Cross curricular links can be made and progression in learning can be evident by comparing the responses of learners at different ages and stages.
- Prompts and suggestions can be provided or adapted, if required, depending on the intended topic focus or experience that the learner has.
- Sharing ideas and collaborative discussions can generate an even greater range of responses after individual reflections.

Cambridgeshire County Council

Tuesday - Maths Eyes



Maths Eyes

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How many crackers are there? What dot pattern do you think there is on each cracker? How many dots would there be altogether?

What shape are the slices of cheese? How many cheese shapes would you need to (almost) cover a cracker? If you wanted to cover all of the crackers with cheese, would you have enough slices? How many more slices would you need/have left over?

How would you describe what you can see using the word 'symmetry'? Can you talk about this image using turn and angles? What else can you see?

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Wednesday 12th January 2022

Maths Challenge!
(pick your level)

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Weekly Maths Challenges Years 1 & 2

Cambs Maths Team

Challenge

Weekly Maths Challenge

Where could the toys go?

On the lowest shelf

Under the train

Higher than the horse

Not on the top or bottom shelf

Next to the fish

In between the teddy and the fire engine

Above the train

Not beside the dinosaur

YEAR OF PROBLEM SOLVING

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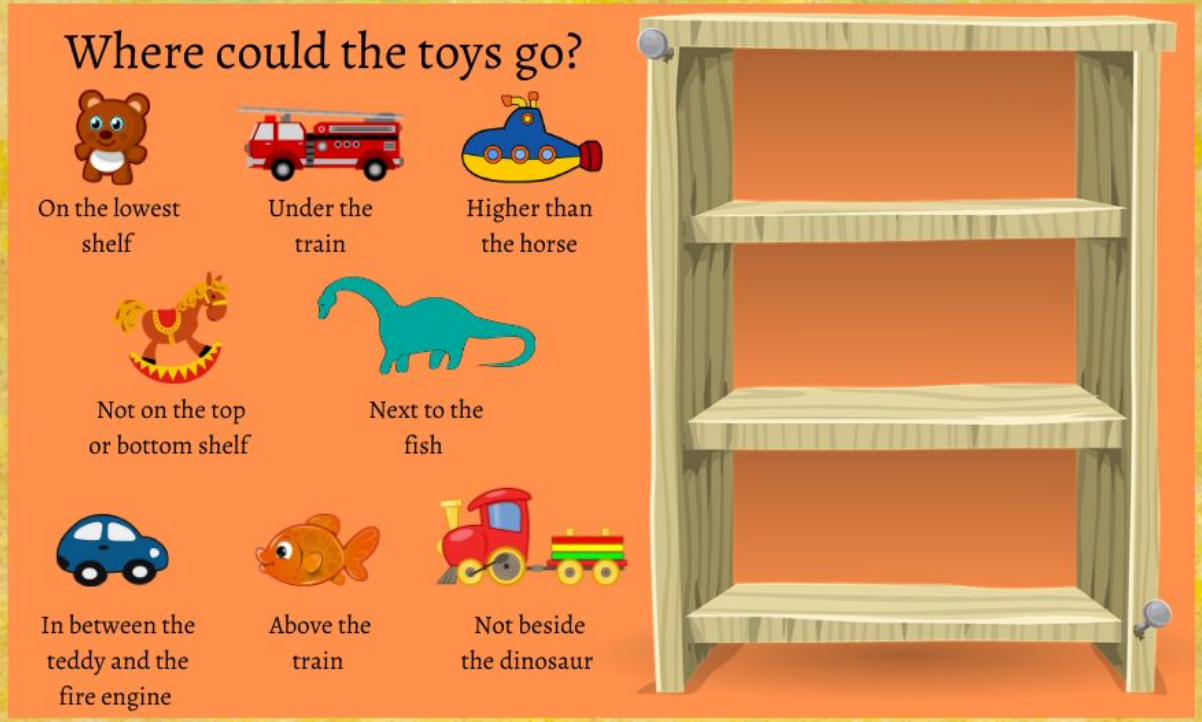
Weekly Maths Challenge



YEAR OF PROBLEM SOLVING

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Challenge Prompts

The following questions and prompts might help when you introduce this challenge to your pupils:

- Do you know what all of the words mean?
- Which object will you start with?
- Do you have to follow the clues in the order that they are given?
- Is there more than one combination or arrangement of toys that will be correct?
- How will you record your solution?
- Can you write your own clues to tidy away some of your own toys?

Solution

Weekly Maths Challenge

Where could the toys go?

On the lowest shelf

Under the train

Higher than the horse

Not on the top or bottom shelf

Next to the fish

In between the teddy and the fire engine

Above the train

Not beside the dinosaur

YEAR OF PROBLEM SOLVING

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Weekly Maths Challenge

Where could the toys go?

Higher than the horse

xt to the fish

Not beside the dinosaur

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Weekly Maths Challenge

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Weekly Maths Challenge

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YEAR OF PROBLEM SOLVING

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Solution Prompts

Here are two possible solutions to the challenge.

- Did you find any others?
- How did you record your solution?
- Was it useful to have any props to help to try out ideas?
- Did you have a go at making up your own similar problem?

Weekly Maths Challenges Years 3 & 4

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Challenge

Weekly Maths Challenge

Can you use each of the digit cards just once to make five 2 digit numbers following the clues below?

1. The **sum** of my digits is 7.
2. I am a **multiple** of 3 and 8.
3. I am an **odd** number below 30.
4. The **difference** between my digits is 4.
5. When you **multiply** my digits together you get 0.

YEAR OF PROBLEM SOLVING

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Weekly Maths Challenge

Can you use each of the digit cards just once to make five 2 digit numbers following the clues below?

1. The **sum** of my digits is 7.
2. I am a **multiple** of 3 and 8.
3. I am an **odd** number below 30.
4. The **difference** between my digits is 4.
5. When you **multiply** my digits together you get 0.

YEAR OF PROBLEM SOLVING

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Challenge Prompts

This challenge could be started with a modelled example using fewer digit cards and clues before the children tackle the problem with all of the digits.

Here are some prompts / questions that you may want to share with your pupils:

- Were there any words you were unsure about?
- Do you think there is more than one solution? If so how many can you find?

Extension questions

- Eddie says, “The answer to number 2 has to be even.” Explain why he is right.
- Priya says, “I know that the zero could only be used in one answer.” Is she right? Explain how you know.

Solution

Weekly Maths Challenge

Solution

Here are 2 possible solutions...

16 (Digits add to make 7)	**52**
48 (A multiple of 3 and 8)	**48**
23 (An odd number below 30)	**19**
59 (Digits have a difference of 4)	**73**
70 (You get 0 when the digits are multiplied)	**60**

If everyone in your class shared their different solutions do you think you would have all the possible answers?

YEAR OF PROBLEM SOLVING

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Solution Prompts

Here you will find two possible solutions to the Y3/4 challenge.

Here are some prompts / questions you may want to share with your pupils:

- Both solutions have 48 as the multiple of 3 and 8. Is it possible to solve the problem with other multiples of 3 and 8?
- Both solutions have 3 even answers and 2 odd answers. Did everyone find this?

Weekly Maths Challenge

Solution

Here are 2 possible solutions...

16 (Digits add to make 7)	**52**
48 (A multiple of 3 and 8)	**48**
23 (An odd number below 30)	**19**
59 (Digits have a difference of 4)	**73**
70 (You get 0 when the digits are multiplied)	**60**

If everyone in your class shared their different solutions do you think you would have all the possible answers?

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Weekly Maths Challenges Years 5 & 6

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Challenge

Weekly Maths Challenge

Can you find the missing values?

28
32
?
?

34 38 ? ?

YEAR OF PROBLEM SOLVING

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Weekly Maths Challenge

Can you find the missing values?

YEAR OF PROBLEM SOLVING

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Challenge Prompts

Here are some possible prompts/questions to share with your pupils:

- Where will you/did you start? Why?
- What knowledge or skills did you need in order to complete this challenge?
- Can you make up a similar challenge?
- How much information will you need to include so that it can be completed?

Solution

Weekly Maths Challenge

Solution

28
32
37
34

34 38 31 28

 = 8

 = 6

 = 9

 = 11

YEAR OF PROBLEM SOLVING

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Solution Prompts

Here is a solution to our challenge.
How did the pupils approach the problem?
Did anyone make up their own similar challenges?

Weekly Maths Challenge

Solution

 = 8

 = 6

 = 9

 = 11

YEAR OF PROBLEM SOLVING

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Thursday 13th January 2022

Estimation and Benchmarking

Thursday - Estimation and benchmarking

Estimation and Benchmarking

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- Estimating is roughly calculating or judging a value or number – it doesn't need to be exact, but it should be reasonable or 'sensible' in the real world.
- A benchmark is a known standard or reference point against which something else can be measured or compared. We can use a benchmark that we do know to estimate a measurement or quantity that we don't.
- Using mathematical language to describe the benchmark in relation to the estimate broadens reasoning skills and logical thinking.
- Cross curricular links can be made and progression in learning can be evident by comparing the responses of learners at different ages and stages.
- Prompts and suggestions can be provided or adapted, if required, depending on the intended topic focus or experience that the learner has.
- Sharing ideas and collaborative discussions can generate an even greater range of responses after individual reflections.

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Thursday - reasoning prompts

Encouraging mathematical thinking and reasoning:

Describing
What do you notice?
How many can you see?
How do these pine cones compare with yesterday's beads?

Reasoning
How many do you think there are? Why do you think that?
Will it be more or less than 20? A lot more/less? Or a little more/less?
Will it be between 15 and 20? A little or a lot more than this? Or less than this?
How many can you see? How many do you think are hidden?
Was your guess more or less than the actual count?
Was your guess very close/way out? Why do you think that was?
Can you put the estimates in order on the board/washing line?
Were most people close or far out?

Thursday - Estimation and benchmarking

ESTIMATION STATION

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This doll's house chair was created by Japanese artist Kyomi.

Estimate how tall it might be. Why do you think that?

What other dimensions of the chair could you estimate?

How many times bigger do you think your classroom chair is?

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Friday 14th January 2022

Times Tables focus

- Which times tables award are you working towards?

Practise your skills on TTRockstars:

https://ttrockstars.com/

Some more games here:
http://www.maths-games.org/times-tables-games.html

Times table support here:
https://home.oxfordowl.co.uk/maths/primary-multiplication-division/help-with-times-tables/

Sutton School's Gem Certificates of Times Table Excellence

1		Sky Blue Topaz	doubling with equipment
2		Swiss Blue Topaz	doubling and halving with equipment
3		Pink Imperial Topaz	doubling without equipment
4		Reddish-pink Imperial Topaz	halving and 10 x
5		Mystic Topaz	doubling, halving and 10 x
6		Azotic Topaz	divide by 10
7		Black Opal	2 x, 5 x, 10 x multiplication and division facts
8		Emerald	2 x, 3 x, 4 x, 5 x, 10 x multiplication and division facts
9		Ruby	2 x, 5 x, 10 x, 3 x, 4 x, 6 x, 7 x, 8 x multiplication and division facts.
10		Sapphire	all multiplication and division facts to 12 x 12
11		Diamond	all multiplication and division facts to 12 x 12 and complete the grid in under five minutes
12		Blue Diamond	elite level in all areas of multiplication and division

STRIVE