Maths Eyes

Cambs Maths Team

20/21 Spring

A collection of images and discussion prompts to adapt for your children and develop the use of Maths Eyes in your classroom.

First published in https://www.facebook.com/cambsmathsteam/

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Maths Eyes

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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.

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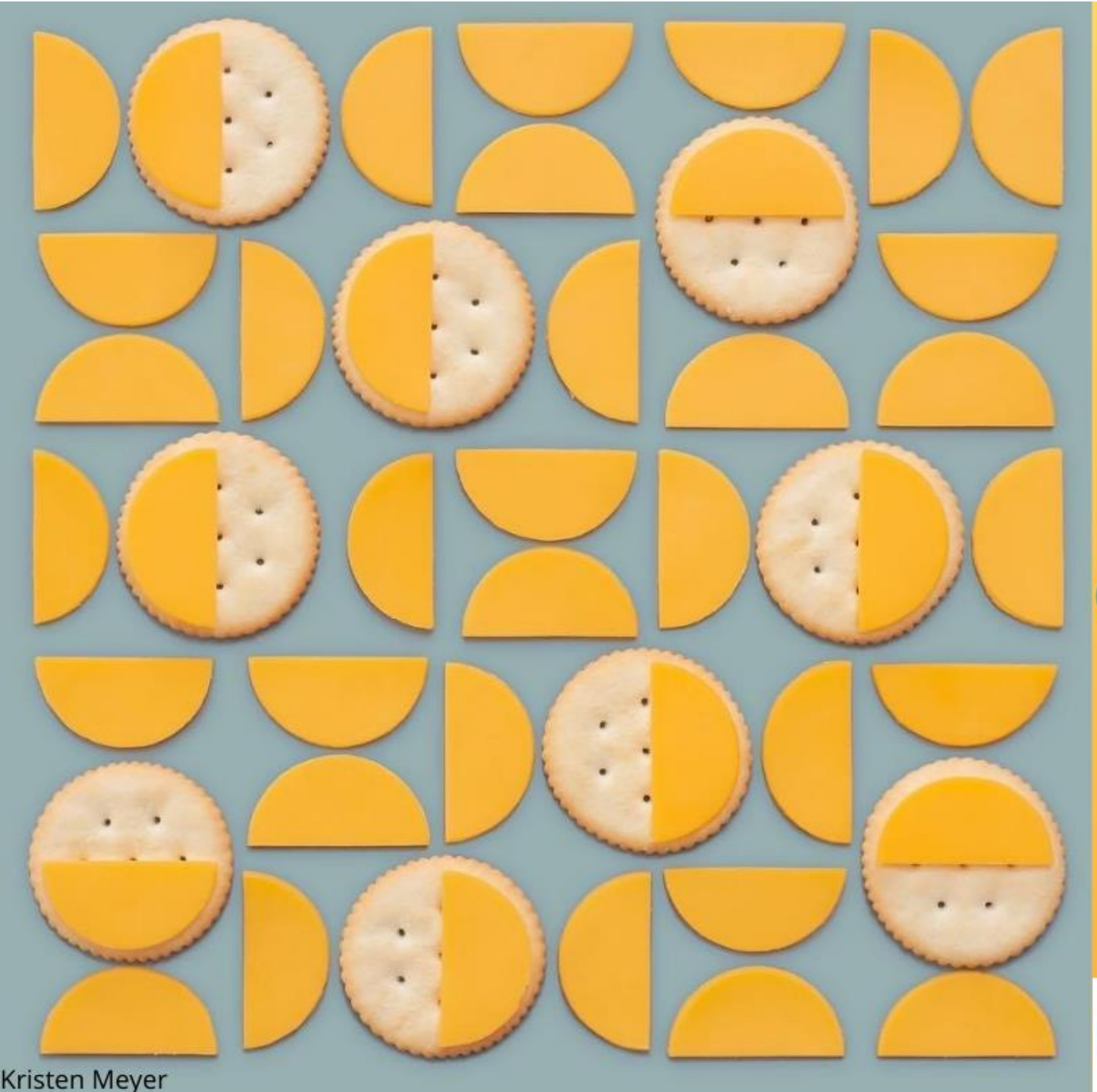

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How many crackers are there? What dot pattern do you think there is on each cracker? How many dots would there be altogether?

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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Adam Hillman

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How many whole crayons can you see? How many different coloured crayons have been used? How many whole crayons do you think were used to make this arrangement? If you made an arrangement with the missing parts, what might it look like? What else do you wonder?

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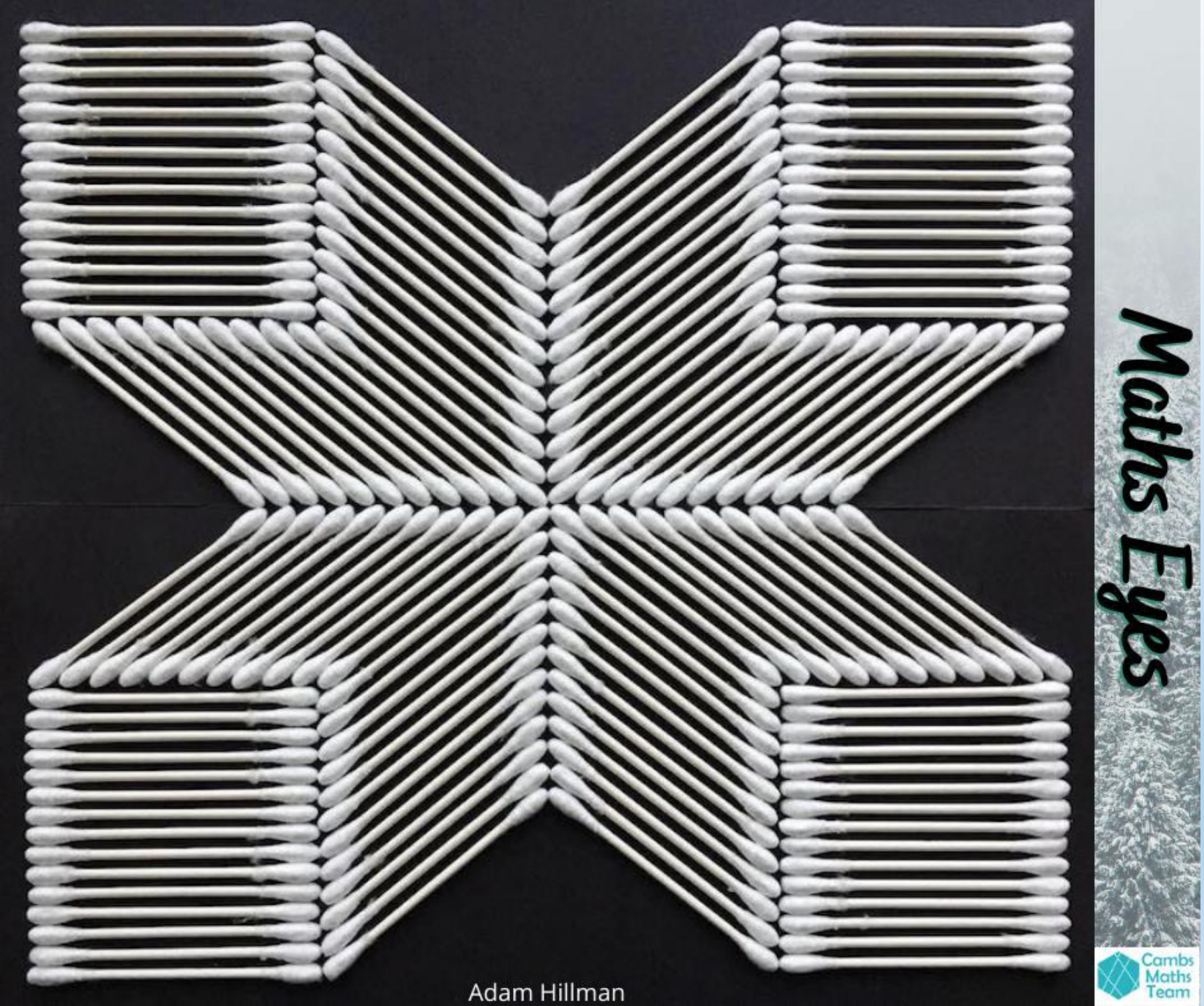

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How many ear buds are there in total? How did you calculate this? Are all of the ear buds the same length? How do you know? Where is the symmetry in this image? If you had more earbuds, where would you place them? Why? What else do you see?

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This structure of a numbat can be found in Perth, Australia and has been designed to give shade as well as welcome people to the city (the numbat is Western Australia's mammal emblem). What shapes can you see? How many people might it provide shade for? Will this change depending on the time of day or year? Why? The dimensions are 23.5m long, 6.5m high and 5.6m wide - if you gave children just one of these dimensions, would they be able to suggest the others? In the background is a similar structure of a frilled lizard - can children design their own animal structure that would fit in with the same triangular style?

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What shapes can you identify? How many doors are there altogether? What strategies could you use to count the number of windows? Do any of the houses have symmetrical properties? How do these houses compare to where you live?

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How many whole avocados do you think were used to create this image? Using fractions, how would you describe what proportion of a whole avocado is missing? How could you use percentages or decimals to describe this image? What else can you see with your Maths Eyes?

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How many forks are there altogether? How many blue prongs are there in total? Which row has the most cocktail sticks in it and how do you know?

What fraction of cocktail sticks are red or orange? What percentage of the whole object collection is not green? Are any parts of the image symmetrical?

How would you describe the angle made by any two cocktail sticks meeting tip to tip? If you were to continue this pattern, what would you add and where would you place these items?

What else do your Maths Eyes see? What else do you wonder?

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Who do you know that enjoys a cup of tea? How many cups of tea are there in this array? What's the same and what's different about them? How many ways could you describe the positions of the different cups of tea? Can you use the language of ratio and proportion to compare different cups of tea? Is there any symmetry in this image? If so, where? If you were to continue this pattern, what would you put and where?

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How many biscuits can you see? How did you count them? How many biscuits do you think were baked on this tray altogether? How many do you think are missing? How do you know?

If each biscuit contains one teaspoon of jam and a full jar contains 454g of jam, approximately what faction of a jar of jam will be remaining?

What else do you wonder?

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How many whole bananas do you think were used in this image? How many slices do you think each banana was cut into? How many slices of banana are in each row? Why do you think this? How many rows of banana are there?

How could you quickly estimate how many slices of banana there are altogether? How would you describe the pattern in this image?

Where do you think the light source was positioned in this image and can you explain why?

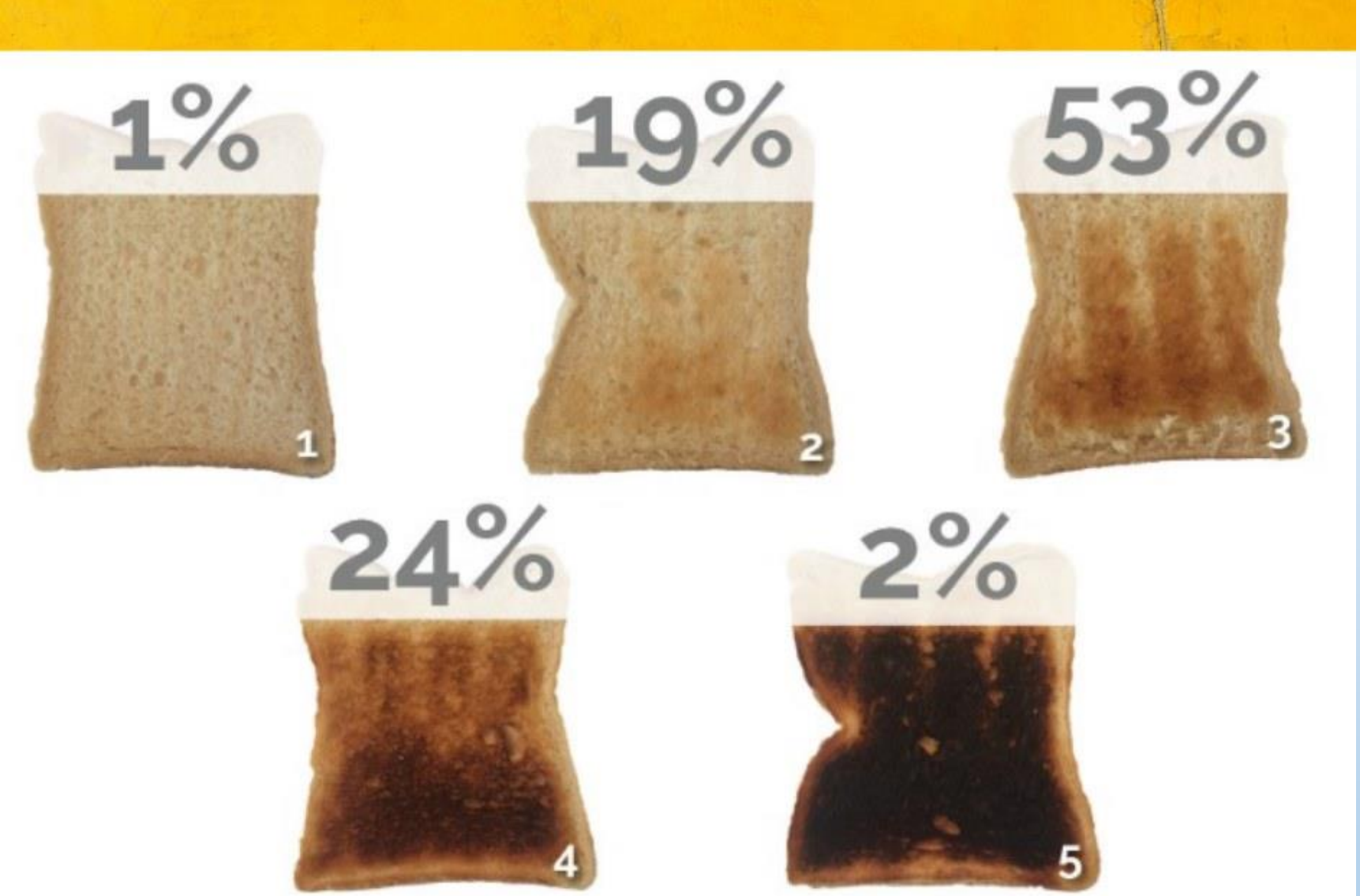
What else do you see with your maths eyes? What else do you wonder?

Part 1:

How do you like your toast? Can you think of a way to describe the position of a particular slice of toast?

How many slices of toast are there altogether? How did you work this out?

How long do you think each slice of bread was in the toaster for? Are there any slices that you think could have spent the same amount of time being toasted?



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Part 2:

Which images in the first picture most closely match the images in the second picture? What do you think the numbers might represent? Why?

What else do your maths eyes see?

What else do you wonder?

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Find more Maths Eyes images and discussion ideas, along with other activities and information, at

https://www.facebook.com/cambsmathsteam/

Tell us, or ask us, about Maths Eyes in your school at

maths.team@cambridgeshire.gov.uk

Find more free resources in our Cambridgeshire Maths Team Knowledge Hub Group at

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