

Mathematics in Transition Year

Take time in Transition Year to explore the world of mathematics through the World Wide Web. With web based resources, teachers can explore the potential of active methodologies in the mathematics classroom while students acquire mathematical skills interactively and independently as they investigate problems, connect and [generalise](#). They make [graphs](#), and see what [shapes](#), different functions produce. [Patterns](#) can be observed and [connections](#) made while [spreadsheets](#) allow a guided discovery approach.

Enjoy mathematical puzzles such as [Tower of Hanoi](#), invented in 1883 by Edouard Lucas, a French mathematician. If you need some background to this puzzle, check out this [site](#). There are other [versions](#) of this puzzle available [online](#) or in [print format](#).

Check out [Pythagoras](#), the Greek mathematician who lived over 2,000 years ago. His mathematical proof is used in architecture, construction, and measurement. Visualise its applications with [dynamic images](#) while generating infinite [Pythagorean triples](#) using the first triple – 3, 4 and 5. What would Pythagoras do about the Leaning Tower of Pisa? Come up with your own solution by following these [lesson plans](#), and use Geometer's Sketchpad to analyse different scenarios.

When you next make reference to the relevant mathematicians, as you introduce a new topic in the mathematics classroom, ask students to consult the [MacTutor History of Mathematics](#) for more detail. This site is one of most extensive sites available for those who want to access information about mathematics or specific mathematicians. And if it is your birthday today, why not check out [which mathematicians share your birthday](#). Then, take the [mathematicians quiz](#) to find out those who share your profile. Also, find [what day of the week you were born on](#) (this only works for people born in the 1900s)! Impress your students with this mathematical trick - ask a student to think of their [birthday](#) and then tell them you know already.

Women mathematicians have also played an important role in the field of mathematics. Check out these sites dedicated to the work of [women mathematicians](#). The story of [Sophie Germain](#), an 18th-century woman who had to assume a man's identity in order to pursue her passion of finding the definitive proof to [Fermat's Last Theorem](#), makes fascinating reading. [Pierre de Fermat](#) is considered to be one of the greatest mathematicians and his last theorem

has fascinated many other mathematicians, with the same ambition as Sophie Germain. The most recent of these is [Andrew Wiles](#).

Get students to [create their own dictionary of mathematics](#), while using the [maths thesaurus](#) to refine their definitions. Then, test their knowledge of common arithmetic terms with [mathematical hangman](#). Do the mathematical quizzes available – [calculator](#), [circle](#). When you tire of all this online activity, download these eight [PDF word searches](#) for an alternative homework exercise or keep students occupied with these [co-ordinated designs](#).

If you need other ideas for class, check out these [PDF card games](#) for mathematical bingo or bungee jumping teddy bears or enjoy these [mathematical cartoons](#). Then engage in a little ‘make believe’, and play ‘[Who wants to be a mathonaire?](#)’. If you win, you may need this [currency converter](#) for your travels in the non-euro zone! Finally, the ‘calculator dependent’ student should check out these [human calculators](#).