OUR PAST YOUR FUTURE

Egg-cellent Easter Tangrams

You might not realise it but maths is everywhere! It is hidden in nature, art, music and throughout our everyday lives. The type of maths that studies shape, space and angles is called geometry.

Tangrams are puzzles consisting of a shape made up of other shapes. These can be rearranged to make other pictures.

To make a set of tangram pieces cut out the shapes in the included egg template.

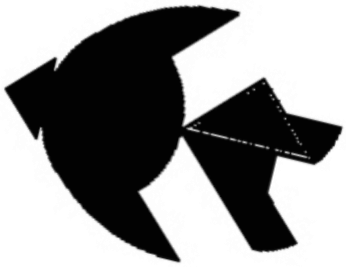
Can you rearrange the pieces to make any of these pictures?

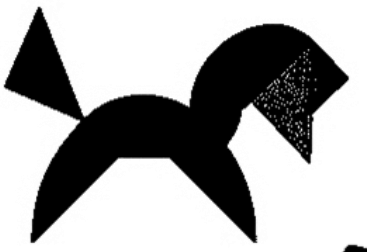
Tangram rules

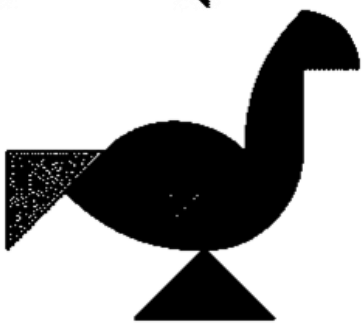
Each silhouette image uses all of the pieces and none of them overlap!

Did you know…

Edith Stoney was briefly employed in Heaton by Charles Parsons in the early 1900s. During this time she looked at the curves of mirrors to get different shaped beams of light.



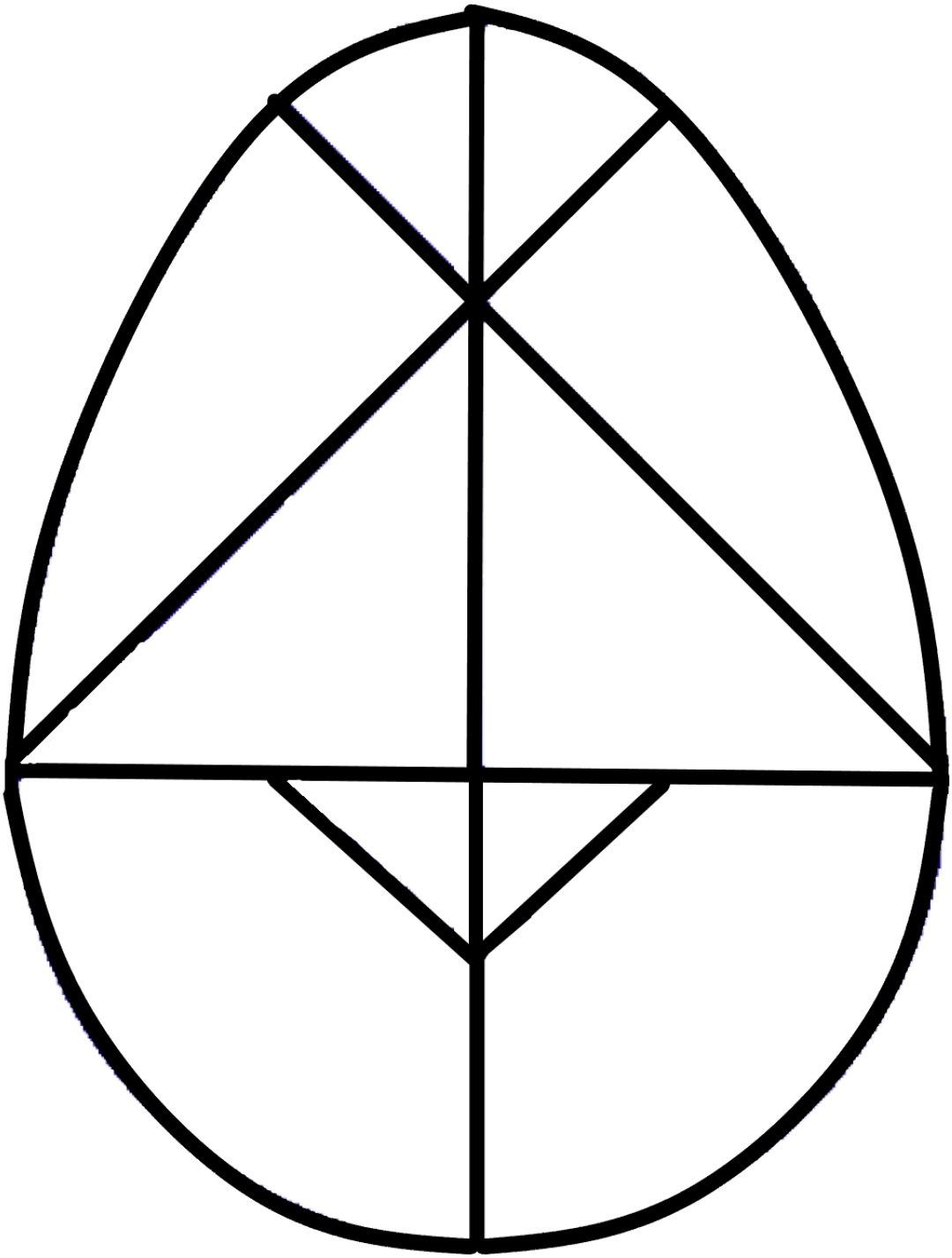




Did you know…

Geometry is really important in our lives, from the construction of buildings, bridges and offshore structures, to satellites and even cutting the patterns for our clothing!

Egg tangrams



You can try drawing your own egg tangram by visiting our tutorial on YouTube: https://youtu.be/YVRQd2Ojaw0

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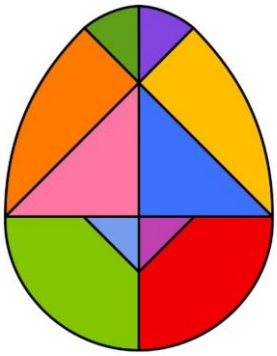
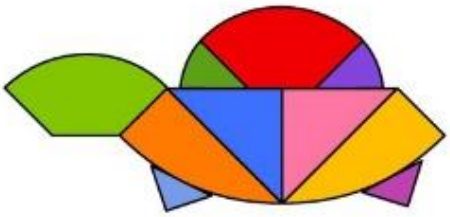
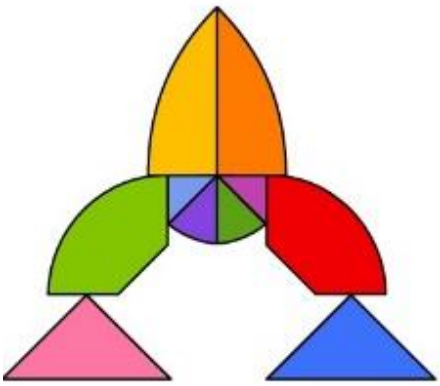
Egg tangrams: answers

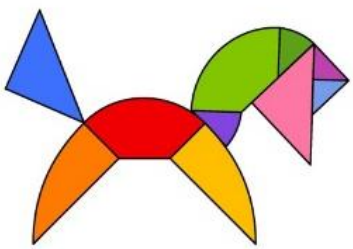
Here are the solutions to our silhouette challenges.

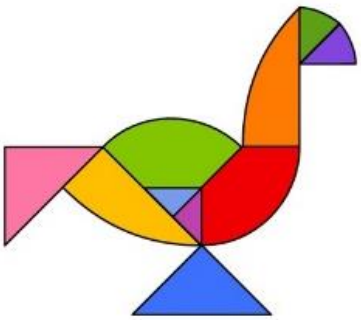
Why not try making your own and challenge your friends and family to recreate them.











The Our Past, Your Future project aims to celebrate our science, technology, engineering and maths (STEM) heritage and promote STEM careers. We'd love to hear your stories, you can share them with us by emailing: stem@museumsnorthumberland.org,uk

OUR PAST YOUR FUTURE

Top tips for families

Asking questions

Asking questions during the activity is a great way to see learning and develop an understanding of what is happening. Asking open ended questions will encourage discussion, here are some suggestions for starting your questioning:

- What problem do we need to overcome?
- How do you think we could...?
- What would happen if we change/ move/ add/ remove...?
- What happens if we use different materials? Do some work better than others?#
- Why is this more/ less successful than...?

Thinking like scientists and engineers

Keep encouraging your child to revise their design and try again. Engineers need to be resilient and persistent and keep trying when they are designing new things and these are excellent skills for life.

Engineers use a loop of:

assessing the problem - identifying a solution - implementing and testing the solution - evaluating the solution - refining the solution

It's all about experimenting and coming up with the best solution you can. By making a first attempt, modifying the design and testing again can you improve the design?

Scientists like to make predictions before they experiment and then test these predictions to see if they are right. *Can you predict what will happen before testing?*

Scientists then repeat their tests lots of times to see if they get the same results. To do this they make sure that their testing is fair and that they are only changing one thing at a time. By getting the same results more than once scientists can be confident in the conclusions of their experiments.

Careers to think about

This activity is all about a type of mathematics called geometry. If you found this interesting then you might want to consider the following careers:

Air Traffic Controller **Architect** **Games Developer**

Go to www.nustem.uk/primarycareers or www.nationalcareers.service.gov.uk/ for more information

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