



Newick Super Challenges



Four Triangles Puzzle

Age 5 to 11 ★

If you cut a square diagonally from corner to corner you get four right-angled isosceles triangles.



How many different shapes can you make by fitting the four triangles back together?

You may only fit long sides to long sides and short sides to short sides.

The whole length of the side must be joined.

You might like to record what you do.

You could use this interactivity to try out your ideas:

Click on the grey triangles to make new pieces.

You can rotate them by dragging the corners.



https://www.youtube.com/watch?v=u2bigf337aU&list=RDu2bigf337aU&start_radio=1&t=29

Who is this lady and why is she famous?



Credit: Aaron Becker

- What is the dad doing?
- Why is the girl standing behind him?
- Why is she dragging a kite on the floor?
- Has she said anything to him? Does he know she's there?
- How is she feeling? What is she thinking?
- Do you think this has happened before? Why/why not?



What is happening in this picture?

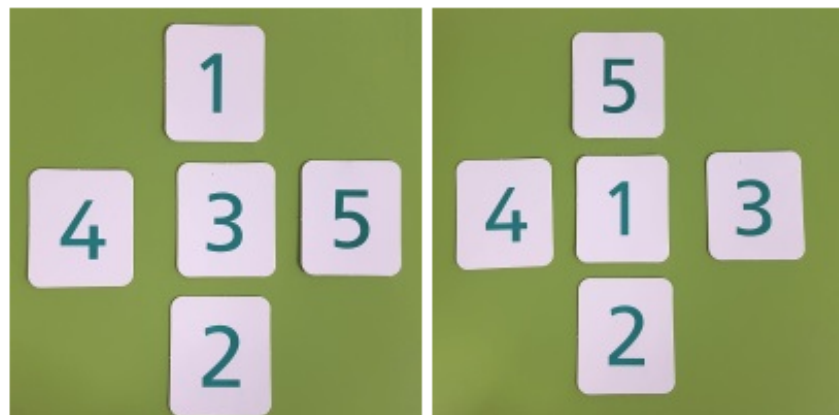
What can you tell me about this photograph?

Research about this mode of transport.

Magic Crosses

Age 7 to 14 ★

Here are pictures of two crosses:



What do you notice about the two crosses?

What is the same?

What is different?

Both crosses use the digits 1, 2, 3, 4, and 5.

The left cross has a horizontal total of 12 and a vertical total of 6.

The right cross has a horizontal total of 8 and a vertical total of 8.

We call the cross on the right a *magic cross*, because its horizontal total is equal to its vertical total.

Can you find any more magic crosses using the digits 1, 2, 3, 4 and 5?

Can you find all the possibilities?

Can you convince yourself you have found them all?



Credit: Goro Fujita

- How are the owls related?
- Which owl is about to take its first flight? How do you know?
- How does the young owl feel about flying?
- What might it be thinking? Add a thought bubble to the picture.
- Is the older owl worried?
- What advice might the older owl give to the younger one?

What is a black hole?
How old is our solar system?
What is a universe?



Noah

Age 5 to 7 ★★



Noah saw 12 legs walk by into the ark.
How many creatures could he have seen?

How many different answers can you find?
Can you explain how you found out these answers?



What can you see? What do you think? What do you wonder? Discuss and/or record your ideas here: See think wonder.

Who – or what – smashed the glass?

Was the frog there before, or did it enter the frame afterwards?

Why are there water droplets inside the frame?

Who holds the key?

Why is there a tag reading 'Prince'?

Is the frog a prince?

Why is the title 'A Prince'? Why not 'The Prince'? What's the difference? (Y3 grammar link)

Does this remind you of any stories you know? How is it similar/different?

Write this story – choose your perspective, style and structure. Do you want your story to feel like a fairy tale? How will you make yours stand out?

Who is this and what is she famous for?

