This resource is part of a suite of materials created to inspire entrants, and support parents, teachers and those out-of-school to make deeper connections with their surroundings. The *maths inside* is waiting to be discovered!

Below, you can find an example documenting the submission journey for an **Second Level** entry to the *maths inside* photo competition (credits).

We welcome entries, both individually and in groups, from all ages of children and young people, as well as parents, guardians, carers and teachers and anyone qualifying for the out-of-school category! See mathsinside.com for full details.

WHOOSH!

We have recently been allowed to play and exercise outdoors. What activities can you do outside? What's your favourite? Have you been doing some fun activities in the sun? What are the links between these activities and maths? Can you investigate them? Can you take a photo that captures what you discover, add a *maths inside* sticker and write about your discoveries in a commentary?

Throwing a Frisbee is one of my favourite activities! Do you also enjoy it? This gets me thinking: what is the maths behind a frisbee? How does it stay up in the air? Why does it glide differently depending on how it is thrown?

Here is my example: a frisbee! This is such a fun activity which can be played while social distancing! I used the internet to research how a frisbee works and found out about the *maths inside!*

This photo could lead to the title

> whoosh!

followed by a brief commentary about how it stays up in the air. Such as

> Frisbees have the same shape as the wing of an airplane! The top part is curved, and the bottom part is flat. This makes the air move faster across the top of the frisbee than on the bottom, and this causes the frisbee to fly when thrown! Also, as a frisbee spins, it builds something called angular momentum. This gives the frisbee stability and allows it to stay in the air and travel long distances!

Can you take a photo and create a title and commentary of your favourite outdoor activity! What aspects of maths might you include? What are the rules behind the game — are they mathematical? What are the shapes, colours, and patterns? How does any apparatus used work? Could you change the rules? Or could you create your own activity and discuss the maths inside? Now it is your turn!

Remember that submissions need to be original to be eligible for the maths inside photo competition. Judges can only accept original photos, commentaries and titles that are not featured, shared or displayed elsewhere (this includes social media and other competitions). See the T&C for more information, and please do get in touch if you have any additional questions.

credits

This suite of resources are the fruit of a collaborative project between undergraduate and postgraduate students from the University of Glasgow — School of Mathematics & Statistics, and Dr Andrew Wilson (*maths inside* Founder and Director).

The authors are Natalie Baird, Tanushree Bharat Shah, Ali Clacy, Dimitrios Gerontogiannis, Jay Mackenzie, David Nkansah, Jamie Quinn, Hector Spencer-Wood, Keren Thomson, and Andrew Wilson.

The photo dog with frisbee is credited to *Tony Trocino*.