

GATEWAYS JOURNEYS

G.A.T.E.WAYS invites high-ability Year 1 & 2 students with a love of maths to...

Captain Hook's Treasure Trove: A Mathematical Thinking and Problem-Solving Adventure

In the enchanted world of Neverland there are no picture storybooks for children to enjoy. Captain Hook, a nasty rogue, had confiscated them and buried them somewhere on the island. Luckily though he was smart enough to draw a map showing the location of this 'treasure' and Peter Pan discovered it in a rusty old chest under Captain Hook's bed. After searching for many months and experiencing numerous adventures, Wendy and Peter Pan have found the treasure trove of picture storybooks – lots of them have the most amazingly exciting mathematical challenges in them. Wendy is so excited because she knows that the lost boys (who she has been looking after) have not seen books or challenged their brains since they arrived in Neverland. Would you like to join Wendy as she acquaints them with the stories, and challenges them to solve some fascinating problems? You never know, you might even meet Captain Hook and the ticking crocodile!!



Requirements:

- Please bring a well-stocked pencil case and a new A4 exercise book/notebook.
- Bring a snack or lunch, as required (adventuring is hungry work!)

Session 1: The Biggest Number in the Universe

What is mathematics? What if there was no such thing as maths? What would our world be like? Join Wendy as she discusses these ideas with the lost boys from Neverland, and helps them solve a range of exciting problem solving challenges. We will begin our journey by listening to "The Biggest Number in the Universe" by Julie Leibrich. In this story, Nesta, a young girl visits her neighbour Mr Abacus who shares the secret of the biggest number in the universe with her. Come and discover Mr Abacus's secret, conduct your own mathematical investigation into numbers and explore wild and wonderful number patterns such as triangular and square numbers as well as the concept of infinity.

Session 2: One Odd Day

We continue our journey of mathematical discovery with Wendy and the lost boys by contemplating how mathematics helps us in our everyday lives. In "One Odd Day" by Doris Fisher, a boy awakes to find that everything around him is odd. His dog has three front legs and two back legs, whilst his shirt has three sleeves, one for each arm and one sleeve hanging down his back. This is a story filled with maths just waiting to be examined! Today you will expand your knowledge by solving lots of challenges relating to odd and even numbers. Did you know that 'odd' means unusual or different? Did you know that we can talk about an 'odd ball', someone who is different from someone else? Why do we talk about the chance of something happening in terms of 'what are the odds? How many odd balls will we meet in Neverland and what are the odds of us meeting the ticking crocodile? We'll have fun developing our powers of logical reasoning by playing a strategy game built on odd numbers. Is it by chance that you will win or lose the game? Should you go first or should you go second? Come and learn about how we can increase the odds of winning.

Session 3: The World of Multiplication

This week we delve into the fascinating area of multiples and multiplication. Our discussion continues with the question: can dreams really help us in real life? In “Amanda Bean’s Amazing Dream” by Cindy Neushwander, the central character Amanda loves to count everything and wishes that she could count faster. Her teacher tries to persuade her of the virtues of multiplication but Amanda is unconvinced until she has an amazing dream, which helps her change her mind. You and the lost boys will be involved in discovering the world of multiplication through problem solving challenges and seeing how multiplication connects to addition and can relate to the real world. In Amanda’s dream she climbs a tree in the park and wonders how many flowers are in the rectangle in the centre of the park. How many different ways can she work this out and how can she prove that she has found all the answers? How do you know that she has found all the solutions?

Session 4: Life’s little Equations

In our final week you will pose your own questions about mathematics for our discussion. In “This Plus That: Life’s Little Equations” by Amy Krouse Rosenthal, the author shows us that again and again, life's total experience is always greater than the sum of its parts. We will explore the interesting world of equations and find out if the sum of its parts is equal to or greater than its parts. You will also investigate logic problems using scales and number shapes and touch on the world of algebra. We conclude our journey to Neverland by bidding goodbye in a special mathematical way to the characters we have met there.

About the presenter:

Sharon Leibowitz is an experienced educator with enthusiasm for ensuring that learning is creative, practical and enjoyable. She has specialised in the area of gifted education for over 20 years and has a passion for the development of Mathematical and Philosophical skills across the primary years. She particularly enjoys the task of designing Mathematical curriculum using the ‘thinking treasure’ of children’s literature, art and science.

