

# A G.A.T.E.WAYS JOURNEYS PROGRAM

for gifted Year 3 and 4 children

with a love of mathematics

## 'Charlie's Chewy, Chocolatey Adventure!'

*A mathematical thinking and problem-solving adventure*



**G.A.T.E.WAYS** is an independent organization offering challenging and enriching activities and experiences to develop and extend highly able children. This *JOURNEY* for both girls and boys will run over four mornings.

Charlie's heart stood still as he peeled back the chocolate wrapper. Would he find the golden ticket and be a guest for the day at the famous Willy Wonka's chocolate factory, and possibly even get the job of helping Mr Wonka supervise the factory?

Do you love chocolate, literature and mathematics? If so, this journey is certainly for you! Join Charlie as we follow the mathematical clues to find the golden tickets and gain entry into Willy Wonka's famous mathematical chocolate factory. Help us solve Mr Wonka's mathematical problems so that he can run his chocolate plant more proficiently. The demand for his chocolates has been more than he has anticipated so he needs someone to help him collect statistics, analyse the results and increase his production output. You will use estimation, probability, measurement, design, percentages, graphs, problem solving and statistical skills to show Mr Wonka that you are a worthy contestant in his search for someone to help him manage his factory. Will you be the lucky new supervisor? Win or not, come join us on this oompa loompish journey into the magical world of Charlie and the Chocolate Factory.

### **Session 1: The Lucky Tickets**

What is the probability of Charlie finding a golden ticket? What is the chance of you choosing to play the character of Charlie? Who is Charlie? We begin this journey by finding out a little about Charlie and The Chocolate Factory by Roald Dahl. You will be introduced to Charlie and his family, the other children in the story and the hunt for the golden tickets which allow individuals to gain entrance into Willy Wonka's factory. Your task will be to use your algorithmic skills to follow the mathematical clues to make your way towards the golden tickets. At the completion of the treasure hunt there will be a lucky dip to choose the name of your character from the story. This session we will conduct our mathematical investigations into the areas of probability, estimation and problem solving.

### **Session 2: Mr Willy Wonka**

Mr Willy Wonka stood in front of the most wonderful chocolate factory in the world with a black top hat on his head, a tail coat of beautiful plum- coloured velvet and trousers of bottle green. In this session you will meet Willy Wonka and the oompa loompas as you travel through the maze of the chocolate factory and into the chocolate room. Here you will weigh different chocolates, and complete mathematical explorations involving measurement, ratio, percentages and fractions and help Mr Wonka sort out such problems as the new wrappers that he has ordered do not fit the shape of the chocolate; someone has miscalculated the ratio of cocoa beans to milk and the Wipple Scrumptious Fudge Mallow delight is not the right colour. For homework you will make edible grass called 'swudge' and find out where chocolate comes from.

### **Session 3: The Invention Room**

Our third session takes you into the famous invention room where you will see square candies that look round. Now you will be put to the test! What will you invent? Will it be hot ice-cream for cold days or hair toffee for a rock star look? Your creative juices will flow as you use your measurement skills to design new wrappers, boxes or products. Now don't become complacent because Mr Wonka has some tricky statistical problems (involving mean, median, mode and frequency tables) up his sleeve for you as he searches for his new supervisor. As part of your role as the prospective new supervisor/manager, you will need to know different currencies of the world and their exchange rates.

### **Session 4: A New Supervisor**

According to the novel, Charlie becomes the new supervisor. But wait the ending has changed - who will our new supervisor really be? What is the probability that it will be you? In our final session you will create a song for the oompa loompas to sing and dance to and help Mr Wonka solve his financial difficulties. Your knowledge of different currencies will help you as you delve into mathematical problems involving interest and changing the dollar into different currencies.

**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.

**Requirements:** It would be quite helpful for children to know the story of Charlie and the Chocolate factory. Each week, please bring an exercise book, a well stocked pencil case which includes coloured pencils or textas, scissors and a glue stick. Please also bring a small photo of yourself to Session 1 and a stamped, self-addressed DL envelope.