Folding paper conundrum

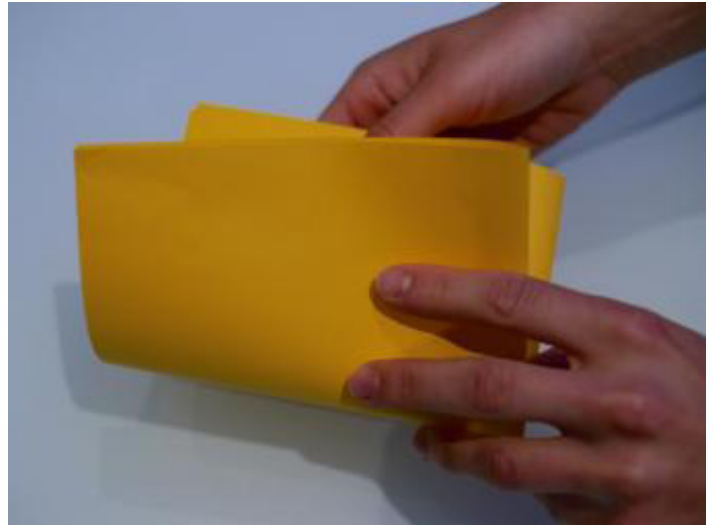One of the app activities asked...

How many times can you fold a piece of A4 paper in half? Does it matter which way you do the fold? Would it help if the piece of paper was longer? Does the thickness of the paper matter?

If students (or you) were to search the net for answers to these questions they will come across a range of sites including:

ONE: Mythbusters TV Series

http://www.mythbusterstheexhibition.com/try-this-at-home/try-this-entry/

The Mythbusters team have collected "a handful of myths" that can be busted by students either at school or home. The experiments are designed to get students reasoning scientifically as they 'wonder', 'research', 'guess', 'test', 'discover', 'decide on results' and 'share their findings.'

TWO: Students break record

http://www.newscientist.com/blogs/nstv/2012/01/paper-folding-limits-push...

Watch a group of students go about trying to break the paper-folding record. Can you go one better?

THREE: Numb3rs TV Show

Series One: Episode 108: Identity Crisis

A man wanted for stock fraud is found garrotted in his apartment and the crime is eerily similar to a murder committed a year earlier, a case Don closed when an ex-con confessed. Now, Don reinvestigates the old case to determine if he put an innocent man in jail. He asks Charlie to go over the evidence to see if anything was missed the first time around.

The Math used in this episode: poker, geometric progression, paper folding, pyramid scheme, fingerprint, and Schrödinger's cat. Do you know what these things mean? Look them up too?

FOUR: A story about Brittany Gallivan

http://pomonahistorical.org/12times.htm Brittany worked on this problem when she was just 13 and established a mathematical formula to work out how many folds were possible given the dimensions of the paper. Find the formulae she developed. But do they work? Check them out.

FIVE: So having looked at all of that…

What are you learning? Is there a limit to the number of folds? What factors have to be taken into account? What else might you try out? What do you want to find out more about?

Creator: John & Leith Hogan